

electronics
BUYERS'
GUIDE

**INCLUDING A DIRECTORY
OF ELECTRONIC AND ALLIED PRODUCTS**

JUNE 15, 1946 ISSUE



Foremost Manufacturers of Transformers
to the **ELECTRONIC INDUSTRY**

United Transformer Corp.

150 VARICK STREET • NEW YORK 13, N. Y.
EXPORT DIVISION: 13 EAST 40th STREET, NEW YORK 16, N. Y., CABLES: "ARLAB"



electronics

BUYERS' GUIDE



JUNE 15, 1946

ELECTRONICS SPECTRUM CHART Between pages 80 and 81

SOUND LEVEL CHART 81
Scale in decibels of sound levels, from the rustle of leaves to the roar of thunder, all with reference to the threshold of hearing

FCC FREQUENCY ALLOCATIONS 82
Proposed allocations in the region below 25 mc and final U. S. allocations above 25 mc; also arranged in frequencies allocated for the various services such as aeronautical, amateur, broadcasting, etc.

GRAPHICAL SYMBOLS FOR ELECTRONIC DIAGRAMS 84
Standard ASA symbols for electronic components, used in each issue of ELECTRONICS

SOLID DIELECTRIC COAXIAL CABLES 86

Cross index of cables showing manufacturers' designations 86

Standard r-f cable list in order of diameter over dielectric 88

Comparison of open wire, solid dielectric lines and waveguides 90

TEN YEAR INDEX OF ELECTRONICS 161
Index by months of the articles most often asked for, published between January 1936 and June 1946

BIBLIOGRAPHY OF IMPORTANT BOOKS 239
Approximately 500 titles of scientific, engineering and technical books dealing with electronic subjects, arranged under an alphabetical subject classification

ELECTRONICS BUYERS' GUIDE D-1 to D-112

 Communication Equipment D-9 Measuring Equipment D-31 Allied Products D-89

 Industrial Electronic Equipment D-22 Components D-40

INDEX TO ADVERTISERS 3

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FOREWORD

This is *your* Buyers' Guide—its contents and format determined by extensive survey among the subscribers of 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 and sub-classification 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 *new* service which will further strengthen our position with you the subscriber. We would appreciate having *your* comments.

SUPERIOR



For VOLTAGE CONTROL

**VARIABLE VOLTAGE TRANSFORMERS
AUTOMATIC VOLTAGE REGULATORS
TEST INSTRUMENTS**

The Superior Electric Company has specialized for many years in the design and manufacture of laboratory and industrial voltage control apparatus.

The wide range of experience gained throughout the years is your assurance of the finest possible voltage control equipment whether the application requires . . . a POWERSTAT variable transformer to obtain a continuously variable voltage from a-c power lines . . . a SECO Automatic Voltage Regulator to maintain a constant output voltage from a fluctuating line . . . test instruments such as the VOLTBOX a-c power supply.

SECO ENGINEERING SERVICE. . . . It is the purpose of this bulletin to show in concise form under one cover the various products manufactured by SECO. Since the size does not permit a detailed discussion of each type of apparatus, we suggest that the factory be consulted when the need for additional information arises. A trained staff of engineers and technicians, thoroughly familiar with all phases of voltage control, is available for consultation. An outline of your particular problem will result in a prompt recommendation. Simply call or write to take advantage of the SECO KNOW-HOW.

BULLETIN NUMBER 150

THE SUPERIOR ELECTRIC COMPANY
BRISTOL • 713 LAUREL STREET • CONN.



POWERSTAT

VARIABLE VOLTAGE TRANSFORMER

Accurately...

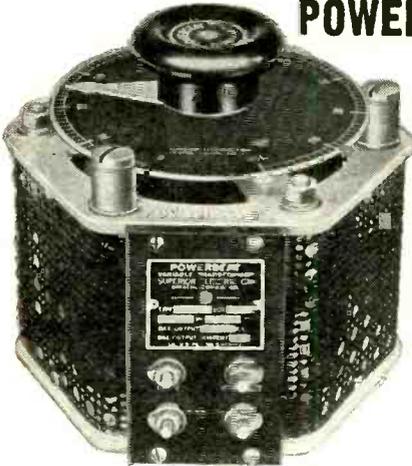
Since it is not feasible to show in a bulletin of this size photographs of the entire line of POWERSTAT variable transformers, only a few of the standard units are illustrated on these pages. If reference is made to page 5 a more comprehensive picture of available standard POWERSTATS can be achieved.

SINGLE PHASE POWERSTATS

The applications of POWERSTATS are as varied and numerous as are the uses of variable a-c voltages. A few of these include . . . electric heat control . . . lighting control . . . filament, plate and bias voltage control on electronic tubes . . . laboratory and shop line voltage control.

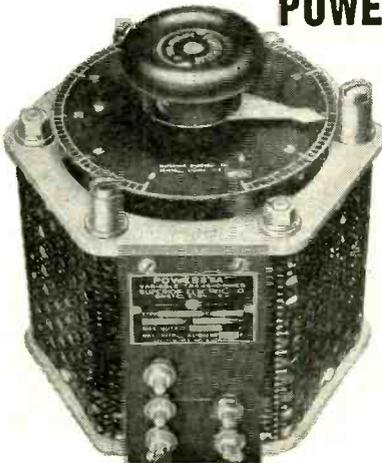
Undoubtedly, a brief review of the single-phase POWERSTATS illustrated on this page will reveal other applications which will solve your particular voltage control problem.

POWERSTAT TYPE 1126



INPUT: 115 volts, 50/60 cycles, 1 phase
OUTPUT: 0-135 volts, 15 amperes, 2.0 KVA
NO LOAD LOSS: 18 watts
NET WEIGHT: 23 pounds

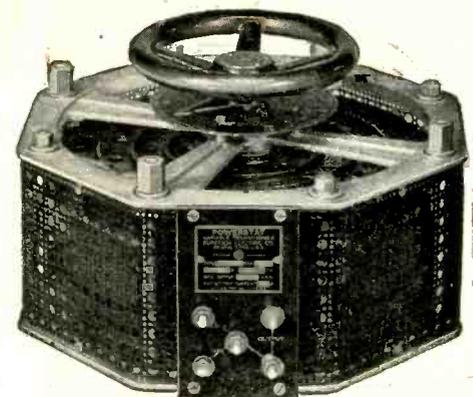
POWERSTAT TYPE 1226



INPUT: 230/115 volts, 50/60 cycles, 1 phase

*OUTPUT: 0-270 volts, 9.0 amperes, 2.4 KVA on 230 volt line.
NO LOAD LOSS: 20 watts
NET WEIGHT: 27 pounds

*9 amperes available on 230 volt input. With 115 volts input, output current reduced in accordance with figure 3 page 6.



POWERSTAT TYPE 1256

INPUT: 230/115 volts, 50/60 cycles, 1 phase
*OUTPUT: 0-270 volts, 28 amperes, 7.5 KVA on 230 volt line.

NO LOAD LOSS: 40 watts

NET WEIGHT: 70 pounds

*28 amperes available on 230 volt input. With 115 volts input, output current reduced in accordance with figure 3 page 6.

The POWERSTAT is essentially a continuously-tapped auto-transformer which will furnish a variable output voltage from a-c power lines by merely turning a handwheel. It is adaptable to any application where a smooth continuously adjustable output voltage is required. No other type of voltage controller can duplicate its many outstanding features. Some of the superior electrical and mechanical characteristics are . . .

• **EXCELLENT REGULATION:** Negligible variation in output voltage from no load to full load current (refer figure 2 page 6).

• **HIGH EFFICIENCY:** Even at low output voltages, the efficiency is remarkably high which means a saving in power (refer figure 1 page 6). Such is in contrast to the inefficient wasteful control method offered by rheostats.

• **ZERO WAVE-FORM DISTORTION:** The use of highest grade silicon-steel together with a superior design of core and coil eliminates the possibility of wave-form distortion.

• **WIDE OUTPUT VOLTAGE RANGE:** Output may be varied from zero to or above line voltage.

• **SMOOTH CONTROL:** Output voltages can easily be adjusted to fractions of a volt.

• **CONSERVATIVE RATING:** All POWERSTATS are rated 50 degree Centigrade temperature rise under continuous full rated load current.

• **RUGGED MECHANICAL DESIGN:** Use of aluminum alloy parts assures low weight.

• **ADVANCED WINDING TECHNIQUE:** Larger models are wound with glass insulated wire while smaller units use a high strength polyvinyl resin insulation.

• **EASY TO MOUNT:** Units are available for table or panel mounting.

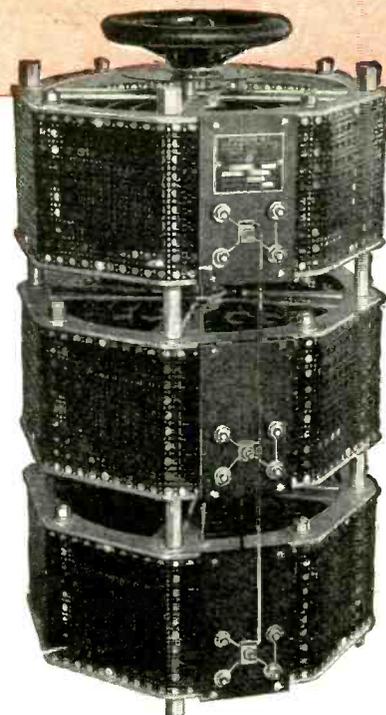
INFORMATION REQUIRED FOR QUOTING

Where recommendations or quotations on POWERSTATS are required to meet individual applications it is necessary to include the following information:

1. Frequency . . .
2. Single or poly phase . . .
3. Input voltage or voltages available . . .
4. Range of output voltage desired . . .
5. Maximum output current required . . .
6. Description of load . . .
7. Duty cycle . . .
8. Special information such as ambient temperature if in excess of 40° C., mounting requirements, unusual atmospheric conditions . . .
9. If a motor-operated POWERSTAT is desired state the speed needed, switching arrangements, etc.

..... Controls Power

POLY-PHASE POWERSTATS ■ ■ As shown on page 8, the POWERSTAT can be readily adapted to any circuit requirement. Where the application calls for a continuously variable voltage from a two or three phase supply, individual POWERSTAT units can be ganged to provide the necessary connection. Although this bulletin illustrates only wye and open-delta connected three-phase units in capacities up to 25 KVA, other POWERSTATS are available in ratings up to 100 KVA for a variety of circuit arrangements. By mounting standard air-cooled POWERSTATS in a sufficient quantity of transformer oil, the capacity can be increased up to 100% above the normal air operation. The typical three-phase unit shown is wye-connected POWERSTAT type 1256-3Y.

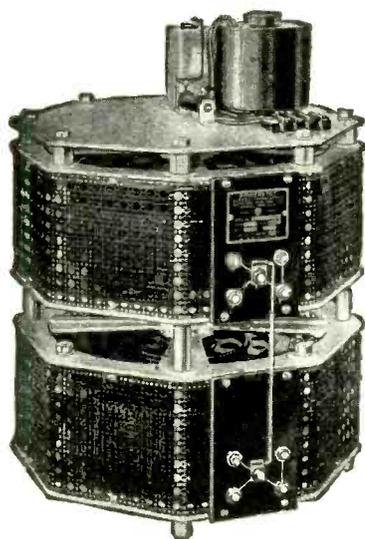


**POWERSTAT
TYPE 1256-3Y**

INPUT: 440/230 volts, 50/60 cycles, 3 phase
 * OUTPUT: 0-515 volts, 28 amperes, 25 KVA on 440 volt line
 NO LOAD LOSS: 125 watts
 NET WEIGHT: 215 pounds
 * With 230 volts input, output is 0-540 volts and the output current is reduced as per figure 3 page 6.

MOTOR-DRIVEN POWERSTATS

To comply with the demand for a means to control POWERSTAT variable transformers from remote push-button stations or automatic controllers, motor-driven POWERSTATS are offered in the same capacities as the manually-operated models. The motor is a 3 wire reversible synchronous inductor type. It has two windings with externally mounted capacitor and resistor and is designed to be energized from a 115 volt single-phase source. Long life and quiet operation is assured by the ball-bearing mounted rotor shaft. The maximum current requirements do not exceed .4 amperes. High damping and rapid starting characteristics mean no over-shooting and the same fine adjustment of voltage as found with the manually-operated units. Standard speeds of travel from zero to maximum output voltage are listed on page 5. If a standard model does not meet your specific requirement, consult our engineering department. Illustrated is typical motor-driven POWERSTAT type MW1256-2D rated: INPUT: 230/115 volts, 60 cycles, 3 phase open delta connected. OUTPUT: 0-270 volts, 28.0 amperes, 13.1 KVA. TRAVEL TIME: 45 seconds.



**POWERSTAT
TYPE MW1256-2D**



TYPE 20 POWERSTAT

A New, Small Type

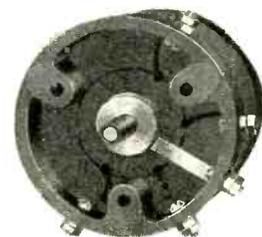
The surprisingly small size of type 20 has in no way diminished its mechanical and electrical characteristics. For example; an extra large aluminum brush heat radiator together with an unusually rugged and durable brush contact assembly are incorporated. Other notable features are a pre-set brush adjustment spring, glass-smooth commutator surface, and an exceptionally light-weight construction for the rating.

The coil is mounted by means of a uniquely designed bakelite base. The design is so arranged that the coil is rigidly held in place by a screw-locking device. This eliminates the possibility of damage from vibration or other mechanical shocks.

For either clip lead or permanent connection; five readily accessible terminals are situated on the periphery of the bakelite base. The multiplicity of connections permits increasing voltage to be obtained with either clockwise or counter-clockwise rotation of the POWERSTAT knob. POWERSTAT 20 is rated: INPUT: 115 volts, 50/60 cycles, 1 phase. OUTPUT: 0-135 volts, 3.0 amperes, 405 va.



This view of type 20 illustrates the large brush heat radiator together with the rugged brush spring assembly.



The base view shows the simple mounting and terminal arrangement of type 20.



TYPES 116 and 216 POWERSTAT

Cased or Uncased

MODEL 116

Offering the smooth control, excellent regulation, and high efficiency of larger types, the 116 and 216 models are a reflection of the years of experience gained by SECO in the designing and building of POWERSTAT variable transformers.

These POWERSTATS are available either cased or uncased . . . the uncased models designated by the letter "U" appended to the type number. Intended primarily for table mounting, the cased models are furnished with screening, fuse protection, and a totally enclosed standard bakelite terminal box. An integral part is an input cord and plug, an output receptacle, and an "on-off" switch. When these POWERSTATS are to be used as a component part of existing equipment or to be rear-of-panel mounted; the uncased model is recommended. Electrically the same as the cased model; the uncased units are supplied without screening, fuse protection, input cord and plug, output receptacle, or "on-off" switch. It becomes a part of any circuit by fastening the input and output wiring to the terminal lugs which accommodate either screw or solder connection.



Although conservatively rated, the POWERSTATS type 116 and 216 are of greater electrical capacity than any other variable transformer of comparable size.

TYPES 116 and 116U

INPUT: 115 volts, 50/60 cycles, 1 phase

OUTPUT: 0-135 volts, 7.5 amperes, 1000 va (7.5 amps. at 135 volts)

NO LOAD POWER LOSS: 6.0 watts

NET WEIGHT: 116—9.0 pounds . . . 116U—7.8 pounds.

If the user desires to limit the maximum output voltage to 115 volts instead of 135 volts on the cased model, type 116L should be specified and the connection will be made at the factory. The 116U can be wired for either 0-115 or 0-135 volts output by employing the correct terminal connections. To facilitate making the correct connections, the reverse side of the bakelite plate covering the terminal box on the 116U shows the terminals to be used for each application. Unless otherwise requested, the units are supplied with aluminum dial plates with graduations of 0-135 volts.

TYPES 216 and 216U

INPUT: 230 volts, 50/60 cycles, 1 phase

OUTPUT: 0-270 volts, 3.0 amperes, 810 va (3.0 amps. at 270 volts)

NO LOAD POWER LOSS: 6.0 watts

NET WEIGHT: 216—9.0 pounds . . . 216U—7.8 pounds

As explained under the 116 and 116U data, the output voltage can be limited to line voltage . . . in this model . . . 230 volts. The dial plate furnished has graduations of 0-270 volts.

Sometimes it is to advantage to operate the POWERSTATS types 216 and 216U on a 115 volt input circuit so as to have an output voltage range of 0-270 volts. Whereas this connection can be made by using the correct terminals on the uncased 216U, it must be done at the factory on the cased 216 and should be specified when ordering. With this connection care must be exercised that the allowable output current does not exceed the values as noted in figure three on page 6.

ADVANCED FEATURES of TYPES 116 and 216

- Highest output current rating for equivalent panel mounting dimensions of any competitive variable transformer.
- This maximum output current is available for continuous operation over the entire range of output voltages.
- An extra large aluminum brush heat radiator of relatively great area and mass results in low brush temperature rise and reduced probability of damage from sudden over-loads.
- A new type of brush pressure adjustment spring is accurately preset at the factory and solder-sealed to prevent change in adjustment due to vibration. It serves to guarantee optimum brush operation at all times.
- Exacting attention to details of design and manufacture and use of all aluminum mechanical construction results in extremely light weight and the highest continuous current rating per pound of any similarly rated variable transformer.

MODEL 116U



OIL-COOLED POWERSTATS



TYPE 0-1126 RATING

INPUT: 115 volts, 50/60 cycles, 1 phase

OUTPUT: 0-135 volts, 30.0 amps. max., 4.0 KVA

APPROX. WEIGHT (with oil): 89 pounds

DIMENSIONS

Diameter—
13 inches

Height—
13 inches

TYPE 0-1226 RATING

INPUT: 230/115 volts, 50/60 cycles, 1 phase

OUTPUT: 0-270 volts, 18.0 amps. max., 4.9 KVA

APPROX. WEIGHT (with oil): 90 pounds

As noted, increased capacities of air-cooled POWERSTATS are possible by oil-immersion. For a high continuous output from a unit of small physical size, SECO offers its standard 1126 and 1226 types in a compact, cast-aluminum oil-container. They may also be used in hazardous or humid atmospheres and where high momentary overloads are occasioned.

STANDARD POWERSTAT RATINGS

SINGLE PHASE							
Line Voltage	Output Voltage	Max. Output Current (Amperes)	Output KVA	Connection (Figure)	Type	**Weight (Pounds)	†Standard Motor Speeds
115	0-135	3.0	0.41	1	20	4	—
	0-135	7.5	1.0	1	116	9	T
	0-135	15.0	2.0	1	1126	23	W, X, Y, Z
	0-135	45.0	6.1	1	1156	70	W, X, Y, Z
	0-135	30.0	4.0	5	1126-2P	54	W, X, Y, Z
	0-135	90.0	12.1	5	1156-2P	145	W, X, Y, Z
	0-270	3.0*	0.35	2	216	9	T
	0-270	9.0*	1.05	2	1226	27	W, X, Y, Z
	0-270	28.0*	3.27	2	1256	70	W, X, Y, Z
	230	0-270	3.0	0.81	2	216	9	T
0-270		9.0	2.4	2	1226	27	W, X, Y, Z
0-270		28.0	7.5	2	1256	70	W, X, Y, Z
0-270		7.5	2.0	3	116-2S	18	T
0-270		15.0	4.0	3	1126-2S	45	W, X, Y, Z
0-270		45.0	12.1	3	1156-2S	141	W, X, Y, Z
0-270		56.0	15.1	5	1256-2P	145	W, X, Y, Z
0-540		9.0*	2.1	4	1226-2S	54	W, X, Y, Z
0-540		28.0*	6.5	4	1256-2S	141	W, X, Y, Z
440		0-515	3.0	1.5	4	216-2S	18	T
	0-515	9.0	4.6	4	1226-2S	54	W, X, Y, Z
	0-515	28.0	14.4	4	1256-2S	141	W, X, Y, Z
THREE-PHASE							
115	0-135	7.5	1.8	6	116-2D	18	T
	0-135	15.0	3.5	6	1126-2D	45	W, X, Y, Z
	0-135	45.0	10.5	6	1156-2D	141	W, X, Y, Z
	0-270	3.0*	0.6	7	216-2D	18	T
	0-270	9.0*	1.8	7	1226-2D	54	W, X, Y, Z
	0-270	28.0*	5.7	7	1256-2D	141	W, X, Y, Z
230	0-270	3.0	1.4	7	216-2D	18	T
	0-270	9.0	4.2	7	1226-2D	54	W, X, Y, Z
	0-270	28.0	13.1	7	1256-2D	141	W, X, Y, Z
	0-270	7.5	3.5	8	116-3Y	27	T
	0-270	15.0	7.0	8	1126-3Y	68	W, X, Y, Z
	0-230	45.0	17.9	8	1156-3Y	215	W, X, Y
	0-540	3.0*	1.2	9	216-3Y	27	T
	0-540	9.0*	3.6	9	1226-3Y	80	W, X, Y, Z
	0-540	28.0*	11.3	9	1256-3Y	215	W, X, Y
	440	0-515	3.0	2.8	9	216-3Y	27	T
0-515		9.0	8.0	9	1226-3Y	80	W, X, Y, Z
0-515		28.0	25.0	9	1256-3Y	215	W, X, Y

All ratings are based on a 50 degree centigrade temperature rise above the ambient.

Where output voltages up to input line values only are required, add letter "L" to type number. For example, POWERSTAT type 1256L has an output range of 0-230 volts on a 230 volt line.

* Values of maximum rated output current marked by asterisk apply to output voltage range from zero volts to 25% above input line voltage. For allocable output currents above this output voltage value refer Figure 3 page 6.

† These letters are prefixed to basic type numbers to designate the speed of Motor-driven POWERSTATS. T, W, X, Y, Z are 5, 45, 18, 14 and 8 seconds respectively for full range travel.

** Manually-operated POWERSTAT weights are listed. For Motor-driven units add 10, 11 and 14 pounds to the (216 and 216), (1126 and 1226) and (1156 and 1256) types, respectively.

LINE VOLTAGE CORRECTION

Where only a limited output voltage range is desired at a relatively large power output, POWERSTATS type LC are available.

These types are ordinarily used for line voltage correction to obtain a nominal rated output voltage for operation of electrical equipment from input lines that vary over a limited voltage range.

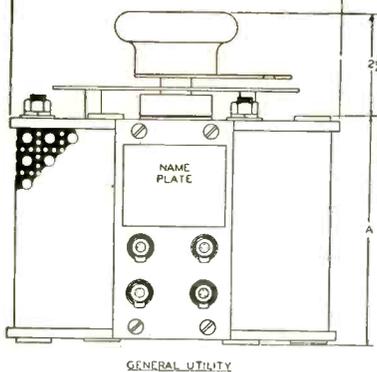
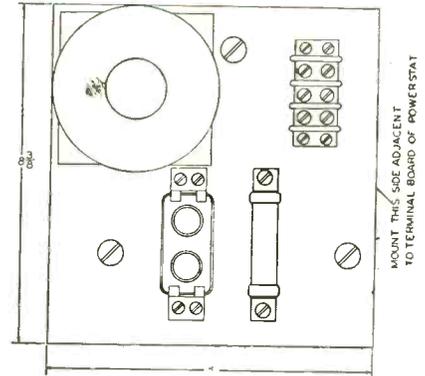
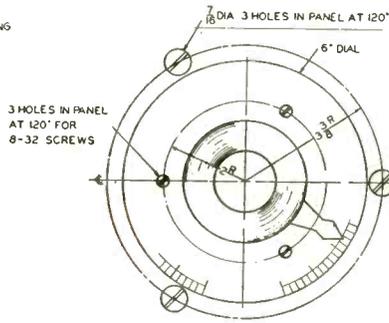
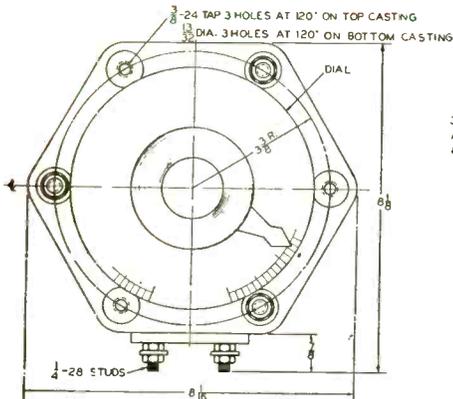
POWERSTATS type LC may also be used on a constant voltage input line to furnish an output voltage variable over a limited range. POWERSTAT type 2106LC may, for example, be used to supply an output voltage variable from 100 to 135 volts on a 115 volt input.

The POWERSTAT type LC consists of a controlling transformer similar to the full range types shown on pages 2, 3, 4 and 5 together with proper auxiliary transformer to effect limited range voltage variation. Output capacities up to 75 KVA are available. Special types can be furnished to meet specifications.

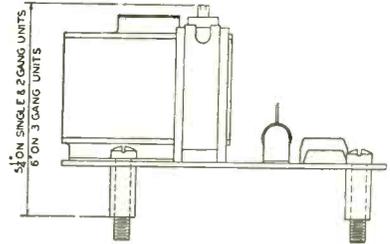
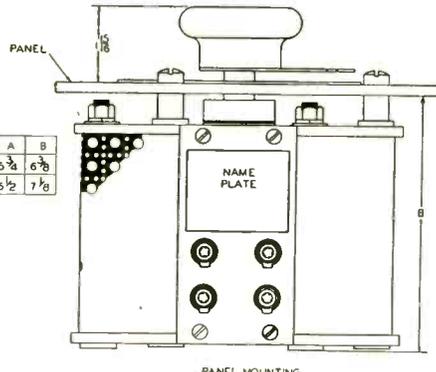
Input Voltage	Output Voltage	Phase	Connection	Max. Ratings		Type
				Output Current	Output KVA	
95-135	115	1	1 phase	52	6	2106LC
95-135	115	1	1 phase	130	15	2115LC
195-255	230	1	1 phase	22	5	2205LC
195-255	230	1	1 phase	39	9	2209LC
195-255	230	1	1 phase	120	27.5	2228LC
380-500	440	1	1 phase	16	7	2407LC
380-500	440	1	1 phase	40	17.5	2418LC
195-255	230	3	wye	25	10	3210YLC
195-255	230	3	wye	38	15	3215YLC
195-255	230	3	wye	50	20	3220YLC
195-255	230	3	wye	113	45	3245YLC
195-255	230	3	wye	145	58	3258YLC
380-500	440	3	wye	16	12	3412YLC
380-500	440	3	wye	22	17	3417YLC
380-500	440	3	wye	33	25	3425YLC
380-500	440	3	wye	66	50	3450YLC
380-500	440	3	wye	100	75	3475YLC

... POWERSTAT VARIABLE TRANSFORMERS

POWERSTAT Types 1126 and 1226



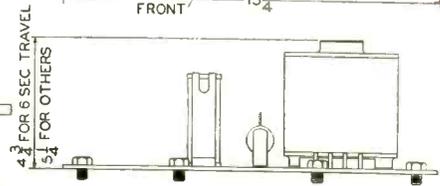
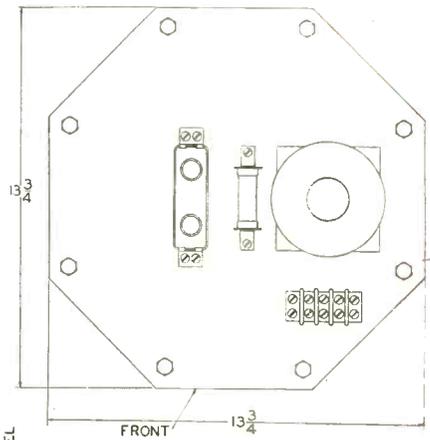
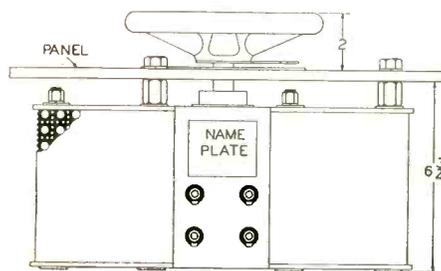
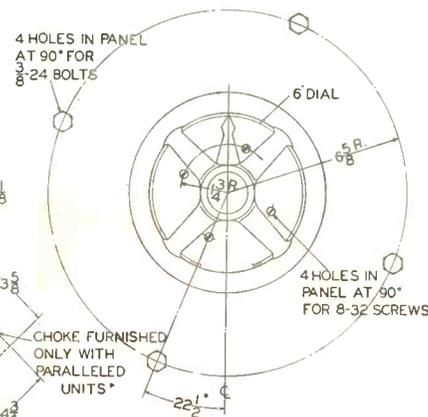
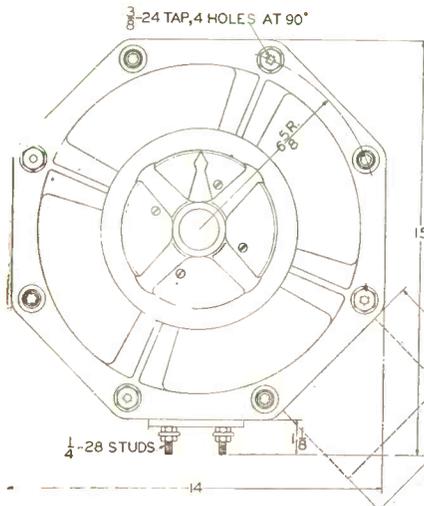
TYPE	A	B
1126	5 3/4	6 7/8
1226	6 1/2	7 1/8



NOTE- WHEN GANGING UNITS, ADD TO "A" OR "B" DIMENSION, FOR EACH ADDITIONAL UNIT, 6 3/4" FOR TYPE 1126 OR 7" FOR TYPE 1226

MOTOR ASSEMBLY
NOTE- ADD HEIGHT AS SHOWN TO DIMENSION "A" FOR OVERALL HEIGHT OF SINGLE UNIT MOTOR DRIVEN POWERSTAT.

POWERSTAT Types 1156 and 1256



GENERAL UTILITY

PANEL MOUNTING

MOTOR ASSEMBLY

NOTE- ADD HEIGHT AS SHOWN TO DIM. 7 5/8" FOR OVERALL HEIGHT OF SINGLE UNIT MOTOR DRIVEN POWERSTAT.

WHEN GANGING UNITS, ADD 7 7/8" TO 6 3/4" DIM. FOR EACH ADDITIONAL UNIT, AND 8" FOR STANDOFF ON BOTTOM UNIT. WHEN MORE THAN A 3 GANG UNIT IS REQUIRED ADD 4" FOR STANDOFF ON BOTTOM UNIT. ADD SKETCH DIMS. FOR MOTOR ASSEM.

NOTE- ADDITIONAL SUPPORT IS RECOMMENDED FOR MOUNTING OF GANGED UNITS

POWERSTAT CIRCUIT ARRANGEMENTS



Shown on this page is a partial list of the more common methods of connection of standard POWERSTAT variable transformers. By paralleling or series-paralleling these basic connections, a POWERSTAT can be made to meet almost any requirement.

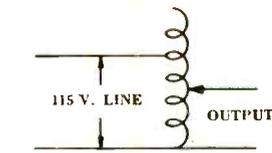


FIGURE 1 SINGLE PHASE

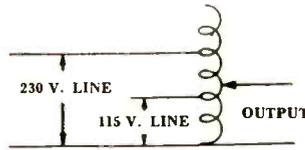


FIGURE 2 SINGLE PHASE

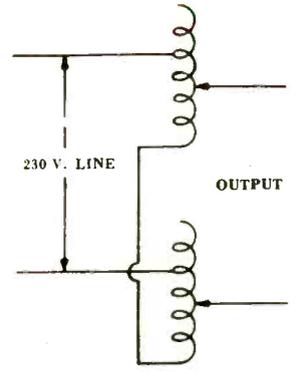


FIGURE 3 SINGLE PHASE

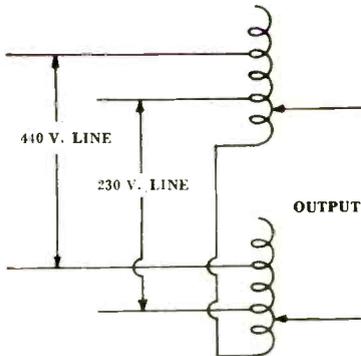


FIGURE 4 SINGLE PHASE

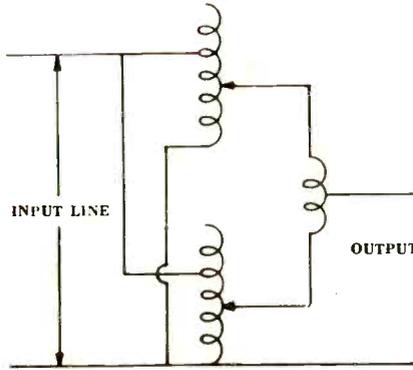


FIGURE 5 SINGLE PHASE

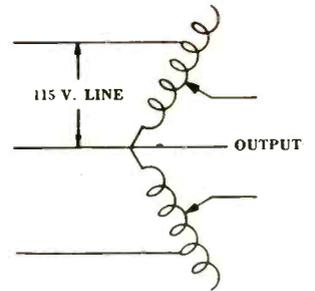


FIGURE 6 THREE PHASE

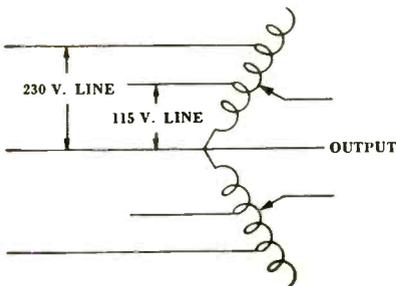


FIGURE 7 THREE PHASE

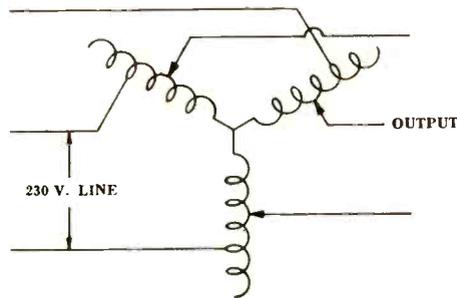


FIGURE 8 THREE PHASE

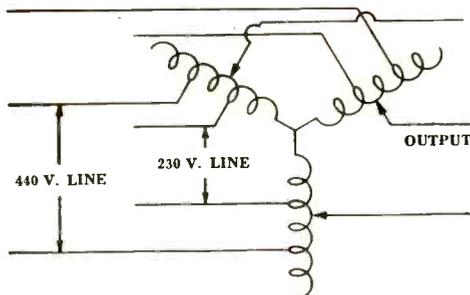
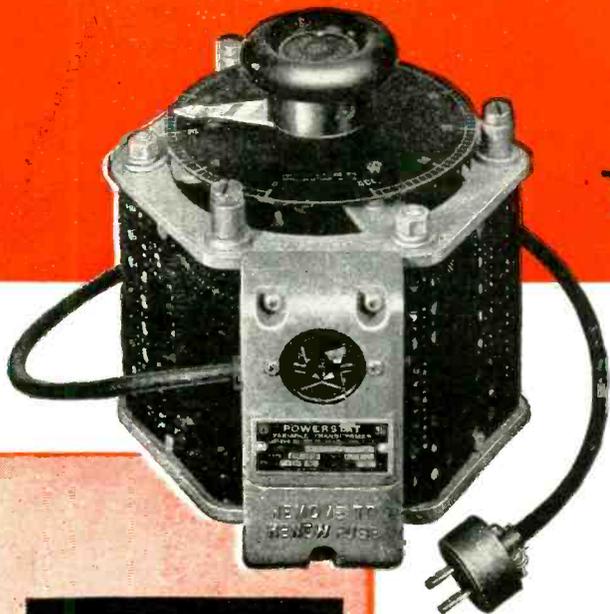


FIGURE 9 THREE PHASE

Use
**SUPERIOR
ELECTRIC**
Engineering
Service

The SECO engineering staff will be most pleased to cooperate in adapting POWERSTATS to individual applications. Without charge or obligation, SECO is always at your service. Never hesitate to consult us on any voltage control problem.

POWERSTAT VARIABLE TRANSFORMER



with . . .

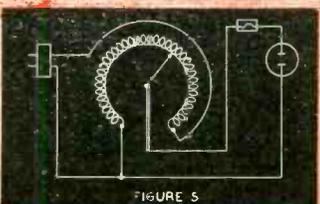
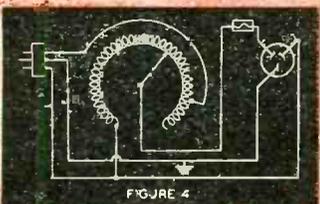
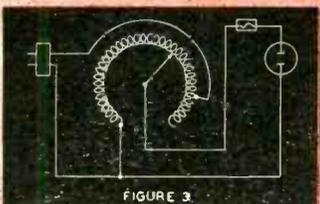
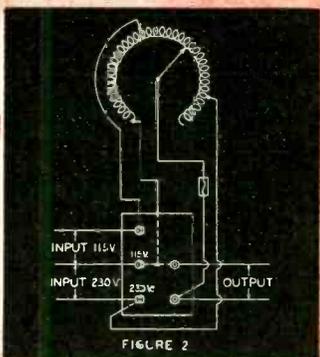
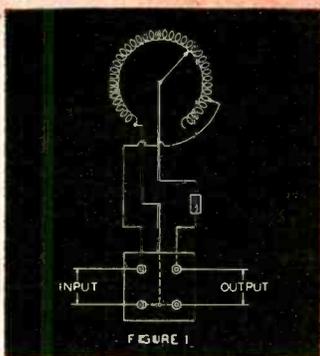
- FUSE PROTECTION
- OUTPUT RECEPTACLE
- INPUT CORD and PLUG

In keeping with its policy of supplying the voltage control apparatus most ideally suited to a specific application, SECO offers POWERSTATS types 1126 and 1226, described on page 2, with fuse protection, output receptacles, and input cord and plug. These refinements enable workers in the shop and laboratory to perform variable voltage tests without danger of injury to themselves or the instrument.

One model, shown in the photograph at the upper left of this page, incorporates a 2 or 3 wire input cord and plug, output receptacle, and a fuse in the output side. In the 3 wire system, the 3rd wire is solidly grounded to the POWERSTAT frame. All the components are housed in a durable cast-aluminum terminal box. To afford easy access to the cartridge type fuse, the lower section of the terminal box can be removed by loosening a screw connection. Since the fuse is held in position by clip-action, replacement is a simple matter.

For those who prefer terminal studs for clip-lead or permanent connection but still desire the fuse protection feature, a POWERSTAT as illustrated to the upper right is available. These units have primarily the same terminal board arrangement as standard POWERSTATS except a cartridge type fuse is located at the top of the panel and a special bakelite cover protects both terminal studs and fuse. To wire or replace the fuse, the cover can be readily removed. An opening at the bottom of the terminal cover offers ample space for the input and output wiring.

To differentiate these fused models from standard POWERSTATS, combinations of various letters and numbers are included in the type number.



POWERSTATS TYPES F1126 and F1226

Features: Fuse protection, bakelite terminal cover.
Connection: Figure 1 (1126)—Figure 2 (1226)

POWERSTATS TYPES 2TF1126 and 2TF1226

Features: Fuse protection, 2 wire input cord and plug, 2 wire output receptacles—plug and receptacle are twist-lock type.
Connection: Figure 3

POWERSTATS TYPES 2PF1126 and 2PF1226

Features: Fuse protection, 2 wire input cord and plug, 2 wire output receptacle—plug and receptacle are straight blade type.
Connection: Figure 3

POWERSTATS TYPES 3TF1126 and 3TF1226

Features: Fuse protection, 3 wire (3rd wire grounded) input cord and plug, 3 wire output receptacle—plug and receptacle are twist-lock type.
Connection: Figure 4

POWERSTATS TYPES 3PF1126 and 3PF1226

Features: Fuse protection, 3 wire (3rd wire grounded) input cord and plug, 3 wire output receptacle—plug and receptacle are straight blade type.
Connection: Figure 4

If it is desired to limit the output voltage to line voltage, the letter "L" should be added to the type number. Thus, POWERSTAT type 2PF1126L has an output voltage range of 0-115 volts instead of 0-135 volts. Connection for this arrangement is shown in figure 5.



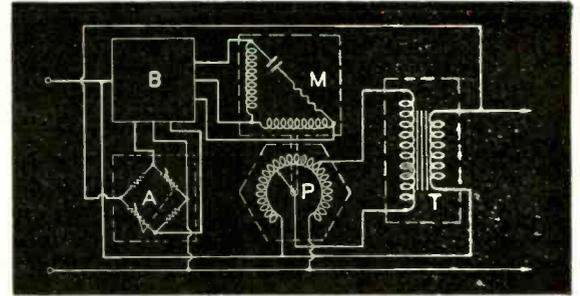
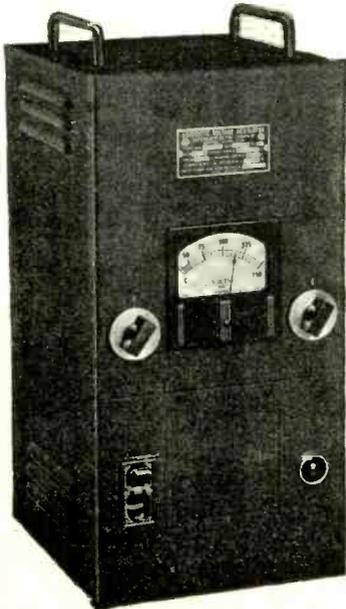
AUTOMATIC VOLTAGE REGULATORS

Maintains...

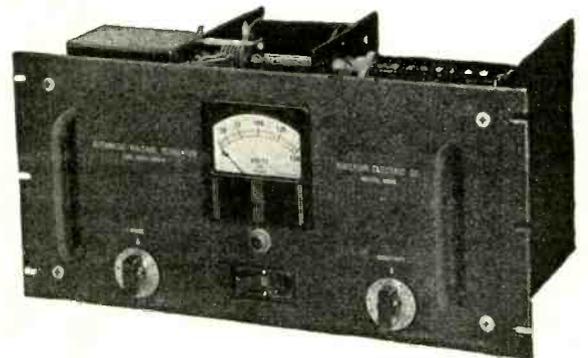
SECO Automatic Voltage Regulators are electrical instruments that provide an unequalled performance wherever an application requires a constant output voltage regardless of variations in input voltage or output load current. The outstanding performance is the result of combining a motor-driven POWERSTAT variable transformer with a special electronic detector bridge. Not only does this arrangement maintain a constant voltage to all types of loads but it offers many advantages not found in other types of voltage stabilizers.

- The operation of the SECO AUTOMATIC VOLTAGE REGULATOR is not affected by changes in the power factor of the load nor does it affect the power factor of the system.
- Actual tests performed under all types of adverse conditions have shown that the SECO regulator has absolutely no waveform distortion.
- There are no critical mechanical adjustments once the SECO regulator is installed.
- SECO regulators have the same high efficiency found in POWERSTAT variable transformers. For most conditions, it is as high as 98%.
- Although not instantaneous, the SECO regulator is extremely rapid in correcting line voltage variations. Most standard units are approximately ten times as fast as an induction regulator.
- The output voltage is adjustable over a wide range by means of a knob on the panel.

SVR4101-H . . . This unit has the same electrical characteristics as the 4101-R but it is self-contained in a light weight, black wrinkled-finished cabinet for table or wall mounting. The 4101-H is representative of the entire line of SECO AUTOMATIC VOLTAGE REGULATORS. Its physical dimensions and weight are smaller and lighter than any other voltage stabilizer of comparable rating. These features plus others such as a quick trip magnetic circuit-breaker, "on-off" switch, pilot light, and easily read voltmeter make the SECO REGULATOR indispensable in many factory and laboratory applications.



SCHEMATIC DIAGRAM illustrates the principle of operation of the electronically-controlled SECO Automatic Voltage Regulator. When the detector bridge (A) notes a variation from the nominal output voltage (set by means of a knob on the front panel) it immediately relays the message through the thyatron tube control circuit (B) to the Motor (M) driving the POWERSTAT variable transformer (P). The highly-damped synchronous reversible motor quickly acts to drive the POWERSTAT to a position where the incoming line is boosted or bucked through the auxiliary transformer (T) to the predetermined output voltage value. When this value is reached, the detector bridge is at balance and calls for no further correction.

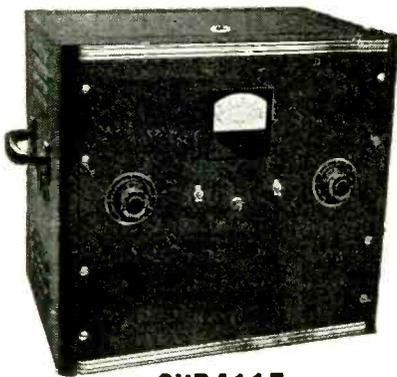


SVR4101-R

Many types of electronic apparatus such as radio transmitters require the maintenance of reasonably close line voltage tolerance in order to obtain proper equipment operating characteristics. SECO AUTOMATIC VOLTAGE REGULATOR type SVR4101-R is ideal for this task. Both the control circuit and power supply are mounted in a standard 19 x 8 $\frac{3}{4}$ inch relay rack panel for installation as a component part of existing equipment.

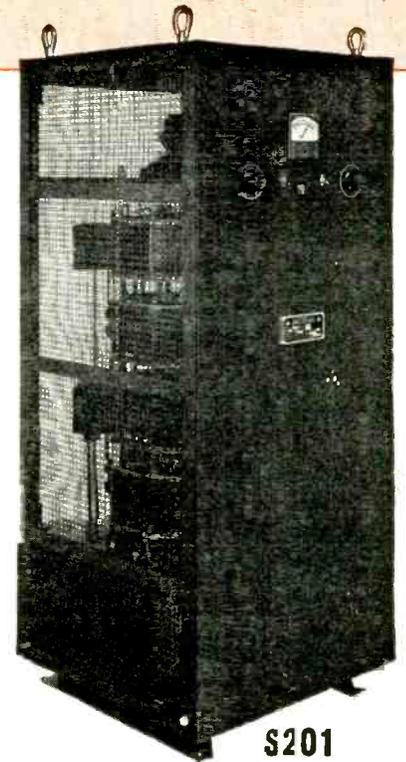
... Constant Voltage

S201 . . . A special SECO Automatic Voltage Regulator built to exacting demands for operation in tropical climates, type S201 provides an example of what SECO can do when units are to be supplied for extraordinary service. Designed to operate from a three phase 50 cycle source, this particular SECO regulator maintains a constant 230 volts output for an incoming line variation of 195 to 255 volts. Its continuous current rating is 188 amperes which means a total capacity of 75 KVA. All components are thoroughly impregnated with special varnish to prevent damage from fungus growth or other deterrents.



SVR4115

SVR4115 . . . To further emphasize the compactness and the large amount of power controlling capabilities packed into a SECO regulator, the SVR4115 is pictured. With outside dimensions of only 19 x 21 x 15 inches, this SECO automatic voltage regulator will maintain a constant 115 volts to a load of 15 KVA. SVR4115 is an example of how large capacity SECO regulators may be employed to maintain a constant voltage for insuring proper operation of motors, electric furnaces, heater units and other factory equipment that is critical of line voltage.



S201

SPECIAL APPLICATIONS

No matter what capacity your particular voltage control application requires, there is a SECO Automatic Voltage Regulator to fulfill the need. Although standard models are available in numerous single and three phase types, special units can be designed to accommodate any unusual mechanical or electric requirements. On these pages are illustrated a few of the standard SECO regulators together

with a photograph of a unit built for a specific application. The illustrations do not give a complete picture of the variety of SECO Automatic Voltage Regulators but they do show the reasons why SECO regulators have found wide use in maintaining constant voltage to all types of electrical equipment.

STANDARD SECO REGULATOR RATINGS

Type	Input Voltage Range for Nominal Output Voltage	Nominal Output Voltage	**Output Voltage Range	Phase	Connection	Max. Ratings		***Rate of Correction sec/Volt.
						Output Current	Output KVA	
SVR4101-H	95-135	115	100-120	1	1 phase	10	1.1	.15
SVR4101-R1	95-135	115	100-120	1	1 phase	10	1.1	.15
SVR4102	95-135	115	100-120	1	1 phase	20	2.2	.15
SVR4106	95-135	115	100-120	1	1 phase	52	6	.15
SVR4115	95-135	115	100-120	1	1 phase	130	15	.15
SVR4205	195-255	230	210-240	1	1 phase	22	5	.10
SVR4209	195-255	230	210-240	1	1 phase	39	9	.10
SVR4228	195-255	230	210-240	1	1 phase	120	27.5	.10
SVR4407	380-500	440	400-480	1	1 phase	16	7	.05
SVR4418	380-500	440	400-480	1	1 phase	40	17.5	.05
SVR6910-Y*	195-255	230	210-240	3	wye	25	10	.10
SVR6915-Y*	195-255	230	210-240	3	wye	38	15	.10
SVR6920-Y*	195-255	230	210-240	3	wye	50	20	.10
SVR6945-Y*	195-255	230	210-240	3	wye	113	45	.75
SVR6958-Y*	195-255	230	210-240	3	wye	145	58	.75
SVR6419-Y*	380-500	440	400-480	3	wye	16	12	.05
SVR6417-Y*	380-500	440	400-480	3	wye	22	17	.05
SVR6425-Y*	380-500	440	400-480	3	wye	33	25	.05
SVR6450-Y*	380-500	440	400-480	3	wye	66	50	.38
SVR6475-Y*	380-500	440	400-480	3	wye	100	75	.38

* These three-phase regulators are arranged so that the three phases are regulated together according to and by control from one phase.

** This output voltage range is obtainable when the input voltage is equal to the specified nominal output voltage.

*** This rate is computed from the time required for correction when a 2 volt line variation occurs.

1 This regulator is supplied on a standard 8 1/4 inch x 19 inch wide relay rack panel. Control circuits of other types can be supplied for rack mounting and connection to remote power circuit upon order.

INFORMATION REQUIRED FOR QUOTING

Be sure to include the following information when a request is made for quotations or recommendations regarding a SECO Automatic Regulator.

1. Frequency
2. Single or poly-phase
3. Types of load encountered (motors, heaters, electronic equipment)
4. Duty Cycle
5. Rapidity of line voltage fluctuations for which regulator must correct (e.g. gradual change during day; or rapid changes caused by motor or furnace loads frequently switched on and off the supply line).
6. Approximate range of input line voltage encountered.
7. Range of output voltage desired.
8. Nominal (most usually required) output voltage.
9. Maximum load current.
10. Speed of correction desired (seconds per volt change).
11. Method of mounting (e.g. table or wall mounted—to be incorporated as a component part of rack equipment).
12. Finish of cabinet or panel desired (black, black-wrinkle, gray, gray-wrinkle, or steel-blasted).
13. Special information such as ambient temperature if in excess of 40 degrees C, unusual atmospheric conditions, etc.

We warrant SECO Automatic Voltage Regulators to be free from defects in material and workmanship. Within one year of date of purchase we will repair or replace without charge any unit returned prepaid that proves by our examination to be defective. Units showing evidence of having been used improperly are not subject to this warranty.



THE
VOLTBOX

A-C Power Supply

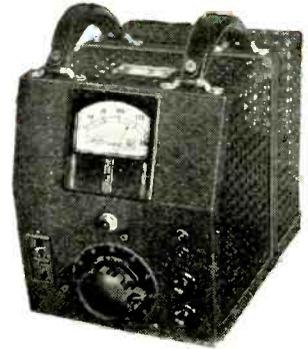
UNREGULATED

The VOLTBOX a-c power supply is a single instrument that eliminates the "headache" of collecting a multitude of instruments prior to conducting variable a-c voltage tests. Housed in a light-weight, durable, black wrinkle-finished cabinet are all the required components. There is the POWERSTAT variable transformer to supply any voltage from zero to above line by finger-tip adjustment of a knob. Accurate voltage setting is assured by a large 4 inch, easily read voltmeter which has an accuracy of 1%. A combination quick trip magnetic circuit-breaker and "on-off" switch prevents damage from overloads and does away with the necessity of removing the input plug when the VOLTBOX is not in use. A pilot light indicates when the VOLTBOX is energized. These unregulated models are intended for use on fairly stable, 50/60 cycle, single phase lines. Various ratings available are:



REGULATED

When the incoming line voltage does not fluctuate to any appreciable extent the UNREGULATED VOLTBOX is the ideal instrument to use. However; if the line is unstable or a constant output voltage is absolutely necessary, the REGULATED VOLTBOX is recommended. It is similar in every detail to the unregulated types except that a voltage stabilizer is included to provide the constant voltage feature. The REGULATED VOLTBOX is designed to maintain an output voltage constant to within $\pm 1\%$ for a total primary variation of 30%. For example; if the REGULATED VOLTBOX is set to deliver 45 volts, it will maintain this voltage within 1% although the input voltage might vary between 95 and 125 volts. Since the voltage stabilizer introduces wave-form distortion varying between 12 and 20% depending upon the load and line voltage, a SECO automatic voltage regulator should be used in conjunction with an UNREGULATED VOLTBOX if this condition is objectional.



Designated as R-500 the REGULATED VOLTBOX is rated:
INPUT: 95-125 volts, 60 cycles, 1 phase
OUTPUT: 0-135 volts, 4.0 amperes.

	U-800	U-1000	U-2000	U-2400
INPUT.....	230	115	115	230
OUTPUT VOLTAGE RANGE.....	0-270	0-135	0-135	0-270
MAX. OUTPUT CURRENT.....	3.0 amps	7.5 amps	15 amps	9 amps

SECO CUSTOM-BUILT EQUIPMENT



SECO REMOTE POSITIONER

This instrument affords a method of remotely controlling a POWERSTAT variable transformer with a high degree of accuracy. Servo-operation is achieved by turning the dial of the remote controller causing the Motor-driven POWERSTAT to follow in accordance with the dial position. Control wires between the "Positioner" and the POWERSTAT act as an "electrical flexible shaft." Either a single or a group of POWERSTATS may be controlled by a "Positioner."

Throughout the electrical industry there are certain classes of equipment that must be custom-built to each customer requirement. It is not only impossible to carry the apparatus in stock but it is exceedingly difficult to catalog list standard units. In addition, each application entails a variety of possible circuits necessitating direct consultation with an engineer familiar with all the possibilities of the apparatus. Equipment by SECO which falls into this category is listed as follows - - -

Powerstat Theater Dimmers

With its smooth control, power saving capabilities, and small size, the POWERSTAT Dimmer is ideal for theater lighting control. In contrast to the rheostat method of control, there is negligible loss of power and the brilliancy of individual or banks of lights is not affected by the number being operated. POWERSTAT Theater Dimmers are custom-built to meet each need. Both manual and remote control units are available.

OTHER EQUIPMENT . . .

Where high quality workmanship and superior electrical performance is of the utmost importance, it is recommended that the SECO engineers be consulted regarding REGULATED D-C POWER SUPPLIES . . . SATURABLE REACTORS . . . FIXED-RATIO TRANSFORMERS. At your service are trained engineers who will gladly design apparatus to meet your need.

BULLETIN
NO. 150



SUPERIOR

ELECTRIC

C O M P A N Y

713 LAUREL STREET,

BRISTOL, CONNECTICUT, U.S.A.

NO MATTER WHAT ELECTRONIC TUBE YOU NEED

Westinghouse *can supply it*

In these four pages are listed the complete line of Westinghouse industrial and transmitter type tubes. For your convenience, the most important characteristics of each tube are classified to help you determine the tubes you require. More complete technical data may be ob-

tained from the new Westinghouse "Easy Guide", or from individual tube data sheets. Ask your nearest Westinghouse Tube Distributor, or Westinghouse District Office for this literature. Or write Electronic Tube Sales Department, Westinghouse Electric Corporation, Bloomfield, N. J.



WL 767
WL 773
WL 775



WL 734



SR 50
SR 53

PHOTOTUBES

Type Number	Spectral Ranges Au.	Vacuum or Gas	Cathode Surface	Sensitivity Microamperes per lumen	Anode Volts Max.	List # Price	Data Sheet
IP29	4000-9000	Gas	S3	40	100	2.55	86-055
SR-50	4000-11000	Vac.	S1	15	500	5.00	
SR-53	1000-11000	Vac.	S1	25	500	7.50	
SK-60	4000-11000	Gas	S1	60	90	5.00	86-059
SK-63	4000-11000	Gas	S1	125	90	7.50	
WL-734	4000-11000	Vac.	S1	15	500	2.60	86-070
WL-767	2000-3150	Vac.	Zirconium	.....	500	50.00
WL-773	2000-3675	Vac.	Thorium	500	50.00	86-080
WL-775	2000-3000	Vac.	Tantalum	.....	500	50.00
WL-789	Below 2100	Vac.	Platinum	.....	500	75.00
WL-868	4000-11000	Gas	S1	90	90	2.15	:
WL-917	4000-12000	Vac.	S2	20	500	2.50	
WL-918	4000-12000	Gas	S2	150	90	2.60	
WL-919	4000-12000	Vac.	S2	20	500	2.95	
WL-920	4000-11000	Gas	Caesium	75	90	2.95	
WL-921	4000-12000	Gas	S2	135	90	1.55	
WL-922	4000-12000	Vac.	S2	20	500	1.55	
WL-923	4000-12000	Gas	S2	135	90	1.25	
WL-924	4000-11000	Gas	S1	55	90	2.00	
WL-925	4000-11000	Vac.	S1	15	250	1.25	
WL-926	4000-9000	Vac.	S3	6.5	500	3.00	
WL-927	4000-11000	Gas	S1	125	90	2.45	
WL-928	4000-11000	Gas	S1	65	90	2.00	
WL-929	3000-6300	Vac.	S4	45	250	2.00	
WL-930	4000-12000	Gas	S2	135	90	2.00	
WL-931A	3000-6300	(Multiplier)	S4	*	1250	9.25	

KENOTRONS—Vacuum Rectifiers

Type Number	Filament		Volts Peak Inverse	Anode Amp. Peak	Amp. Average	Type of Cooling	List # Price	Data Sheet
	Volts	Amperes						
WL-456	11.0	20	140000	0.50	0.06	Air	95.00	86-305
WL-579B	2.5	6	20000	0.27	0.025	Air	9.50	86-315
RO-585	5.0	1.1	1500	0.011	0.003	Air	12.00	86-320
WL-608	10.0	10	60000	0.20	0.06	Oil	120.00	86-325
WL-612	10.0	50	150000	0.75	0.24	Air	195.00	86-329
WL-613	11.0	10	140000	0.20	0.06	Air	150.00	86-330
WL-616	20.0	21.5	150000	1.00	0.25	Air	140.00	86-333
WL-660	10.0	10	230000	0.10	0.03	Air	200.00	86-338
WL-836	2.5	5	5000	1.0	0.25	Air	7.00	:
WL-8020	5.0	6	40000	0.75	0.1	Air	15.00	:

* Sensitivity 1.5 amp. per lumen at 75 volts per stage; 10 amp. per lumen at 100 volts per stage.
Prices subject to change without notice.
: : For data sheet refer to tube type number.



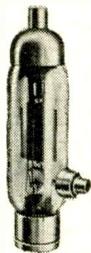
WL 579B

WESTINGHOUSE

PIOTRONS—Modulators, Amplifiers, Oscillators



WL 807



WL 460



WL 803



WL 895R



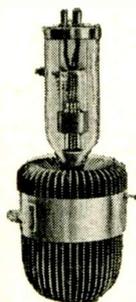
WL 473



WL 889A



WL 891



WL 892R

Type Number	Filament		Plate DC** Volts	DC** MA	Dissipation Watts**	Output Watts Class C	Amplification Factor	Max. MC for 100% Input	List # Price	Data Sheet
	Volts	Amps.								
WL-195	10.0	3.25	3000	150	125	325	12	15	26.00	86-110
WL-196	10.0	3.25	3000	150	125	325	35	15	26.00	86-111
WL-203A	10.0	3.25	1250	175	100	120	25	15	10.00	86-115
WL-201A	11.0	3.85	2500	275	250	450	23	3	85.00	86-116
WL-207	22.0	52.00	15000	2000	10000	20000	20	1.6	220.00	86-119
WL-211	10.0	3.25	1250	175	100	130	12	15	10.00	86-122
WL-285	10.0	3.25	1350	200	100	170	12	20	15.00	
WL-460	10.0	3.85	3000	200	150	400	18	30	26.00	86-130
WL-463	11.0	5.0	2500	275	200	550	22	30	37.00	86-133
WL-468	10.0	3.85	2500	200	150	400	18	6	21.75	86-138
WL-473	6.0	60.0	3000	1400	2500	3900	22	60	125.00	86-143
RH-507	2.0	0.06	9	::	.....	.....	0.8	.....	21.50	86-150
WL-801A	7.5	1.25	600	70	20	25	8	60	2.60	::
WL-802	6.3	0.9	600	60	10	15	.....	30	3.50	86-165
WL-803	10.0	5.0	2000	175	125	225	.....	20	25.00	86-166
WL-805	10.0	3.25	1500	210	125	215	50	30	10.00	86-168
WL-806	5.0	9.5	3000	200	150	450	12.6	30	22.00	86-169
WL-807	6.3	0.9	600	100	25	40	.....	60	1.95	86-170
WL-808	7.5	4	1500	150	50	150	47	30	7.75	::
WL-809	6.3	2.5	750	100	25	55	50	60	2.50	86-172
WL-810	10.0	4.5	2000	250	125	375	36	30	13.50	86-173
WL-811	6.3	4.0	1250	125	40	115	160	60	3.50	86-174
WL-812	6.3	4.0	1250	125	40	115	29	60	3.50	86-175
WL-813	10.0	5.0	2000	180	100	260	.....	30	18.00	86-176
WL-814	10.0	3.25	1250	150	50	130	.....	30	11.00	86-177
WL-815	6.3	1.6	400	150	20	41	.....	150	4.50	86-178
WL-826	7.5	4	1000	65	60	25	31	250	12.00	::
WL-828	10.0	3.25	1250	160	70	150	.....	30	14.25	86-185
WL-829B	6.3*	*1.125	750	210	40	87	.....	200	17.00	::
WL-832A	6.3*	8*	750	90	15	26	.....	200	13.00	::
WL-833	10.0	10.0	4000	500	400	1110	35	20	62.50	86-188
WL-837	12.6	0.7	500	80	12	20	.....	20	2.80	86-190
WL-838	10.0	3.25	1250	175	100	130	51	30	9.00	86-191
WL-845	10.0	3.25	1250	120	100	57	5.3		10.00	86-195
WL-849	11.0	5.0	2500	350	400	560	19	3	120.00	86-199
WL-851	11.0	15.5	2500	1000	750	1750	20.5	3	160.00	86-201
WL-860	10.0	3.25	3000	150	100	200	.....	30	18.75	86-205
WL-861	11.0	10.0	3500	350	400	800	.....	20	155.00	86-206
WL-880	12.6	320.0	10500	6000	20000	45000	20	25	350.00	86-210
WL-889A	11.0	125.0	8500	2000	5000	11000	21	50	160.00	86-215
WL-889RA	11.0	125.0	8500	2000	5000	11000	21	25	280.00	86-216
WL-891	22***	60	12000	2000	6000	12000	8	1.6	170.00	86-218
WL-891R	22***	60	19000	2000	4000	11000	8	1.6	315.00	86-219
WL-892	22***	60	15000	2000	10000	20000	50	1.6	170.00	86-220
WL-892R	22***	60	12500	2000	4000	11000	50	1.6	315.00	86-221
WL-893A	20†	183	20000	4000	20000	50000	36	5	450.00	86-222
WL-893AR	20†	183	20000	4000	20000	50000	36	5	800.00	86-223
WL-895	19††	138	17000	9000	40000	100000	37	6	700.00	86-225
WL-895R	19††	138	17000	9000	20000	90000	37	6	1000.00	86-226

ELECTRONIC TUBES

PLIOTRONS—Modulators, Amplifiers, Oscillators

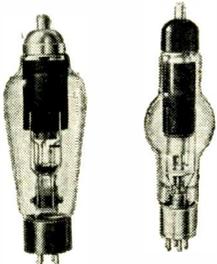
Type Number	Filament		Plate DC** Volts	DC** MA	Dissipation Watts**	Output Watts Class C	Amplification Factor	Max. MC for 100% Input	List # Price	Data Sheet
	Volts	Amps.								
WL-1623	6.3	2.5	750	100	25	55	20	60	2.50	::
WL-8000	10.0	4.5	2000	250	125	375	16.5	30	13.50	::
WL-8003	10.0	3.25	1350	250	100	250	12	30	12.00	::
WL-8005	10.0	3.25	1250	200	75	170	20	60	7.00	::
WL-8025A	6.3	1.92	1000	80	40	35	18	500	11.00	::

* Per unit, heater can be arranged to operate from either a 6.3 or 19.8 volt supply.
 ** Max ratings (CCS)—RF Amplifier and Oscillator Class C.
 *** Two filament strands in series with large post at neutral junction; operate in series or two phase.

† Six filament strands, connected each post to floating neutral. 61 amperes per strand.
 †† Three filament strands connected from black posts to neutral center post.
 R Indicates air-cooled radiator.
 ‡ Prices subject to change without notice.
 :: For data sheet refer to tube type number.

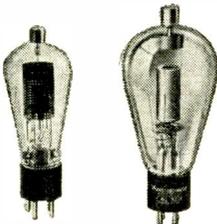
THYRATRONS—Grid Controlled Gas or Mercury Vapor Rectifiers

Type Number	Filament		Anode		Amp. Average	Gas	Control	List # Price	Data Sheet
	Volts	Amps.	V Peak Inverse	Amp. Peak					
WL-17	2.5	5	5000	2.0	0.5	Hg	Neg.	6.00	
WL-3C23	2.5	7.0	1250	6.0	1.0	Hg	Neg.	9.00	
WL-33	5.0	4.5	1000	15.0	2.5	Hg	Pos.	11.00	
WL-41	5.0	20.0	10000	75.0	12.5	Hg	Neg.	125.00	::
WL-57	5.0	4.5	1000	15.0	2.5	Hg	Neg.	13.50	
WL-81A	2.5	5.0	500	2.0	0.5	Inert	Neg.	11.00	
WL-105	5.0	10.0	2500	40.0	6.4	Hg	Neg.	37.00	
WL-172	5.0	10.0	2000	40.0	6.4	Hg	Neg.	35.00	
WL-411	5.0	20.0	2000	100.0	12.5	Hg	Neg.	70.00	86-405
WL-502A	6.3	0.6	1300	.5	0.1	Inert	Neg.	1.50	
KU-610	2.5	6.5	500	0.4	0.1	Inert	Pos.	17.50	86-110
KU-618*	Gold	Cath.	800	0.1	0.015	Inert	Pos.	9.50	86-415
KU-627	2.5	6.0	2500	2.5	0.64	Hg	Neg.	11.00	86-420
KU-628	5.0	11.5	2500	8.0	2.0	Hg	Neg.	22.00	86-421
WL-629	2.5	2.6	350	0.2	0.04	Inert	Neg.	4.50	86-122
WL-632A	5.0	6.0	1500	30.0	2.5	Hg	Neg.	16.00	86-425
KU-636	2.5	7.5	350	0.4	0.1	Inert	Neg.	15.00	86-429
WL-672	5.0	6.0	1500	30.0	2.5	Hg	Neg.	19.00	86-433
KU-676	5.0	10.0	2500	40.0	6.4	Hg	Neg.	31.00	86-437
WL-677	5.0	10.0	10000	15.0	4.0	Hg	Neg.	31.00	86-438
WL-678	5.0	7.5	15000	6.0	1.6	Hg	Neg.	40.00	86-439
WL-881	6.3	0.6	350	0.3	0.075	Inert	Neg.		::
WL-885	2.5	1.5	350	0.3	0.075	Inert	Neg.		::
WL-2050	6.3	0.6	1300	1.0	0.1	Inert	Neg.	1.35	86-448



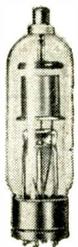
KU 676

WL 41

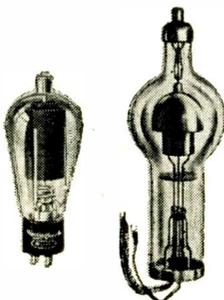


KU 627

WL 17



WL 872A



WL 32

WL 857B

PHANOTRONS—Gas and Mercury Vapor Rectifiers

Type Number	Filament		Anode		Amp. Average	Type of Cooling	List # Price	Data Sheet
	Volts	Ampere	V Peak Inverse	Amp. Peak				
WL-32	5.0	4.5	1000	15	2.5	Convection	9.00	::
WL-104	5.0	10.0	3000	40	6.4	Convection	27.50	::
WL-575A	5.0	10.0	15000	6	1.5	Convection	30.00	::
WL-670A	2.5	21	1000	9.5	6.0	Air	15.00	86-355
WL-816	2.5	2	5000	.5	.125	Air	1.00	::
WL-857B	5.0	30	22000	40	10.0	Forced Air	160.00	86-360
WL-866A/866	2.5	5	10000	1	0.25	Air	1.50	86-365
WL-869B	5.0	18	20000	10	2.5	Forced Air	100.0	86-368
WL-872A/872	5.0	7.5	10000	5	1.25	Air	7.50	86-371

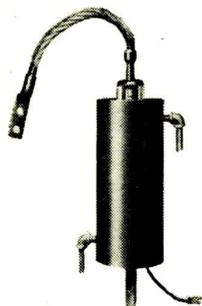
† Prices subject to change without notice.

:: For data sheet refer to tube type number

* Grid Glass tube.

IGNITRONS—Welder Control Service

Type Number	Size	R. M. S. Volts Range	Max. KVA Demand and Corresponding Ave. Current		Max. Ave. Current and Corresponding KVA Demand		Type Cooling	Lis # Price	Data Sheet
			KVA	AMPS	KVA	AMPS			
WL-651/656	C	200-600	1200	75.6	400	140	Water	75.00	86-160
WL-652/657	B	200-600	600	30.2	200	56	Water	51.00	86-161
WL-653B		2400	2400	135.0	1105	207	Water	220.00	86-162
WL-654/659		Replacement Only						50.00	::
WL-655/658	D	200-600	2400	192.0	800	355	Water	165.00	86-164
WL-679		2400	1200	75.0	600	113	Water	120.00	86-474
WL-681/686	A	200-600	300	12.1	100	22.4	Clamp.	30.00	86-476
WL-682		Replacement Only						33.00	



WL 651/656



WL 653B

IGNITRONS—Power Rectification Service

Type Number	D-C Output Voltage	Max. Ave. Amp. Per Tube		1 Min. Overload	Type Cooling	List # Price	Data Sheet
		Con- tinuous	2 Hour Overload				
WL-653B	300	200	300	400	Water	220.00	86-162
	600	150	225	300	Water		::
WL-679	300	100	150	200	Water	120.00	86-474
	600	75	112.5	150	Water	120.00	::



WL 655/658

MISCELLANEOUS

Type Number	Use	Volts RMS		Current			List # Price	Data Sheet			
		Breakdown	Max. Oper- ating	Max. 2 Sec.	Max. 10 Min.						
KX-612	Protector	300-500	230	50 Amps.	7 Amp.		10.00	86-960			
WL-710 WL-711 WL-712 WL-788 WL-896	Regulating Range Filaments Volts	Regulator	20-30 7-11 19-25 8-18 4-9	Current			3.00 3.00 3.00 3.00 3.00	86-970			
				Normal	Ave.	Per Volt Total					
									250 Ma	1.4 Ma	11 Ma
									500 Ma	4.0 Ma	12 Ma
				500 Ma	3.8 Ma	19 Ma					
250 Ma	1.7 Ma	10 Ma									
250 Ma	2.0 Ma	8 Ma									
WL-762	Pressure Indicating	10-13		0.3 Ampere			15.00	86-980			
OA3/VR75	Voltage Regulator	Cold	105	5-10	75	5	1.00	::			
OC3/VR105	Voltage Regulator	Cold	133	5-10	105	2	.90	::			
OD3/VR150	Voltage Regulator	Cold	185	5-10	150	4	.75	::			



KX 642



WL 710
WL 711
WL 712
WL 788
WL 896

Prices subject to change without notice.

:: For data sheet refer to tube type number.

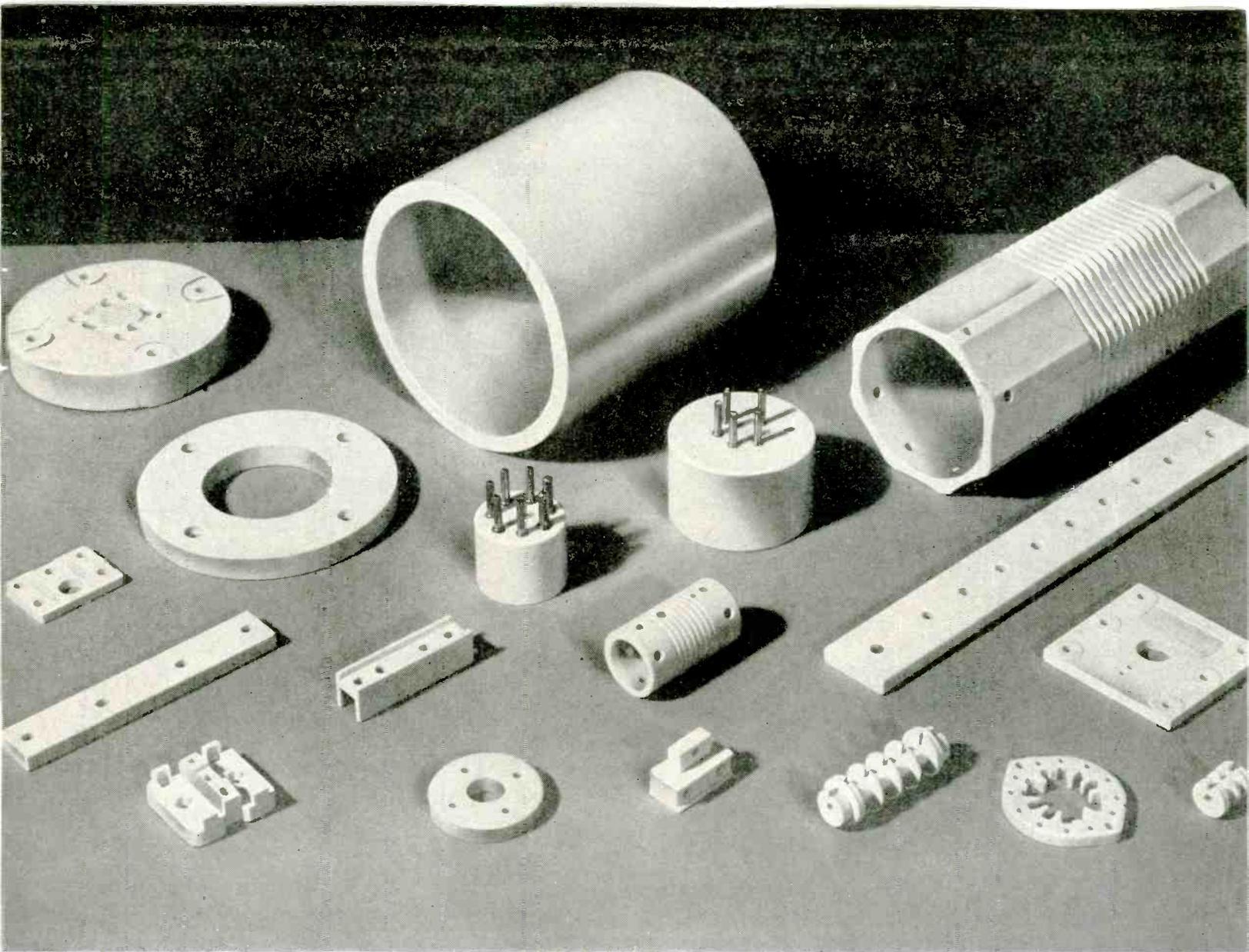
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ELECTRIC CORPORATION

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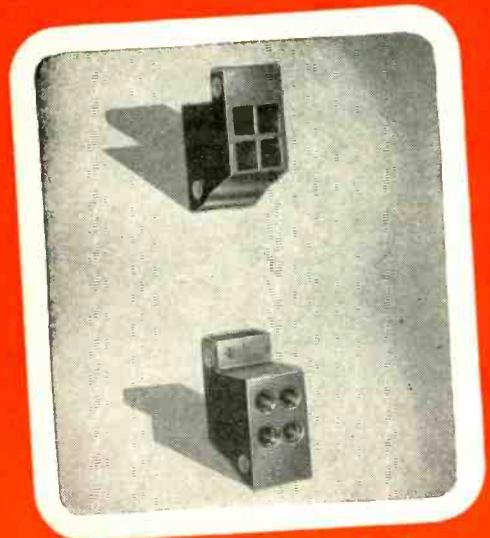
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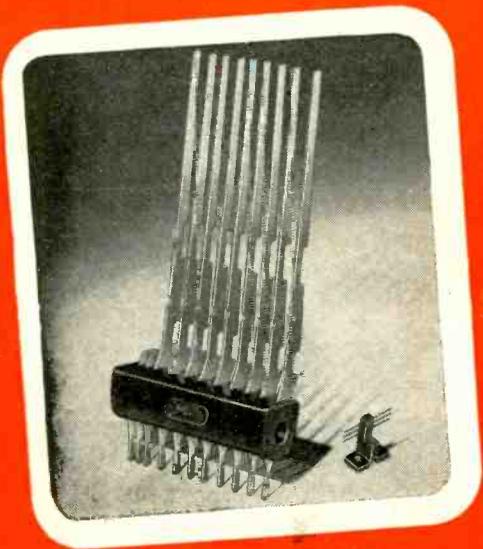
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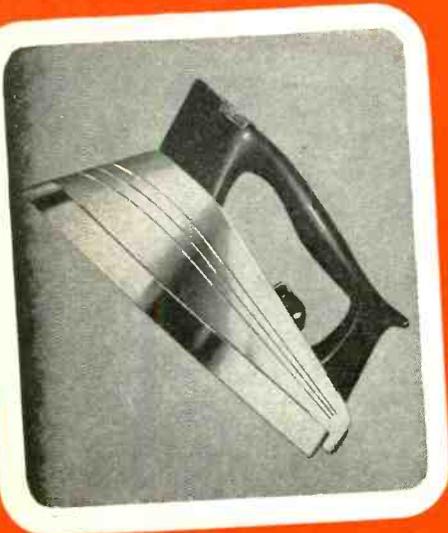
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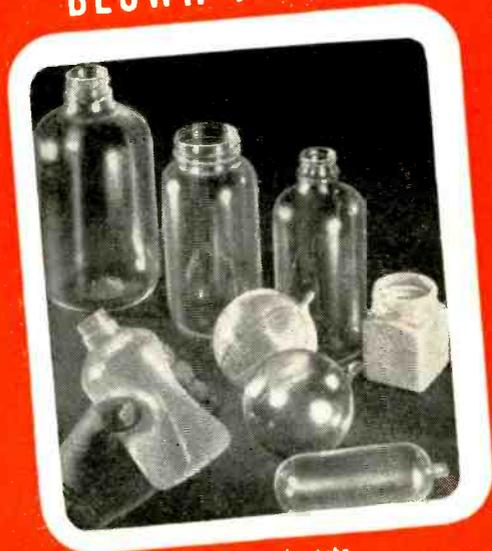
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Ethyl Cellulose • Polyethylene
Polystyrene

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Polystyrene

BLOWN ITEMS



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Polystyrene

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TUBE



Cellulose Acetate
Cellulose Acetate Butyrate
Ethyl Cellulose • Methacrylate
Polyethylene • Polystyrene

MACHINED PARTS



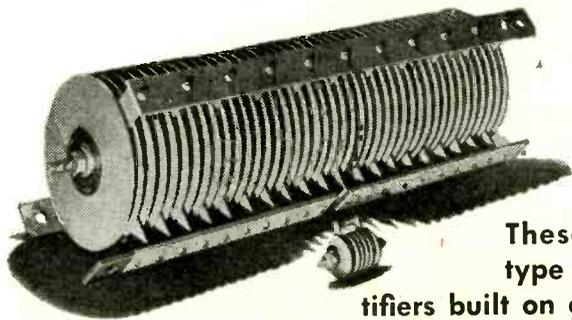
Cellulose Acetate
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SELENIUM RECTIFIERS

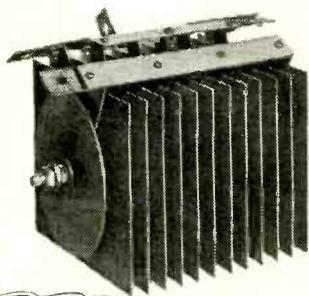
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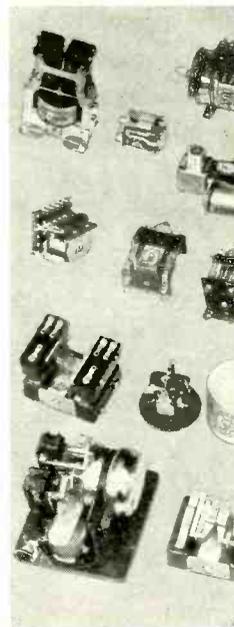
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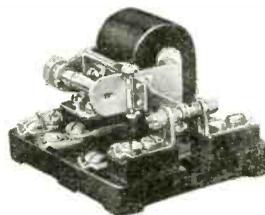
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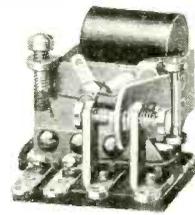
...for Electronic Control Equipment

Shown on these pages are some of the types of relays designed, developed and manufactured by Allied. In addition to these there are many other plus variations of these types for special applications. The Allied organization specializes in relays and similar electro-magnetic devices, and has a number of strategically-located plants devoted to the manufacture of these products. An engineering staff having the know-how of relay devices and control equipment will help you in recommending relay types for your applications. Complete and up-to-date test laboratories are available for setting standards of quality and for case study of special equipment. Write today. Your request will have our prompt attention.



Type B

The B is a single pole sensitive type relay particularly adaptable to applications where the source of power is limited. The base is of wax impregnated molded bakelite. Contact gap and spring tension are adjustable in the field. The magnetic structure of the B relay is a special heat treated alloy. Nominal rating .012 watts. Available AC or DC. Contact arrangement normally open, normally closed or double throw. Contact rating 2 amperes at 24 volts DC or 5 amperes at 115 volts AC. Weight 7 ounces. Length 2-3/4". Height 1-3/4". Width 2-3/8".



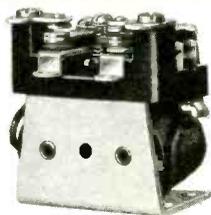
Type BG

The BG is a rugged, single pole, sensitive relay designed for long life and unflinching operation. Coils are sealed against humidity. The BG is available for DC service; contact arrangements are normally open, normally closed, or double throw. It is rated at approximately .050 watts. Contact rating is 2 amperes at 24 volts DC or 5 amperes at 110 volts AC non-inductive. Weight 2-3/4 oz. Length 1-3/8". Height 1-1/4". Width 1-3/4".



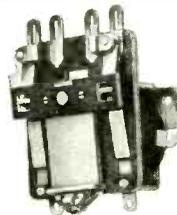
Type CN

The new CN relay is a power relay expressly designed for breaking heavy current. This unit incorporates molded bakelite insulation, greater electrical clearance and overall improved mechanical structure. The CN is a single pole relay available for AC or DC and can be furnished normally open or normally closed. Nominally rated at 3.5 watts. Contact rating is 50 amperes (75 amperes on CNS type with alloy contacts) at 24 volts DC, or 110 volts AC non-inductive. Weight 9-1/4 oz. Length 2-1/4". Height 2-1/2". Width 2".



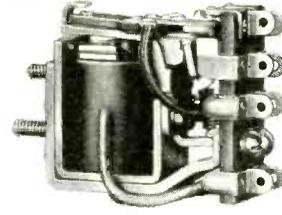
Type BOY

The dual coil double pole BOY shown above is a semi-sensitive DC relay. The BOY will operate from a low power supply, yet has the ruggedness and load breaking capacity of power relays. This unit can be supplied in three or four pole arrangements which are specified as DOY 9 and DOY 12, respectively. The BOY is nominally rated at .750 watts. Contact rating is 10 amperes at 32 volts DC or 115 volts AC, non-inductive. Weight 5 oz. Length 1-13/16". Height 1-7/8". Width 1-13/32".



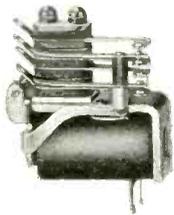
Type AH

The AH relay has universal applications. Although designed as an inexpensive relay it has many of the characteristics ordinarily found in more expensive types. The AH has a novel hinge arrangement which improves the magnetic circuit. A double pole relay, it can be furnished for AC or DC normally open, normally closed, double throw. Nominal rating, 1 watt. Contact rating is 5 amperes at 32 volts or 115 AC non-inductive. Weight 4 oz. Length 2-1/8". Height 1-3/8". Width 1-1/4".



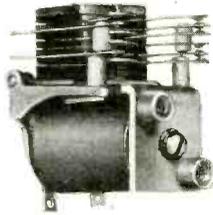
Type BJ

The BJ is a medium power double pole relay, which incorporates compactness and minimum weight. The BJ features excellent wipe and heavy contact pressure. This relay can be furnished in a three pole version. It is also available with ceramic insulation, which type is known as the BJC. Contact arrangement is normally open, normally closed, double throw. Available for AC or DC service. Nominal rating 2 watts. Weight of the BJ is 2 1/4 oz. Contact rating is 5 amperes at 24 volts DC or 110 volts AC, non-inductive. Length 2-5/16". Height 1-9/16". Width 25/32".



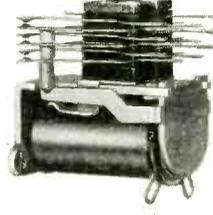
Type TSL

The type TSL relay for DC is one of the smallest of that class of relays known as the telephone type. It has a power rating of approximately one watt. The TSL can be supplied with bakelite or ceramic insulation and is available in several contact arrangements. Contact rating of this relay is 1 ampere at 32 volts DC or 115 volts AC non-inductive. Weight less pile-up is 1 ounce. Length 1-9/32". Height max. 1". Width 3/4".



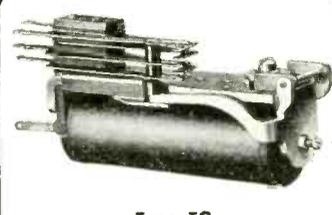
Type TKL

The type TKL relay for DC is another small telephone type relay which is excellent for applications in which space is at a premium. The TKL has a nominal power rating of 1.5 watts depending on the contact arrangement. It is available up to four pole double throw with bakelite insulation. Ceramic or mycalex insulation also available. Contact rating is 1 ampere at 24 volts DC or 115 volts AC non-inductive. Weight 1-1/2 ounces less pile-up. Length 1-7/16". Width 15/16". Height (max.) 1-7/16".



Type SK

The SK relay for DC is an improved version of the small telephone types. As the illustration above indicates although the SK occupies as small an area as most relays of this type it features a larger coil. Another plus feature of the SK is the novel hinge arrangement which improves the magnetic circuit. Various arrangements and several types of insulation are available. Normal power rating .500 watts. Contact rating is 1 ampere at 24 volts DC or 115 volts AC, non-inductive. Approximate maximum weight 2-1/8 ounces. Length 1-19/32". Maximum height 1-17/32". Width 31/32".



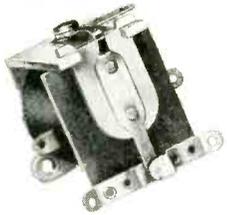
Type TG

The type TG relay is a telephone type unit which has a great deal of flexibility. Various contact combinations are available and the relay can be furnished for time delay, high speed operation and many other special arrangements. Mountings are designed to conserve all possible space, yet permit ready adjustments without removing relays from their mountings. Contact ratings are .50 watts, (maximum, 1 ampere). Weight 8 to 12 ounces. Length 4 inches. Height (max.) 1-7/32". Width 1-5/8".

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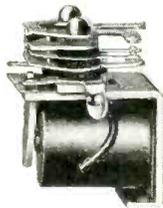


ALLIED CONTROL CO., Inc.



Type E

The E single pole relay for DC is designed for electronic controls in which space limitation is a critical factor. The E relay is small enough to fit into an area approximately one cubic inch. This unit is available in a single pole, normally open, normally closed, or double throw arrangement. Nominal power rating .750 watts. Standard silver contacts carry 1 ampere at 24 volts DC or 115 volts AC, non-inductive. Weight 1-1/8 ounces. Length 1-1/16". Height 15/16". Width 1-1/16".



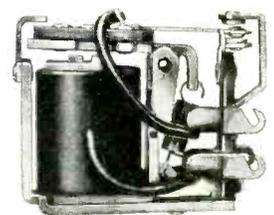
Type F

The F relay is a single pole relay for DC particularly adaptable in applications where space is limited. Bakelite insulation is used. May be supplied with other contact combinations. Silver is standard contact material, alloy contacts can be substituted. Contact rating is 3 amperes at 2 volts DC or 115 volts AC non-inductive. Nominal power rating is .750 watts. Weight 1-7/8 ounces. Length 1-3/32". Width 1-3/16". Height 1-11/32".



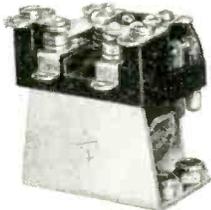
Type CR

The CR relay shown above is a single pole normally open double break arrangement. The CR uses molded Bakelite throughout. Standard contacts are silver, alloy contacts can be supplied. Contact rating with 1/4" silver contacts is 30 amperes at 24 volts DC or 110 volts AC non-inductive. The single pole weighs 3 ounces and is 1-33/64" high; 1-3/32" wide and 1-25/32" long. Also available in other contact combinations.



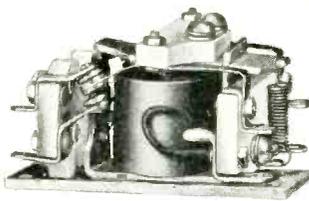
Type AS

The AS single pole relay is a small, light, medium power relay. It has a nominal power rating of 1 watt. The AS is insulated from the frame. Another version, the AR, is alike in all characteristics except that it is grounded to the frame. The AS has many applications in all types of controls and is available in AC or DC. Contact arrangement is normally open, normally closed or double throw. Contact rating is 5 amperes at 24 volts DC or 110 volts AC non-inductive. Weight 50 grams. Length 1-5/8". Height 1-3/16". Width 15/16".



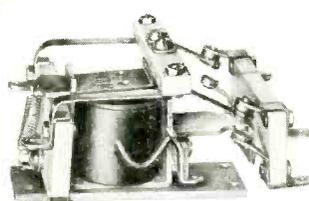
Type BO

The BO relay is an all purpose, double pole power relay. Like other Allied types it is ruggedly designed, yet features compactness and minimum weight. This relay utilizes molded bakelite insulation throughout. The BO can be furnished for AC or DC normally open, normally closed, double throw. Nominal rating 2.5 watts. A three and four pole combination is available which is known as the DO 9 and DO 12. Contact rating 15 amperes at 24 volts AC or 110 volts DC, non-inductive. Weight 4 oz., Length 1-5/8". Height 1-7/8". Width 1-13/32".



Type HR

The HR relay is a superior designed high frequency two pole unit. Wide spaced spring contacts have been constructed to give ample wipe and to handle currents far in excess of rated load. This relay can be furnished for AC or DC and supplied normally open, normally closed or double throw. Nominal rating 3 watts. There is a three pole version with the same characteristics which is known as the HRX. Contact rating is 15 amperes at 32 volts DC or 115 volts AC. Weight 6 ounces. Length 2-11/16". Height 1-1/2". Width 1-5/8".



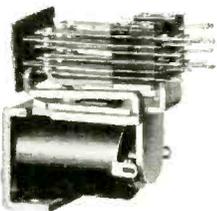
Type HF

The HF relay is a two pole radio frequency unit, especially designed to meet the rigid requirements of modern aircraft, mobile, marine and industrial applications. Standard contacts are silver with alloy contacts available for special applications. Nominal rating 3 watts. This relay may be furnished normally open, normally closed or double throw. Contact rating is 15 amperes at 24 volts DC or 115 volts AC. This unit can be furnished for AC or DC service. Weight 7 ounces. Length 3-3/16". Height 1-1/2". Width 2-5/16".



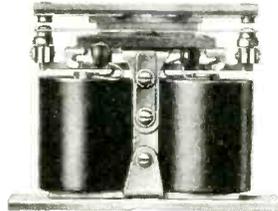
Type BN

The BN is a six pole, double throw, heavy duty type, which embodies Allied's many advanced engineering features such as: individual adjustment of contacts, compactness, and minimum weight. The BN may be furnished for AC or DC, normally open, normally closed, or double throw. Nominal rating 3.5 watts. Contact rating is 10 amperes at 32 volts DC or 115 volts AC, non-inductive. Weight 11 oz. Length 3". Height 2-9/16". Width 1-23/32".



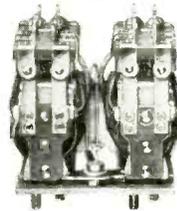
Type U

The Type U relay is an improved multiple-type relay which has many applications because of its ruggedness and ability to operate even under severe service requirements. The U is available with a number of control arrangements and is available in either AC or DC. Nominal power rating is approximately 2-1/2 watts, depending on the pile-up arrangement. Standard contacts are rated at 5 amperes at 24 volts DC or 115 volts AC non-inductive. Weight 5.8 ounces. Length 2-7/32". Height 2-1/4". Width 1-1/8".



Type DS

The DS differential relay for DC is of dual coil construction with the armature pivoted centrally between the coils and all contacts normally open. When an equal amount of current is applied to coils of equal resistance or an equal amount of power is applied to coils of unequal resistance—the armature is held in a neutral position with all contacts normally open. When a suitable differential of current occurs the relay will operate to close the contacts associated with that circuit only. Contact rating is 2.5 amperes at 24 volts DC or 115 volts AC non-inductive. Length 2-3/8". Height 1-13/16". Width 1-3/16".



Type BJU

The type BJU relay is a four pole double throw latching relay for intermittent duty. When either relay is energized one set of contacts will close and the other set will open, working off the latch switch, which is similar to a toggle switch arrangement, assuring that the contacts on one relay remains mechanically and electrically closed. Available in AC or DC. Nominal power rating is 2 watts. Contact rating 5 amperes at 24 volts DC or 110 volts AC non-inductive. Weight 6-1/2 ozs. Length 1-15/16". Width 1-7/8". Height 1-9/16".



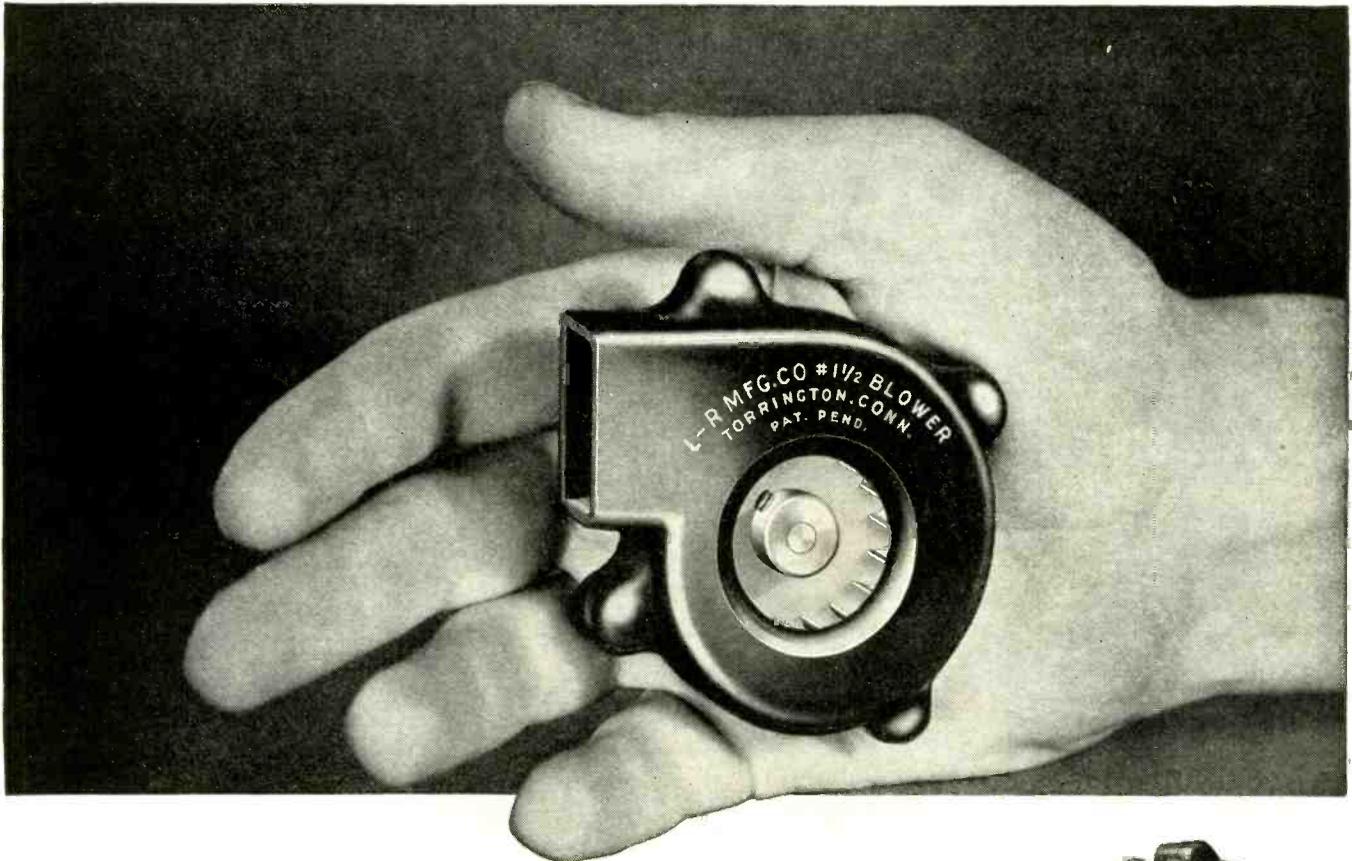
HERMETIC SEALED

Most Allied relays can be hermetically sealed when required to meet severe conditions of dust, dirt, moisture, insects and possibly to prevent tampering. Allied has up-to-date facilities for sealing relays, including a special air-conditioned section for complete cleanliness in the sealing operation. Relays can be furnished with plug-in base or solder terminals.

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WEIGHT: 2½ oz.; **CAPACITY:** 15 C.F.M. at 8000 R.P.M.; **CONSTRUCTION:** Housing of high impact phenolic plastic. Wheel is turbo-type cadmium-plated steel; **SIZE:** 2⅝" long x 6¼" wide x 3" high.

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MODEL 2

Weight: (less motor) 5 oz.
Output: 25 C.F.M. at 8000 R.P.M.
Height: 3¼"



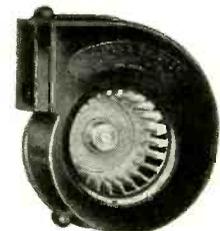
MODEL 2½

Weight: (less motor) 5½ oz.
Output: 50 C.F.M. at 8000 R.P.M.
Height: 4⅝"



MODEL 3

Weight: (less motor) 12½ oz.
Output: 270 C.F.M. at 8000 R.P.M.
Height: 6⅝"



RIPLY COMPANY, INC.

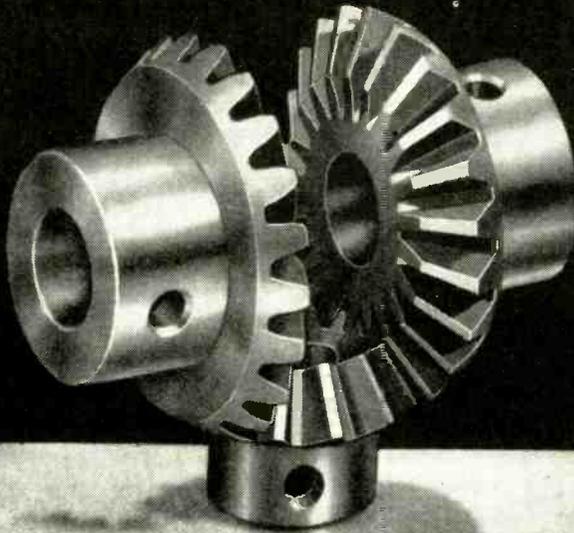
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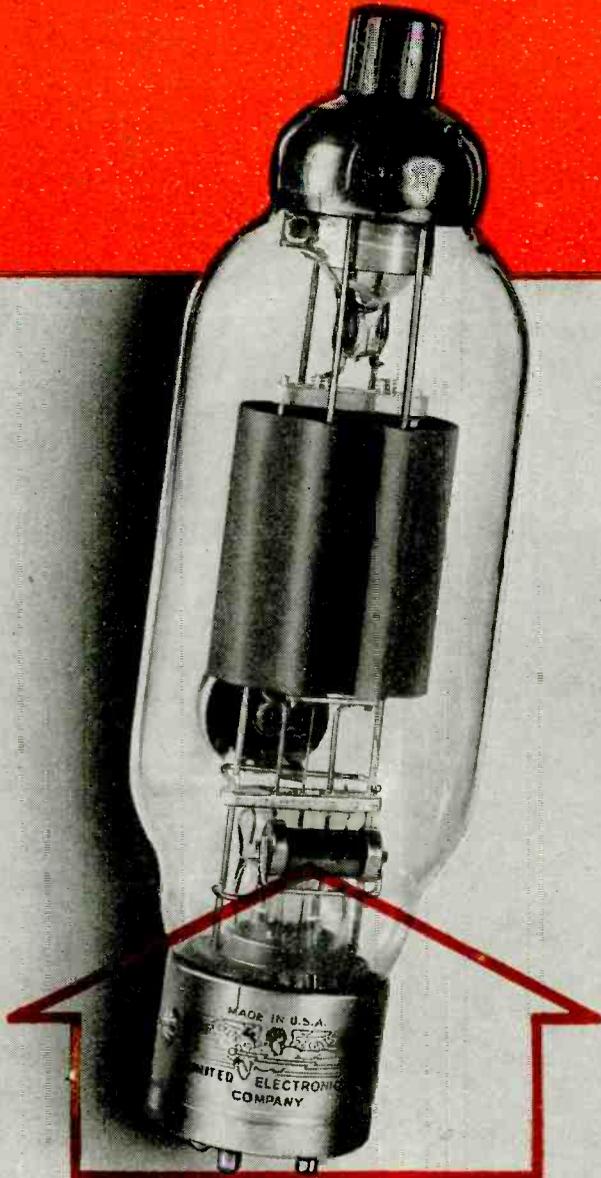
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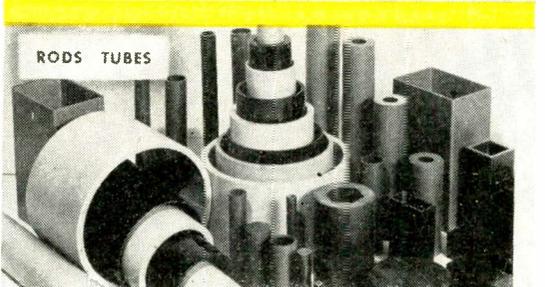
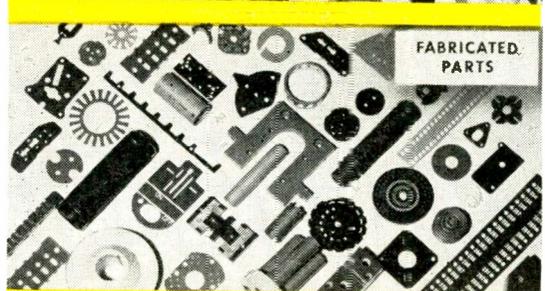
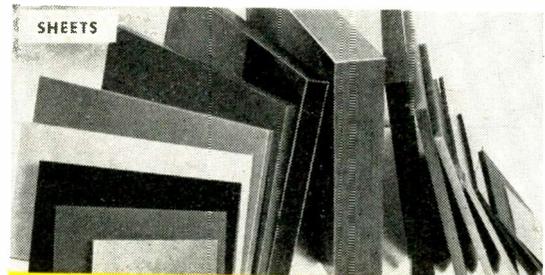
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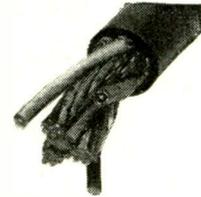
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CoX-3BD-250	1/4" cu tube	Ceramic Disc	1"	CT	13.3	77.5	98.5
CoX-4FD-105	3/64" cu tube	Teflon Disc	3/4"	CT	10.1	100.0	98.5
CoX-5GD-050	#16 AWG Solid	Styrene Disc	3/4"	CT	6.7	156.0	97.0
CoX-1FF-375	3/8" cu tube	Teflon Fabricated	3/4"	CT	38.1	30.0	88.0
CoX-2FF-250	1/4" cu tube	Teflon Fabricated	3/4"	CT	22.6	51.5	87.5
CoX-3FF-050	#16 AWG Solid	Teflon Fabricated	1/4"	CT, RS	16.5	72.0	85.0
CoX-5FF-026	#22 AWG CuWeld	Teflon Fabricated	7/8"	PS, RS, A	8.5	156.0	78.0
CoX-3DF-064	#14 AWG Solid	Styrene Fabricated	3/8"	CC, WP, PS	18.0	75.0	76.0
CoX-4DF-064	#14 AWG Solid	Styrene Fabricated	1/2"	CC, WP, PS	15.0	90.0	76.0
CoX-3CF-050	#16 AWG Solid	Cellulose Fabricated	1/4"	CC, WP, PS	23.0	67.0	70.0
CoX-2EF-064	#14 AWG Solid	Polyethylene Fabctd	1/4"	CC, WP, PS	24.0	55.0	78.0
CoX-3EF-064	#14 AWG Solid	Polyethylene Fabctd	3/8"	CC, WP, PS	18.9	72.5	75.0
CoX-2BB-162	#6 AWG Solid	Ceramic Bead	1 1/2"	CC, WP, RS	38.0	44.0	60.0
CoX-5BB-020	#24 AWG Solid	Ceramic Bead	1 1/2"	CC, WP, RS	9.3	160.0	67.0
CoX-6AB-22	#22 AWG Strand	Styramic Bead	1"	CC, WP, RS	6.2	200.0	81.0
CoX-7AB-016	#26 AWG Solid	Styramic Bead	1"	CC, WP, RS	5.0	240.0	84.0
CoX-2RS-16	#16 AWG Strand	Rubber Solid	1/4"	CC, WP, RS	37.0	50.0	53.5
CoX-3RS-18	#18 AWG Strand	Rubber Solid	3/8"	CC, WP, RS	27.0	67.5	54.0
CoX-2SS-20	#20 AWG Strand	Styraloy Solid	3/16"	CC, WP, RS	30.6	50.0	65.0
CoX-3SS-026	#22 AWG CuWeld	Styraloy Solid	1/4"	CC, WP, RS	20.5	73.0	65.0
CoX-3ES-18	#18 AWG Strand	Polyethylene Solid	3/8"	CC, WP, PS	20.0	75.0	67.0
TwX-1/IDF-050	2#16 AWG Solid	Styrene Fabricated	1/8" x 1/4"	CC, PS	23, 23	62, 62	71.0
TwX-1/IDF-011	2#29 AWG Solid	Styrene Fabricated	1/8" x 1/4"	CC, PS	11, 11	117, 117	78.0

CC=Cotton; WP=Weatherproof; PS=Plastic; RS=Rubber; A=Armor; CT=Copper Tube
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Expansion End Seal



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CoX Flex Seal



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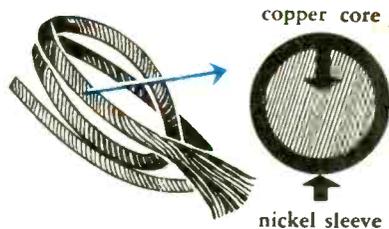
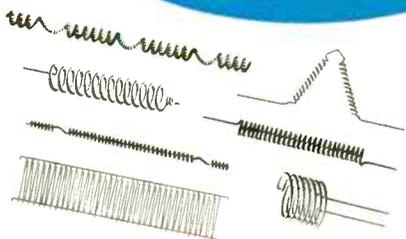
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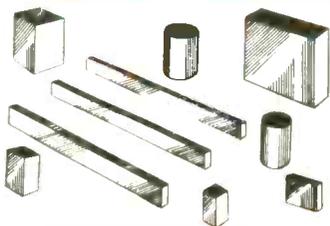
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Type TC tungsten-copper alloy for heavy duty resistance welding. Type ST tungsten-silver alloy for high current and high frequency circuits. Type SM, a new silver-molybdenum alloy, for facing contact surfaces in heavy current switch gear.

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METALLURGICAL COMPONENTS



This is an era of great discovery in electronics. With each new scientific "find," industry must gear itself quickly and efficiently to mass-produce the wonderful equipment of tomorrow's world. Dependable components that fit right in with your production plans, that augment the precision of your own equipment — these have been Callite's forte in 25 years of parts specialization. Look to Callite for metallurgical ingredients that will help your products operate better, sell faster, last longer. Our engineers will gladly assist you with Callite applications in your field. Callite Tungsten Corporation, 544 Thirty-ninth St., Union City, New Jersey. Branch Offices: Chicago, Cleveland.

*KULGRID is covered by U.S. and foreign patents.

ANOTHER NEW

Jensen

Coaxial

The most significant postwar loud speaker development yet announced is the new Jensen family of Type H Articulated Coaxial Speakers. The latest member is Model HNP-51, an all *ALNICO 5* design - in which low-frequency and high-frequency speakers are employed coaxially in an articulated assembly. The 15-inch l-f cone acts as an extension of the h-f speaker horn. The two loud speakers are electrically and acoustically coordinated into a system achieving brilliant and natural response through the entire useful frequency range (l-f performance depends upon the baffle or enclosure used). Frequency-dividing network has variable control in range above 4,000 cycles.

HNP-51 is recommended for FM receivers, high quality phonograph reproduction, television, review rooms, monitoring and home and public entertainment generally.

Coaxial Models HNP-50 and HNF-50 (for manufacturers and HNP-51 (for general use), are now nearing quantity production. All Type J Jensen Coaxials (3 models) are now in production. Write for complete information.



Jensen

SPEAKERS
WITH

ALNICO 5

JENSEN RADIO MANUFACTURING CO., 6607 S. Laramie Ave., Chicago 38, Ill.
In Canada: Copper Wire Products, Ltd., 137 Oxford Street, Guelph, Ontario

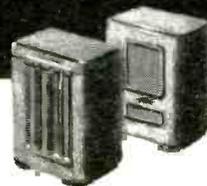
Specialists in Design and Manufacture of Fine Acoustic Equipment

TYPE H SPECIFICATIONS

MODEL HNP-51 (15-inch) with *ALNICO 5* in both l-f and h-f units. Power rating 25 watts maximum in speech and music systems. Input impedance, 500 ohms. List price approximately \$125.

MODEL HNF-50 (15-inch) *ALNICO 5* design h-f unit, field coil in l-f unit; otherwise same as HNP-51. List price approximately \$115.

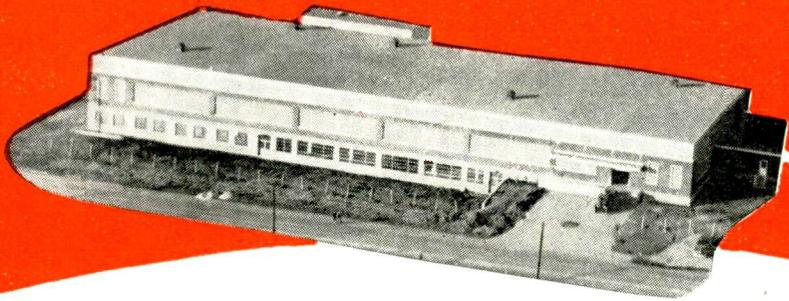
COMPLETE REPRODUCERS. Model HNP-51 Speaker is offered in 2 cabinet models to form complete reproducers. Model "CR" Reproducer employs beautiful Jensen Imperial Walnut cabinet. Model "RA" Reproducer employs attractively finished general utility cabinet.



FOR ELECTRONICS PRODUCTS IN METAL TUBING

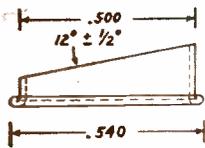
UP TO $5\frac{1}{8}$ " O. D. MAXIMUM

Superior's new mill represents the ultimate in modern equipment of mill and laboratory to which the industry can look for leadership in the production, control and development of electronic tubing.



Superior

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FOR YOUR OTHER NEEDS TOO**

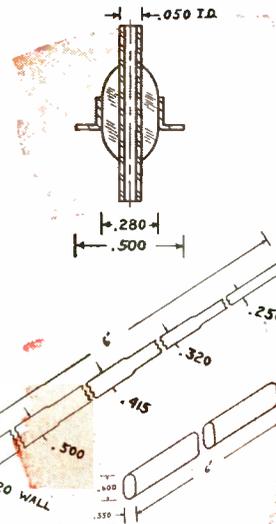


ANODE TUBING — For Cathode Ray Tube Gun Structures, Ion Traps, Anodes, Stamped Parts.

You name the material and size—we have it!



FORMED TUBING — With rolled edges, flared and expanded ends, to solve your particular problems of high voltages and tricky electric fields.



GLASS SEALING TUBING — for soft or hard glass. Can you use one piece of tubing for a glass seal, electrode support and exhaust tubulation? The more unusual the application, the better we like it.

ANTENNA TUBING — shaped, tapered or formed tubing for vertical or horizontal antenna, of materials that save weight, have greater strength, and last longer.

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THEY ARE WHAT YOU WANT—WATCH FOR THEM!**

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Call us in at the start of your development program, in order to take full advantage of Superior's experience in this field.

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THE **BIGGER NAME IN SMALL TUBING**
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**SUPERIOR TUBE COMPANY
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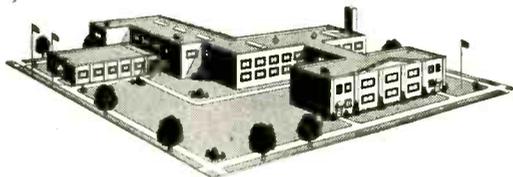
SHALLCROSS

ENGINEERING SPECIALISTS

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WRITE FOR DETAILS ON ANY TYPE

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| <input type="checkbox"/> 18. Fault Location Bridges | |
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SHALLCROSS MFG. CO.

Engineers • Designers • Manufacturers

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STORED ENERGY

Spot Welding



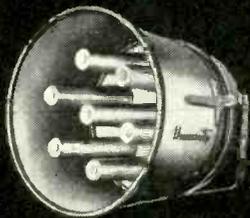
(Bench welder MODEL # 2000-56 in operation at one of the largest instrument manufacturers —THE FOXBORO CO.)

- WELD dissimilar metals of various thickness
- WELD with no distortion
- WELD without discoloration
- WELD with consistent accuracy
- WELD with cold electrodes —(lessen operator fatigue)

THE **VANG** *AA* **TRONIC** CORP.

87 WASHBURN STREET
BRIDGEPORT 5, CONN.

Models AA7, 4A4 and 2YR—**MULTI-UNIT LOUDSPEAKERS**: High powered directional units with power capacities from 50 to 250 watts and projection ranges from 3/4 mile to 2 miles. AA7 illustrated.



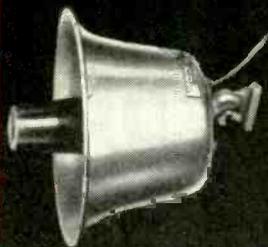
Models 1B8 and 1BR—**PAGING AND INTER-COMMUNICATION SPEAKERS**: Two high efficiency speakers of extreme capability. 1B8 is directional, 1BR is a radial projector. 1B8 illustrated.



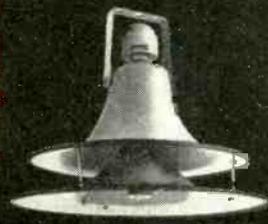
Models LH, PH and SMH—**REFLEX HORNS**: Rugged sound projectors capable of 1/2 mile directional coverage. Each unit features different frequency cutoff. LH illustrated.



Models RCR and CR—**HIGH EFFICIENCY BOOSTER SPEAKERS**: These hermetically sealed units are designed to over-ride high noise levels in indoor or outdoor locations—docks, shipping rooms, loading platforms. RCR is radial type; CR directional. CR illustrated.



Models RLH, RPH and RSH—**RADIAL LOUDSPEAKERS**: These units provide 360° coverage with three choices of low frequency cutoff. They are designed for minimum sound concentration beneath the speaker. RPH illustrated.



PAH and SAH—**DRIVER UNITS**: UNIVERSITY Driver units incorporate such special features as rim centering, all-weather construction—that increase efficiency and make possible a breakdown-proof guarantee. Designed to fit any UNIVERSITY PROJECTOR.



Models RBP12 and RBP8—**RADIAL CONE SPEAKERS PROJECTORS**: Radial cone speaker projectors incorporating infinite baffle design for excellent low frequency response. RBP 12 illustrated, takes 12" cone speaker; RBP8 takes 8" cone speaker.



University Speakers

...for every installation!



Backed by a record of leadership in the pioneering of the reflex, non-resonant, horn-type projectors, and high power, weather-proof breakdown proof driver units, the all-inclusive line of UNIVERSITY speakers represents the most diversified in the field.

As a result of the long, specialized experience, it is now possible to specify a UNIVERSITY unit exactly suited to any particular requirement. Both indoor and outdoor types are available for high fidelity reproduction, or with characteristics suitable for crisp clarity, and capable of over-riding high surrounding noise levels.

Each UNIVERSITY speaker incorporates special features—both electrical and mechanical—which assure maximum efficiency and dependable functioning at all times.

SPECIAL FEATURES

"U" BRACKET MOUNTING: This feature reduces mounting to a simple straightforward procedure and permits orientation of the projectors with the ease of spotting a searchlight.

RIM DAMPING: All UNIVERSITY speakers and projectors are rubber rim loaded to eliminate mechanical and acoustic resonance. All traces of rattle and reverberation are eliminated even at full power output.

ALL WEATHER CONSTRUCTION: Climate and exposure can not impair the fine performance of UNIVERSITY loudspeakers. Heavy gauge metal construction, complete enclosure of the driver units, dust and water proof design recommends them for any installation indoor, outdoor or shipboard.

**UNIVERSITY
LOUDSPEAKERS, INC.**

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NEW YORK, 14, N. Y.



THORENS

MADE IN SWITZERLAND

LEADS AGAIN



Starts and stops automatically



HINGED
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REJECTS RECORD
IF DESIRED

REPEATS WHOLE OR PART
OF RECORD

PAUSES BETWEEN RECORDS IF DESIRED

RECORD CHANGER
CD40

PLAYS 10" and 12" RECORDS MIXED

PLAYS MIXED 10 OR 12 IN. RECORDS in any order (8 records continuously). **REJECTS** any record if desired, and goes on to next. **REPEATS PART OR WHOLE RECORD AT ANY DESIRED POINT.** **PAUSES BETWEEN RECORDS IF DESIRED.** No interference from

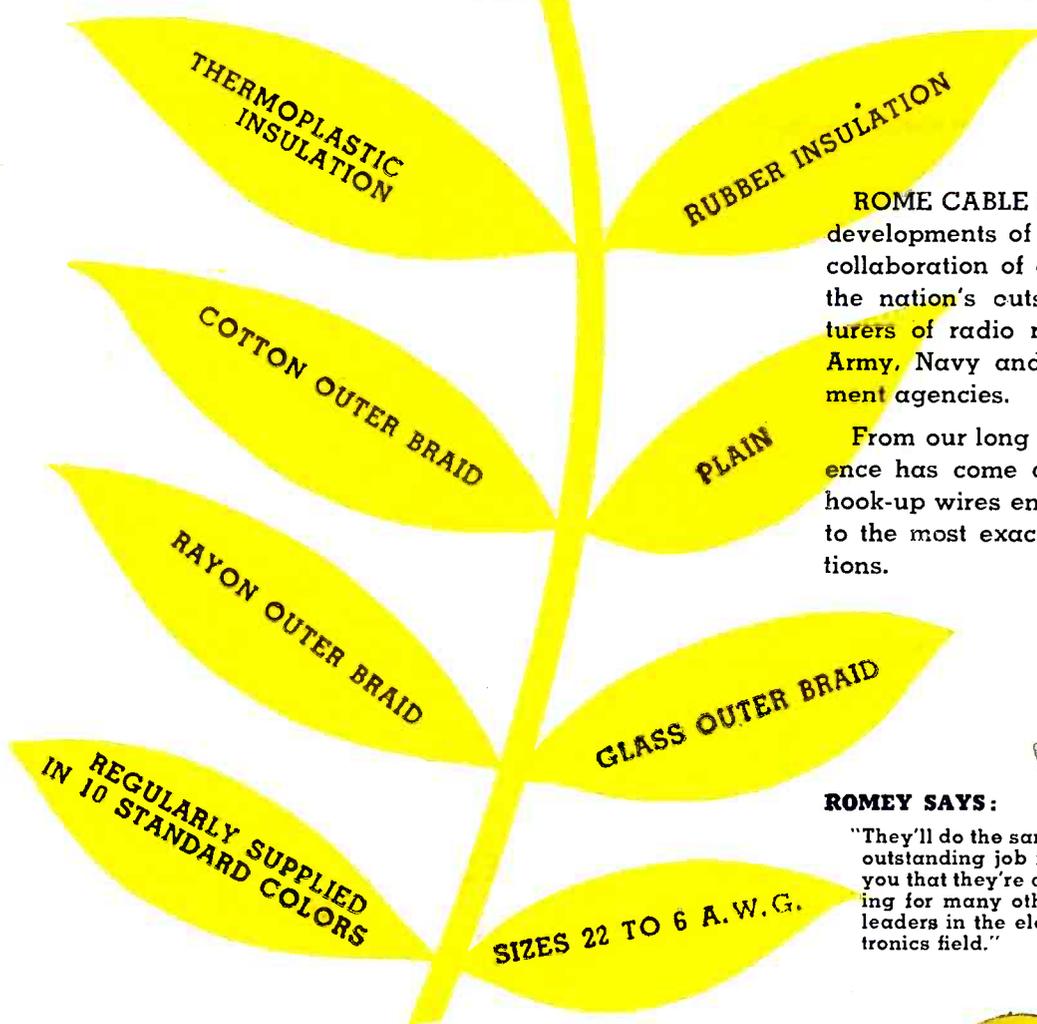
vibration, or with radio reception. Crystal pick-up. 15" x 12". Height 5". Tone-arm is hinged for greatest convenience in changing needles. AC motors 100 to 250 volts, 50 to 60 cycles. Also will be available with motor for both AC and DC.

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HOOK-UP WIRES THAT GREW UP WITH ELECTRONICS



THERMOPLASTIC INSULATION

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COTTON OUTER BRAID

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RAYON OUTER BRAID

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REGULARLY SUPPLIED IN 10 STANDARD COLORS

SIZES 22 TO 6 A.W.G.

ROME CABLE Hook-up Wires are developments of many years' close collaboration of our engineers with the nation's outstanding manufacturers of radio receivers and with Army, Navy and Federal procurement agencies.

From our long and varied experience has come a complete line of hook-up wires engineered and built to the most exacting service conditions.

ROMEY SAYS:

"They'll do the same outstanding job for you that they're doing for many other leaders in the electronics field."



FROM BAR TO FINISHED WIRE

ROME CABLE CORPORATION
ROME • NEW YORK



PRECISION MEASURING INSTRUMENTS FOR DEVELOPMENT, ENGINEERING, AND PRODUCTION LINE USE

Since 1934 Boonton Radio Corporation has been designing and manufacturing essential measuring instruments for the engineer. Constructed of finest quality parts, assembled, and tested to exacting standards by skilled craftsmen, these instruments have become indispensable to manufacturers, research laboratories, educational institutions, and to the whole radio and electronics industry.



Q-METER TYPE 170-A

FREQUENCY RANGE: 30 mc to 200 mc ($\pm 1\%$).
RANGE OF Q MEASUREMENT: 80—1200.
ACCURACY OF Q MEASUREMENT: In general, $\pm 10\%$.
RANGE OF Q TUNING CAPACITOR: 11—60 mmf. ($\pm 1\%$ or ± 0.5 mmf., whichever is greater).

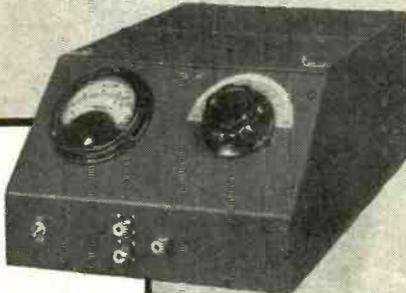


Q-METER TYPE 160-A

FREQUENCY RANGE: 50 kc to 75 mc ($\pm 1\%$, 50 kc—50 mc; $\pm 3\%$, 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, $\pm 5\%$.
RANGE OF Q TUNING CAPACITOR: Main Section, 30—450 mmf. ($\pm 1\%$ or ± 1 mmf., whichever is greater). Vernier Section, plus 3, zero, minus 3 mmf. (± 0.1 mmf.).

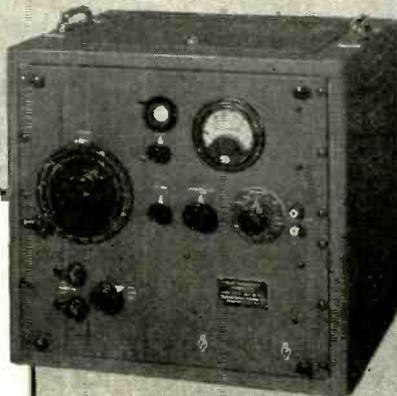
QX-CHECKER TYPE 110-A

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, $\pm 2\%$ 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.



DESIGNERS AND MANUFACTURERS OF THE "Q" METER . . . QX-CHECKER
 FREQUENCY MODULATED SIGNAL GENERATOR
 BEAT FREQUENCY GENERATOR
 AND OTHER DIRECT READING TEST INSTRUMENTS

BOONTON RADIO Corporation

BOONTON, NEW JERSEY, U.S.A.



Here's why **MYCALEX 410**

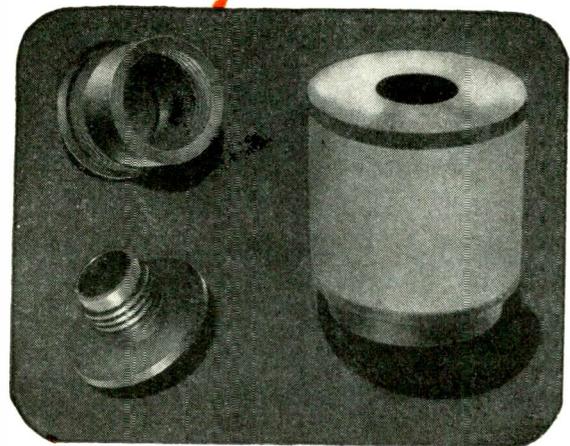
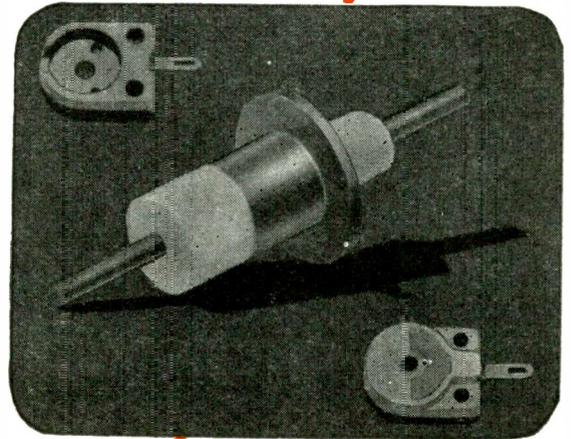
is the "Last Word" in low loss insulation

For more than 27 years MYCALEX has consistently demonstrated its superiority as an insulating material — supplanting one old-fashioned material after another as electronic advancements have made insulating needs more exacting.

MYCALEX excels wherever high dielectric strength and extremely low loss factor are important . . . where resistance to arcing and high temperature is desired . . . where imperviousness to oil and water must be virtually 100%.

Latest and greatest of MYCALEX advancement is MYCALEX 410 (Molded Mycalex). This highly perfected insulation, together with our exclusive injection-molding techniques, now makes available a wide variety of unusual or intricate shapes . . . especially with metal inserts or electrodes molded in to form a perfect bond or hermetic seal.

Our engineers invite your inquiries on all insulating problems.



SOME PROPERTIES OF MYCALEX 410

<i>Electrical Properties</i>	
Power factor, 1 megacycle, dry.....	0.0015
Dielectric constant, 1 megacycle.....	8.3
Volume resistivity, ohm-cm.....	6.0×10^{17}
Arc resistance, ASTM seconds.....	250
Dielectric strength, volts/mil.....	400
<i>Mechanical Properties</i>	
Flexural strength, psi.....	13,000
Tensile strength, psi.....	6,000
Compressive strength, psi.....	20,000
Hardness, Brinell.....	150
Modulus of elasticity, psi.....	8×10^6
Maximum safe operating temperature, °C.....	400
Density, lb./cu. in.....	0.136
Specific gravity.....	3.8

MYCALEX CORPORATION OF AMERICA

"Owners of 'MYCALEX' Patents"

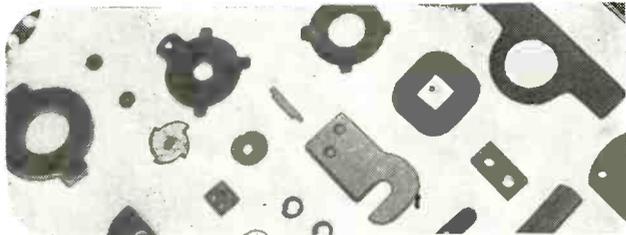
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are sturdily built for the hard usage of industrial service. Have plug type tips and are constructed on the unit system with each vital part, such as heating element, easily removable and replaceable. In 5 sizes, from 50 watts to 550 watts.



TEMPERATURE REGULATING STAND

This is a thermostatically controlled device for the regulation of the temperature of an electric soldering iron. When placed on and connected to this stand, iron may be maintained at working temperature or through adjustment on bottom of stand at low or warm temperatures.

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110-1

**AMERICAN ELECTRICAL
HEATER COMPANY**
DETROIT 2, MICH., U. S. A.

The New Handy Tube
for
M & W 76 SPOT CEMENT
formerly sold in bulk
Now Makes Cementing
a Precision Job

Now Also in Tube Form
M & W 54
GENERAL PURPOSE CEMENT
formerly sold in bulk
Avoids Waste
in Radio Fabrication



DRIES ALMOST INSTANTLY

76 Spot Cement is an extremely fast drying cement for attaching fine lead wires to paper speaker-cone. It dries almost instantly, sets completely in two minutes. The new handy tube makes it possible to apply accurately to the point desired and saves waste, fuss and bother.



UNIVERSAL USAGE

54 General Purpose Cement is used extensively in radio fabrication, particularly in cementing periphery of the paper cone to the frame. It dries rapidly and is water-resistant. The new handy tube eliminates waste and bother, makes application easy.

M & W Products for the Electronic Field

- Condenser Enamels
 - Coil Enamels
 - Cone Lacquers
 - Cabinet Finishes
 - Dykast Enamels
- Fungus Resistant Coatings
 - Insulating Lacquers
 - Insulating Varnishes
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50 watt—Model 241



25 watt—Model 245



11 watt—Model 275
Side Wiper
(Model 275 T has tapped winding; ranges 100-20,000 Ohms)



11 watt—Model 276
Top Wiper



8 watt—Model 296



6 watt—Model 260
Side Wiper
(Model 260 T has tapped winding; ranges 100-20,000 Ohms)



6 watt—Model 261
Top Wiper



6 watt—Model 291
Top Wiper
single hole mounting
(Model 292 has top wiper, two-hole mounting)



4 watt—Model 281

DeJUR FEATURES

Designed for maximum ruggedness, durability, dependable accuracy. Tested for resistance to vibration, heat, humidity. Every DeJUR Potentiometer undergoes a severe 24-hour test.

Units with special resistance values and tolerance can be supplied. Also tapered units, of both straight and logarithmic types.

Available with side or edge contacts.

Types 260 and 275 are ideally suited in high impedance vacuum tube circuits where high resistance values and a minimum noise level are required. Five wiping fingers, self-aligning, assure continuous contact and low noise level for any position. Shaft may be extended through either or both ends.

Other resistance ranges are available. "Off" position, tapered resistance, center-tapped, dual and multiple tandem units can also be supplied. Shaft lengths, slotted metal $\frac{1}{4}$ " insulated shaft and other mechanical changes are available.

MODEL NO.	WATTS	RANGE-OHMS		ROTATION		STD. DIA.	DEPTH BEHIND PANEL	WEIGHT
		MINIMUM-MAXIMUM		MECHANICAL	ELECTRICAL			
241	50	1 — 20,000		300°	270°	2 3/8"	1 1/2"	7 oz.
245	25	1 — 20,000		300°	270°	1 3/4"	1 1/4"	4 oz.
260	6	20 — 100,000		324°	300°	3"	1 7/16"	5 oz.
260T	6	20 — 50,000		324°	300°	3"	1 7/16"	5 oz.
261	6	20 — 100,000		320°	300°	3"	1 7/16"	5 oz.
271	11	100 — 200,000		324°	300°	3"	2 5/8"	7 oz.
275	11	100 — 200,000		324°	300°	3"	2 5/8"	7 oz.
275T	11	200 — 100,000		324°	300°	3"	2 5/8"	7 oz.
281	4	1 — 100,000		320°	300°	3"	1 3/16"	5 oz.
291	6	1 — 50,000		258°	258°	1 13/16"	1 1/16"	3.5 oz.
292	6	1 — 50,000		258°	258°	1 13/16"	1 1/16"	3.5 oz.
296	8	5 — 50,000		248°	248°	1 13/16"	1 1/2"	3.5 oz.
501	25	100 — 500,000		326°	316°	5 1/4"	2 7/16"	13 oz.



Special Gang Mounting



Special Bracket for Dual Mounting

DeJUR Rheostat-Potentiometers can be furnished mounted two or more in gang assembly for simultaneous operation of several circuits or circuit components, by means of one control. Two of these applications are illustrated above and many other arrangements are feasible. Our engineers will be glad to examine your requirements.

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ELECTRICAL INDICATING INSTRUMENTS

D. C. Voltmeters, Ammeters, Microammeters, Millivoltmeters, Milliammeters, and A. C. Rectifier types

Superior magnetic materials—Alnico and Cobalt, used in conjunction with soft iron pole pieces, assure high torque, fast response, improved performance.

Large pivot axis permits more accurate adjustment of jewels and pivot assembly and greater accessibility for servicing.

Better balancing and uniform magnetic flux around moving coil eliminate possibility of calibration error.

Highest-grade Alnico magnets. Laminated magnets are protected by Cadmium and tin platings. Movement supported by aircraft-type bracket. Beryllium copper balance weights and anodized coil frame. Every meter rigidly inspected, electrically and mechanically, in air-conditioned rooms.

Knife-edge or pear shaped pointers, shatter-proof glass, rear-illumination and special scales supplied on order.

1 1/2" MINIATURE—External pivots for greater accuracy. Highest-grade Alnico magnets. Waterproof sealing. Metal (round) or plastic (square) case.



Model 112 Square



Model 120 Round

2 1/2" Model S-210 in the 2 1/2" size and Model S-310 in the 3 1/2" size are built to comply with American Standards Association specifications.



Model S-210 Round



Model S-212 Square

3 1/2" Similar in construction to the 4" Model. Easy legibility at a distance. Multi-scales in combinations up to 3 colors supplied on order.

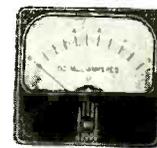


Model S-310 Round



Model S-312 Square

4" Maximum scale areas permit multi-scale combinations in 2, 3 or 4 colors, with no crowding of graduations. Lance pointer standard; others to order.



Model S-422 Rectangular

CHART

MODEL NO.	SIZE	BODY SIZE	CASE	SCALE LENGTH	DEPTH BEHIND PANEL	STD. POINTER
S-210	2 1/2"	2 13/64"	Round Flush Bakelite	1 23/32"	1 9/32"	Spade
S-212	2 3/8"	2 13/64"	Square Flush Bakelite	1 23/32"	1 5/16"	Spade
S-310	3 1/2"	2 3/4"	Round Flush Bakelite	2 5/16"	1 9/32"	Spade
S-312	3"	2 3/4"	Square Flush Bakelite	2 5/16"	1 5/16"	Spade
S-422	4 1/2"	2 3/4"	Rectangular Semiflush Bakelite	3 11/16"	7/8"	Lance
112	1 3/4"	1 1/2"	Square Flush Bakelite	1 1/64"	13/16"	Spade
120	1 3/4"	1 1/2"	Round Semiflush Metal	1 1/64"	25/32"	Spade

DeJUR METERS

are manufactured to a guaranteed accuracy of 2% of full-scale value.

WRITE FOR CATALOG E



DeJUR-AMSCO CORPORATION

GENERAL OFFICES: NORTHERN BLVD. AT 45TH STREET, LONG ISLAND CITY, N. Y.

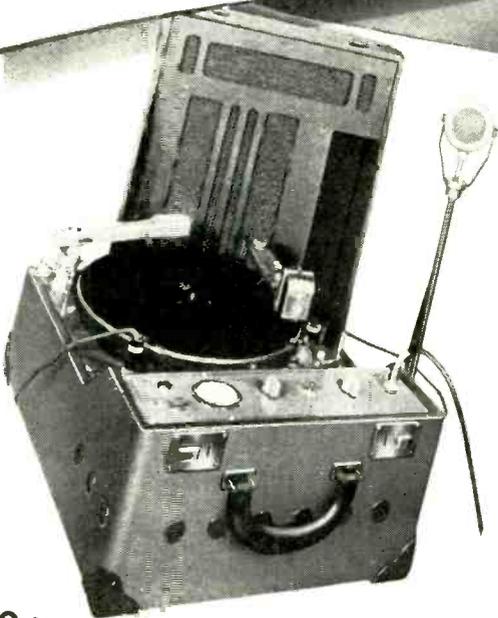
The PRESTO



PRESTO 8 D studio transcription recording turntable, variable pitch 96-136 lines per inch



PRESTO 14 A studio recorder, directly gear driven at 78.26 and 33.3 r.p.m., selection 10 cutting pitches 88-136 lines per inch, designed to cut vertical or lateral masters or instantaneous recordings.



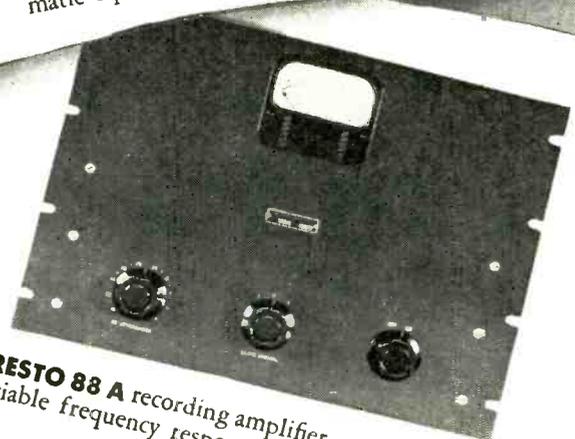
PRESTO MODEL K dual speed recorder, playback PA system, 12 inch turntable.



PRESTO 8 N studio transcription recorder, with automatic equalizer.



PRESTO 6 N recording turntable, 16" dual speed for portable or studio use.



PRESTO 88 A recording amplifier, output 50 watts, variable frequency response.

Hit Parade!



PRESTO 63 B transcription turntable, 16 inch dual speed, combination vertical-lateral reproducer.



PRESTO MODEL L portable transcription playback, plays 6 to 16" records, 78 or 33 1/3 RPM, 12 inch turntable.



PRESTO GREEN SEAL DISCS for master and direct playback recordings.



PRESTO RECORDING NEEDLE — individually boxed, packed six to a carton.

HERE are ten featured items from the 1946 line of PRESTO transcription recording equipment... every one a hit with recording engineers. Hundreds of PRESTO turntables installed before the war are still giving daily trouble-free service. The armed services used this PRESTO equipment on the many fronts, *as is*, with no change except to give it A N designations.

For your new radio station or replacement of worn equipment specify PRESTO, the equipment that is still setting the pace today in sound recorder development.



PRESTO

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT

RECORDING CORPORATION
242 West 55th Street, New York 19, N. Y.
WALTER P. DOWNS, LTD., in Canada

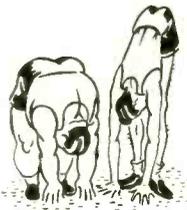
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the insulating material



1 High dielectric strength secured by the use of materials and processes best suited to particular conditions as determined by laboratory research, breakdown tests and field surveys.



2 High Mechanical strength to withstand repeated bending and twisting without cracking, chipping or peeling. Improved tensile strength and anti-fray construction without excessive bulk.



INSULATION IS IMPORTANT—It is a fact that almost 85% of electrical equipment failures are caused by insulation failure. This startling situation is due, not to any inherent fault in material, workmanship or lack of “know-how” on insulation practice. It is a result of inadequate specification methods to fit individual requirements.

With a discriminating buying public primed for volume spending for a host of new industrial and home appliances . . . with canny industrial buyers expecting top performance and longevity from “war-tested” products . . . it is dangerous indeed to risk product reputation and dealer good-will on anything but the finest insulation for the job.

THE 5 VITAL PROPERTIES—How can you assure trouble-free, dependable insulation service? The answer . . . by checking to see that the wire insulation you specify for regular electric circuits possesses the 5 vital properties described in these pages . . . Dielectric and Mechanical Strength . . . Resistance to Heat, Moisture, Chemicals. While no one insulator can be specified for all circumstances, TURBO offers in its TURBOTUF Sleeving and Tubing, a superior insulating material which

3 High heat endurance meets ASTM standards . . . Resists high temperatures in soldering and potting as well as in extreme service conditions without flowing, stiffening or sticking. Extremely high ignition point; does not support combustion.

WILLIAM BRAND & COMPANY



4 High moisture resistance a result of "all-the-way-through" varnish impregnation . . . to safeguard dielectric properties and to prevent rot, fungus, or mildew formation.

with all 5 vital properties!

provides satisfactory service over a wide range of conditions.

Where extreme electrical characteristics or operating conditions indicate specially resistant insulating materials, investigate TURBO Glass Fibre Tubing, a varnished insulation fabricated from strands of glass fibre especially suitable for high heat resistance in extreme ambient temperatures. On the other hand, for low temperature service where embrittlement must be avoided, specify Extruded Plastic Tubing—withstands frigid conditions and chemical effect of refrigerants.

FOR ANY INSULATING NEED—Other TURBO insulation products—Varnished Papers and Cloths, Mica and Wire Identification Markers . . . offer a wide choice of materials to satisfy almost every known condition of service . . . in household appliances, commercial devices, industrial equipment, communications apparatus and electronics in general.

FREE SAMPLE CARD—A brief outline of your insulation problems in a letter will enable our engineers to make helpful recommendations. Send today for free specimen card with sample lengths of TURBO Tubings and Sleeveings.

Play safe - if it's
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it safeguards!



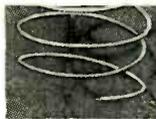
5 High chemical resistance through the use of exclusive TURBO varnish formulae. Unaffected by transformer oils, thinners, gasoline, or carbon tetrachloride. Resists most electrochemical deteriorants.



FLEXIBLE VARNISHED TUBING:
 TURBO varnished fibre tubings and sleeveings. Varnished glass tubing. ID range from .020 to 1½". Standard lengths or continuous lengths.



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 TURBO markers in cotton, fibrous glass and extruded plastic. Various lengths and diameters in choice of colors. Blank or imprinted to order.



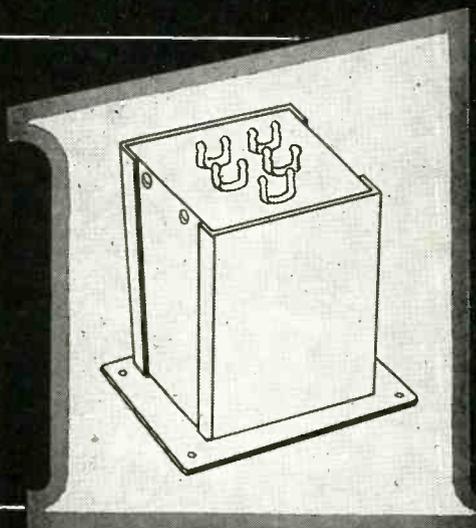
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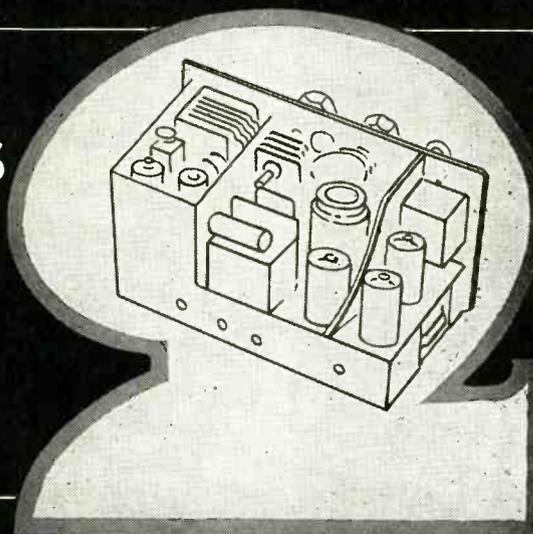
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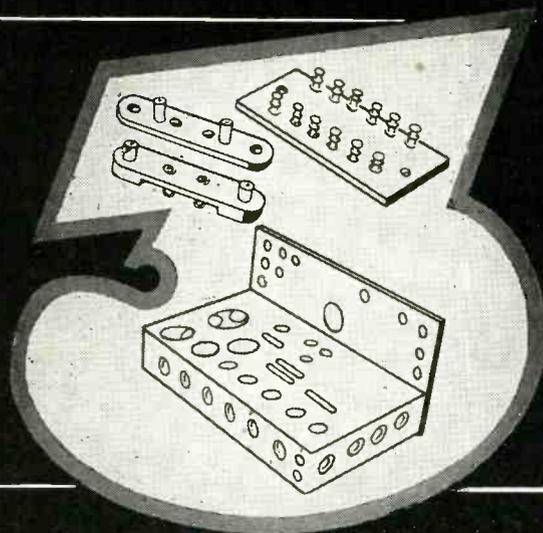
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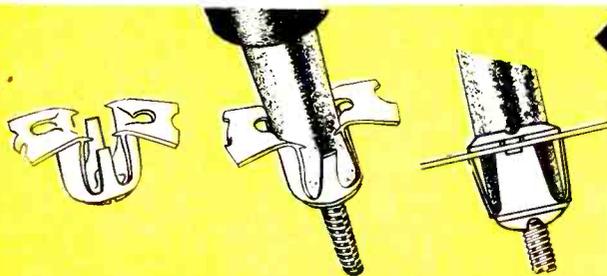
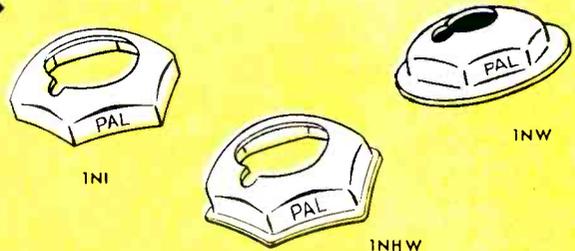
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PALNUT VIBRATION-PROOF FASTENERS

For Fast, Low-Cost Assembly of Radio Equipment

MACHINE SCREW PALNUTS

Types 1NI and 1NHW, sizes #4 through #10, for fastening light parts such as shield cans and variable condensers. Type 1NW, where round washer base is desirable, such as speaker mounting and against wood surfaces. Self-locking PALNUTS reduce material and handling costs by eliminating washers.

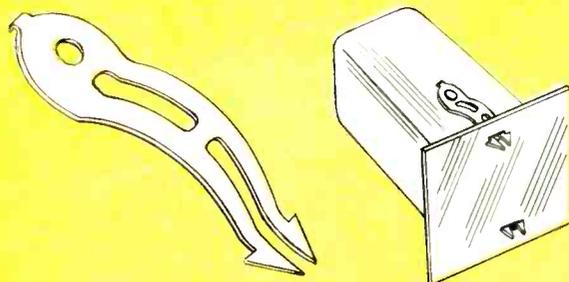
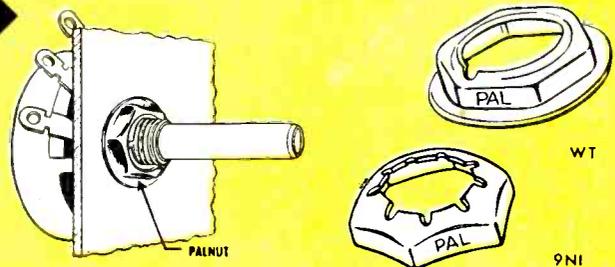


COIL TUBE FASTENERS

Three jobs with one fastener: (1) holds RF or IF coil tube, (2) provides tension for holding iron core in adjustment, (3) mounts coil securely to chassis, shield can or terminal board. Part 513 for 0.375" O.D. tubes and Part 514 for 0.283" O.D. tubes.

3/8"-32 PALNUTS for Variable Resistors

Self-locking PALNUT eliminates need for lock-washer in mounting volume and tone controls. Assembly time and material costs reduced. Fast assembly with hand or power tools. Type WT has 1/2" hex width; Type 9NI has 9/16" hex width.



SHIELD CAN FASTENERS

Live spring action pulls shield can securely against chassis, providing positive grip and good ground contact. Saves assembly time; can is merely snapped into chassis. Eliminate nuts and spade screws. May be used on any chassis thickness.

ACORN PALNUTS

Recommended where appearance counts. Pleasing dome shape covers bolt-ends, while the self-locking PALNUT feature goes to work providing secure assembly. Eliminates need for lockwashers. Available to fit #6, 8, and 10 machine screws and 1/4" and 5/16" bolts.



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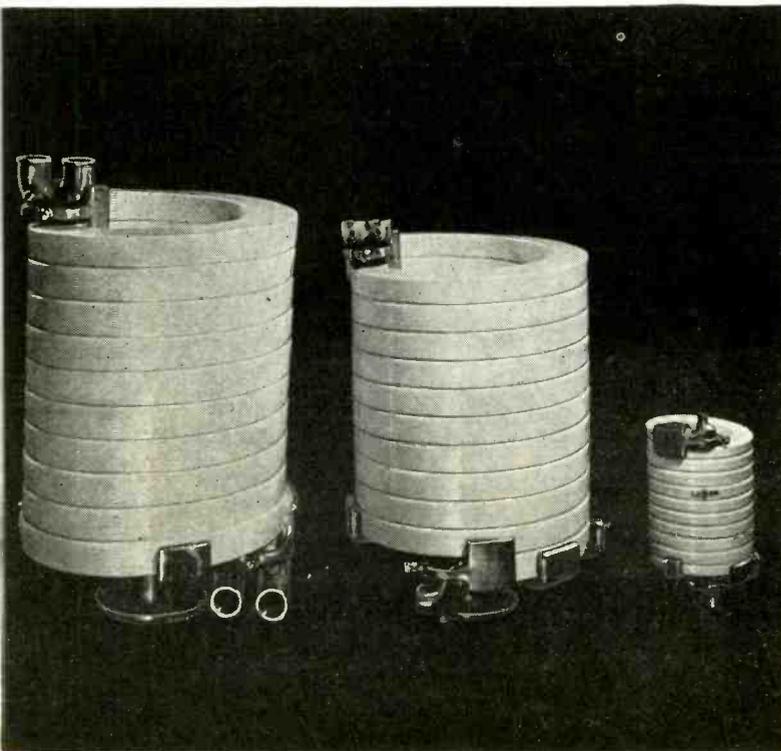
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LAPP GAS FILLED CONDENSERS

In any electronic circuit, wherever lump capacitance is needed, Lapp condensers will save space, save power and save trouble. Available for duty at almost any useable voltage rating and capacitance, they bring to any application notable mechanical and electrical advantages: non-deteriorating dielectric, small space requirement, non-failing, puncture-proof design, constant capacitance under temperature variations. Variable, adjustable and fixed capacitors are available. Fixed condensers have been made with capacitance up to 60,000 mmf., variable and adjustable up to 16,000 mmf. Current ratings range up to 500 amperes R. M. S., and voltage ratings up to 60 Kv peak.



**FOR
HIGH-FREQUENCY
POWER SOURCES**

For high-power, high-frequency circuits, the Lapp specialties shown on these pages provide electrical and mechanical characteristics that mean improved efficiency, dependability and reduced maintenance.

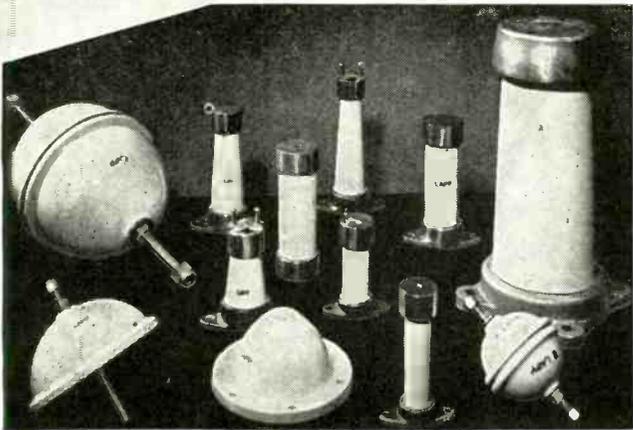
For more than 25 years Lapp has been insulating radio-frequency circuits. The first vertical radiators in the broadcast industry were insulated by Lapp porcelain; Lapp water coils first eliminated water sludging and improved performance for water-cooled tubes; the Lapp gas-filled condenser offered first completely-dependable performance in a puncture-proof constant-capacitance unit.

Today Lapp has considerable specialized capacity for production of porcelain and steatite pieces as well as the associated metal parts. And with it the skilled, sensible engineering that creates parts that will do their jobs—right. *Lapp Insulator Co., Inc., LeRoy, N. Y.*

LAPP PORCELAIN

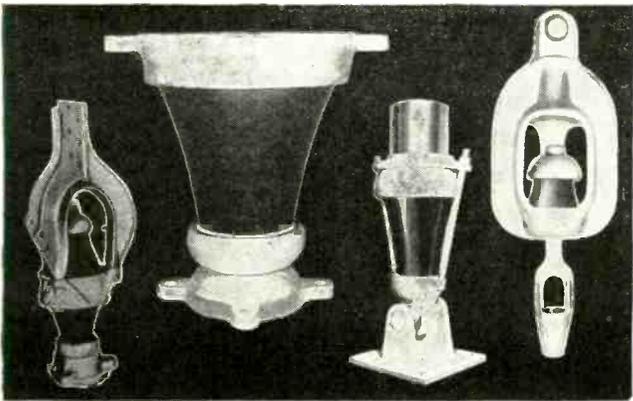
WATER COILS For cooling of high-frequency tubes in radio transmitters and other electronic power sources, Lapp porcelain water coils have been widely used. With nothing about the porcelain to deteriorate, sludging is eliminated, and with it the need for cleaning and water changes. Porcelain pipe and fittings in any needed size are also available as catalog items.

- ★ Radio Broadcast
- ★ Radio Communication
- ★ Industrial Radio-Frequency Heating



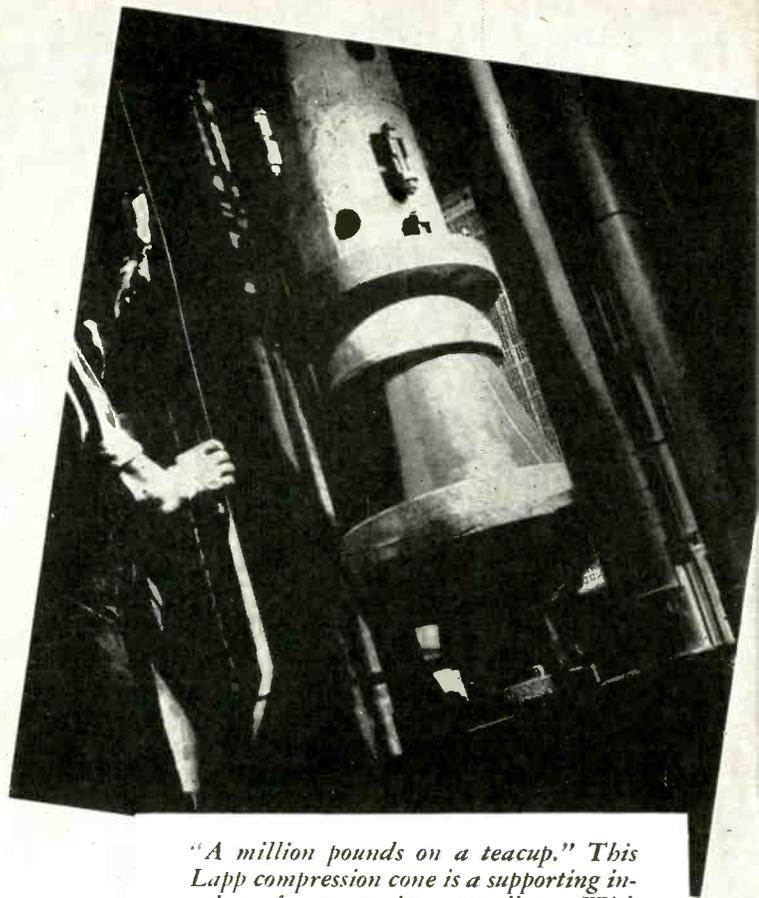
STANDOFF, BOWL, ENTRANCE INSULATORS

Standoff, bowl, entrance and other special-purpose insulators are available in wide range as standard catalog items. Other insulators for special duty or of special design are easily produced by Lapp methods, in porcelain or steatite.



ANTENNA STRUCTURE INSULATORS

Footing, sectionalizing and guy insulators—for self-supporting towers and guyed masts—are available from Lapp in more than 100 designs. With Lapp insulators, antenna structures can be insulated for any electrical or mechanical service.



"A million pounds on a teacup." This Lapp compression cone is a supporting insulator for a guyed-mast radiator. With a wall thickness of 2½ inches of porcelain, it is proof-tested at 1,500,000-lb. loading. The unit withstood 3,000,000 lbs. on design test.



All Lapp footing and guy insulators incorporate the Lapp patented curved-side compression cone (right). With the same dimension and same wall thickness, the curved-side cone has double the strength of the straight-side cone (left).

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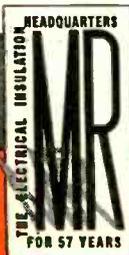
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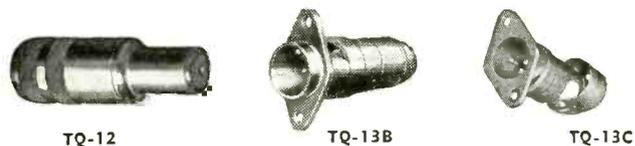
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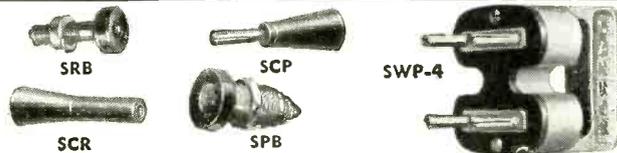
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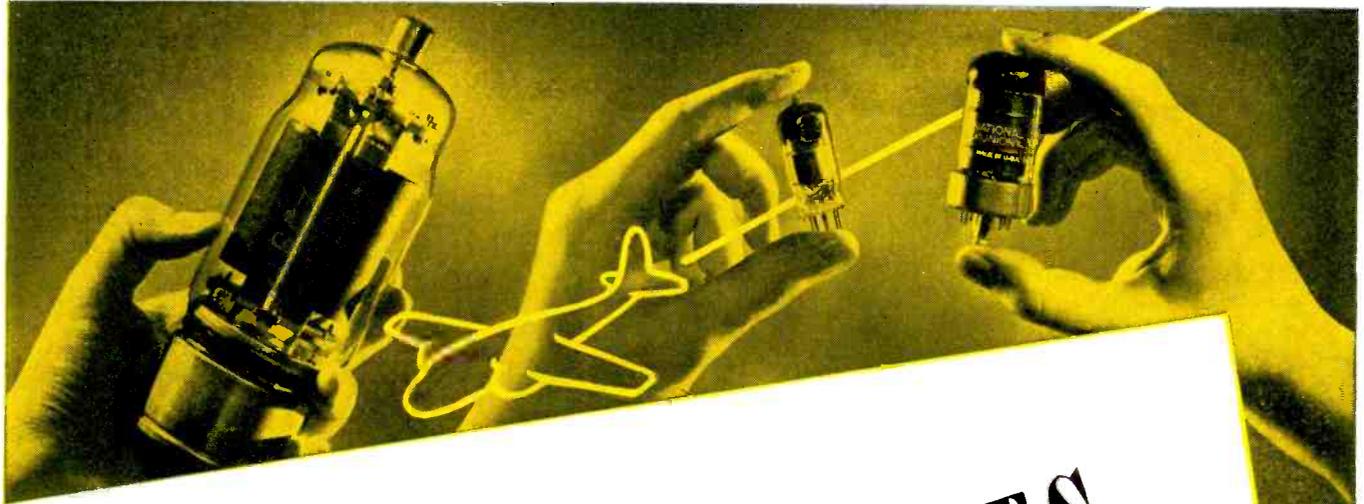
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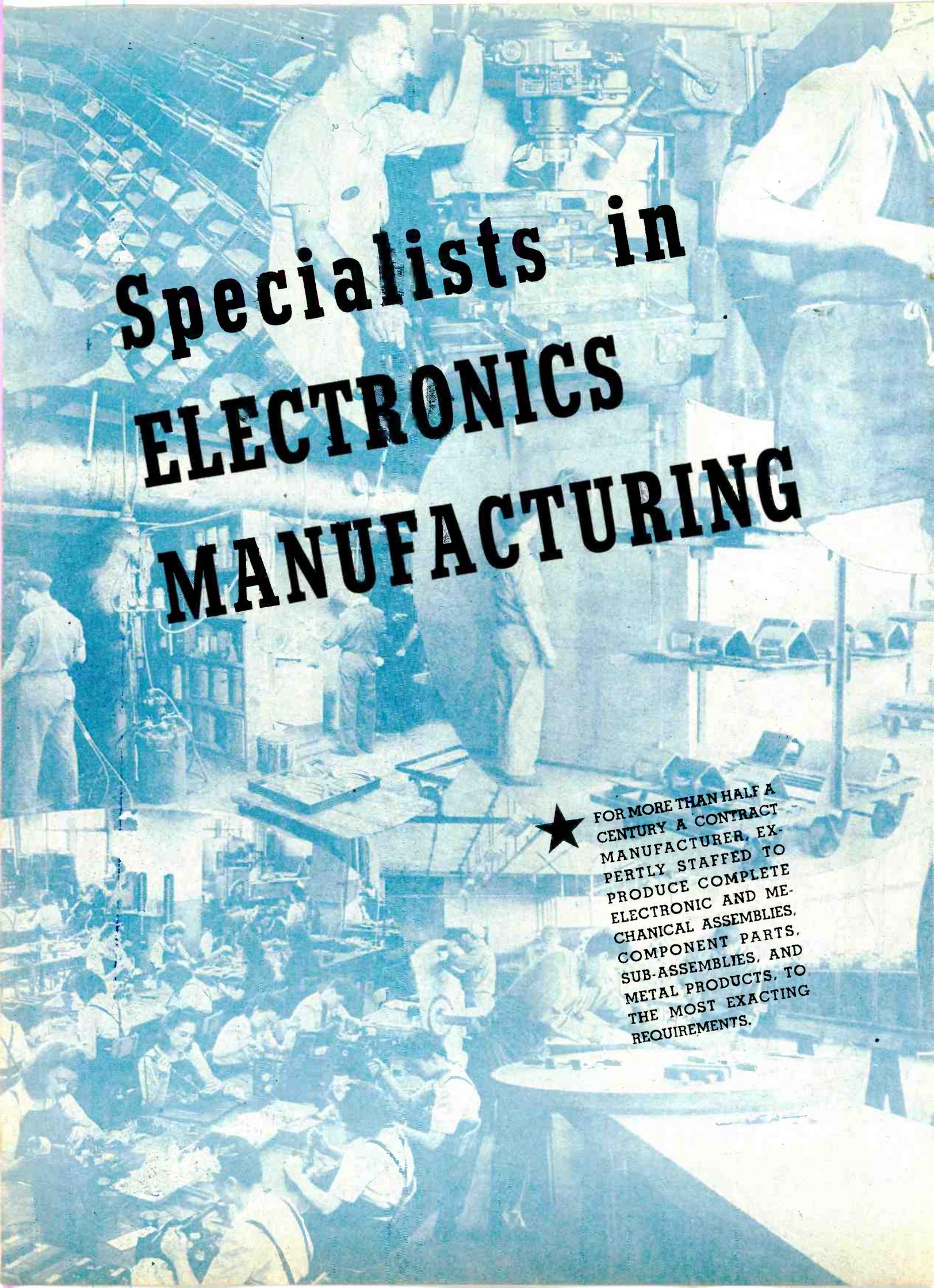
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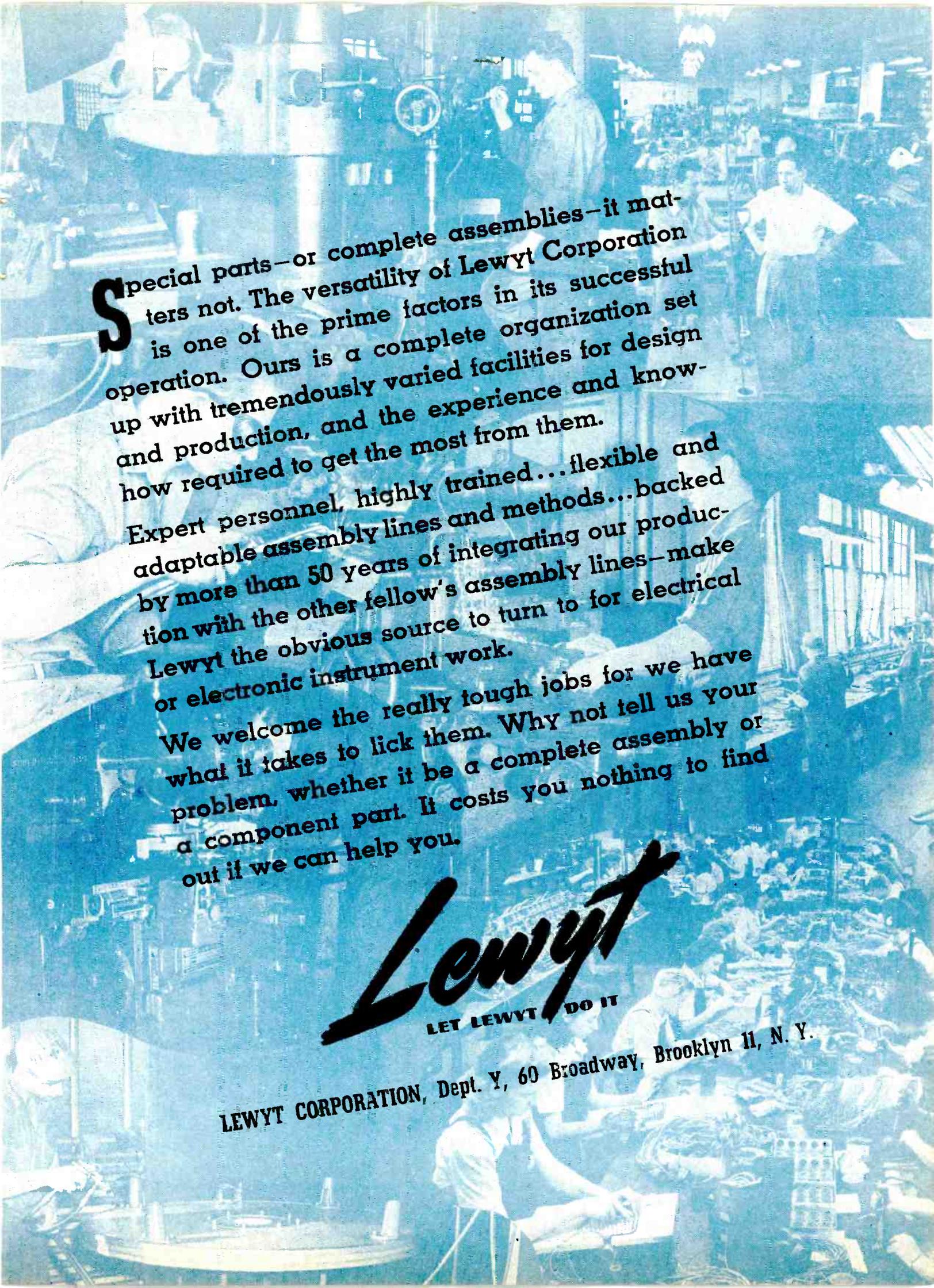
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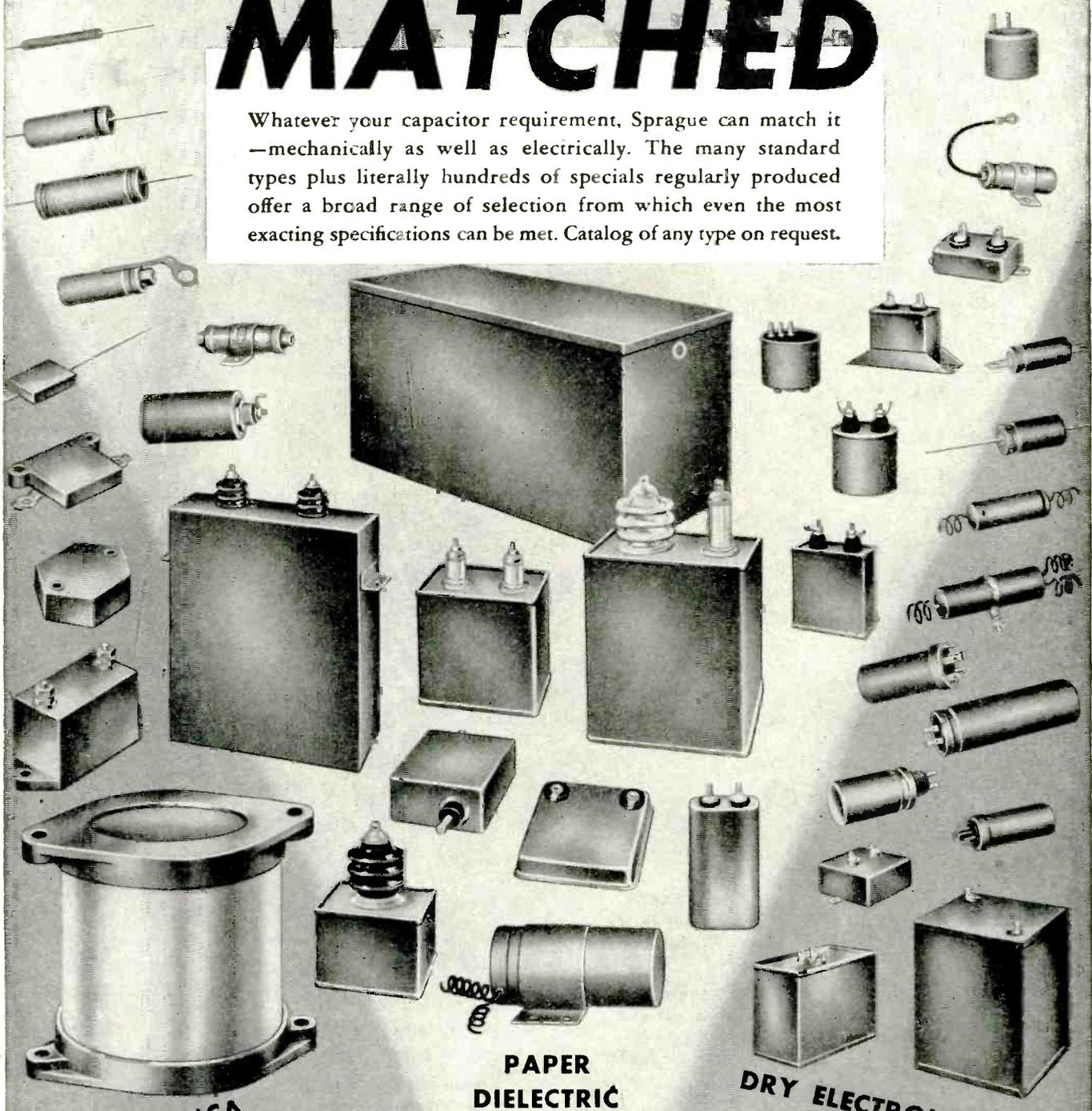
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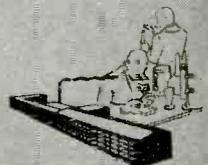
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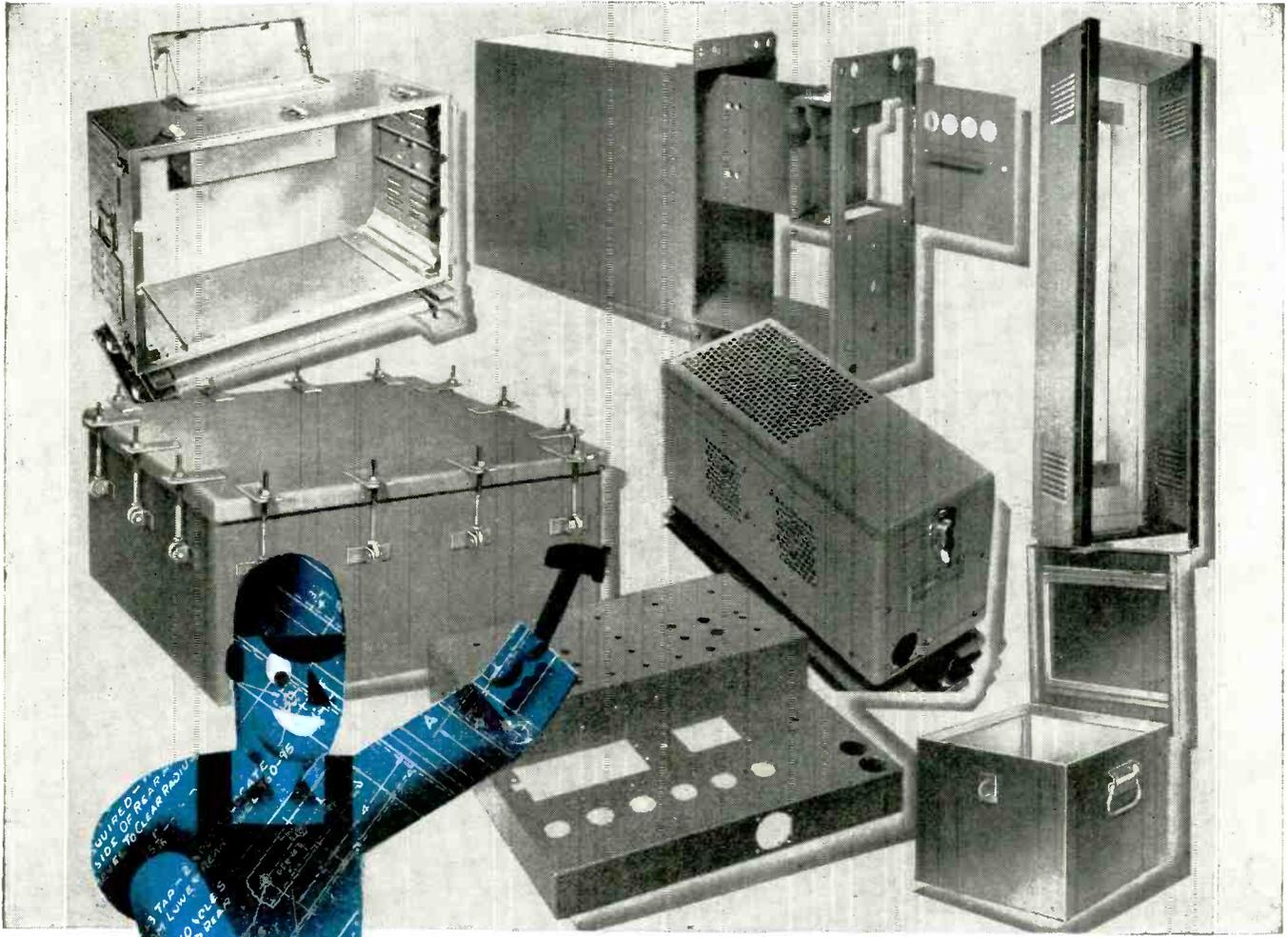
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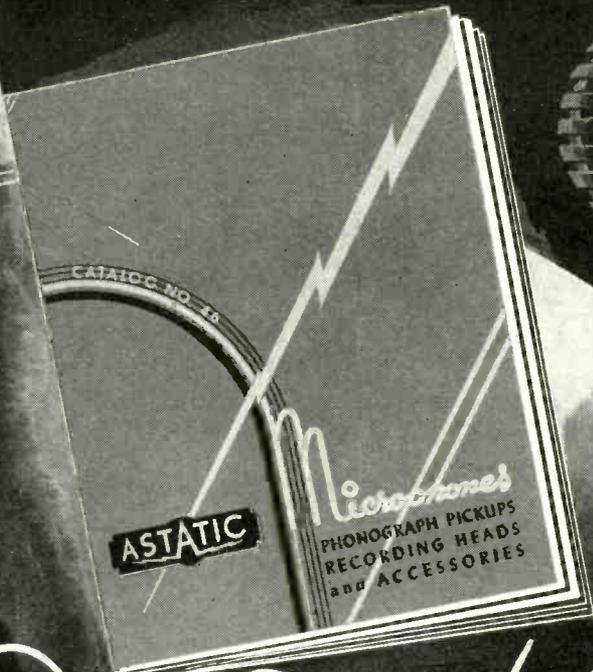
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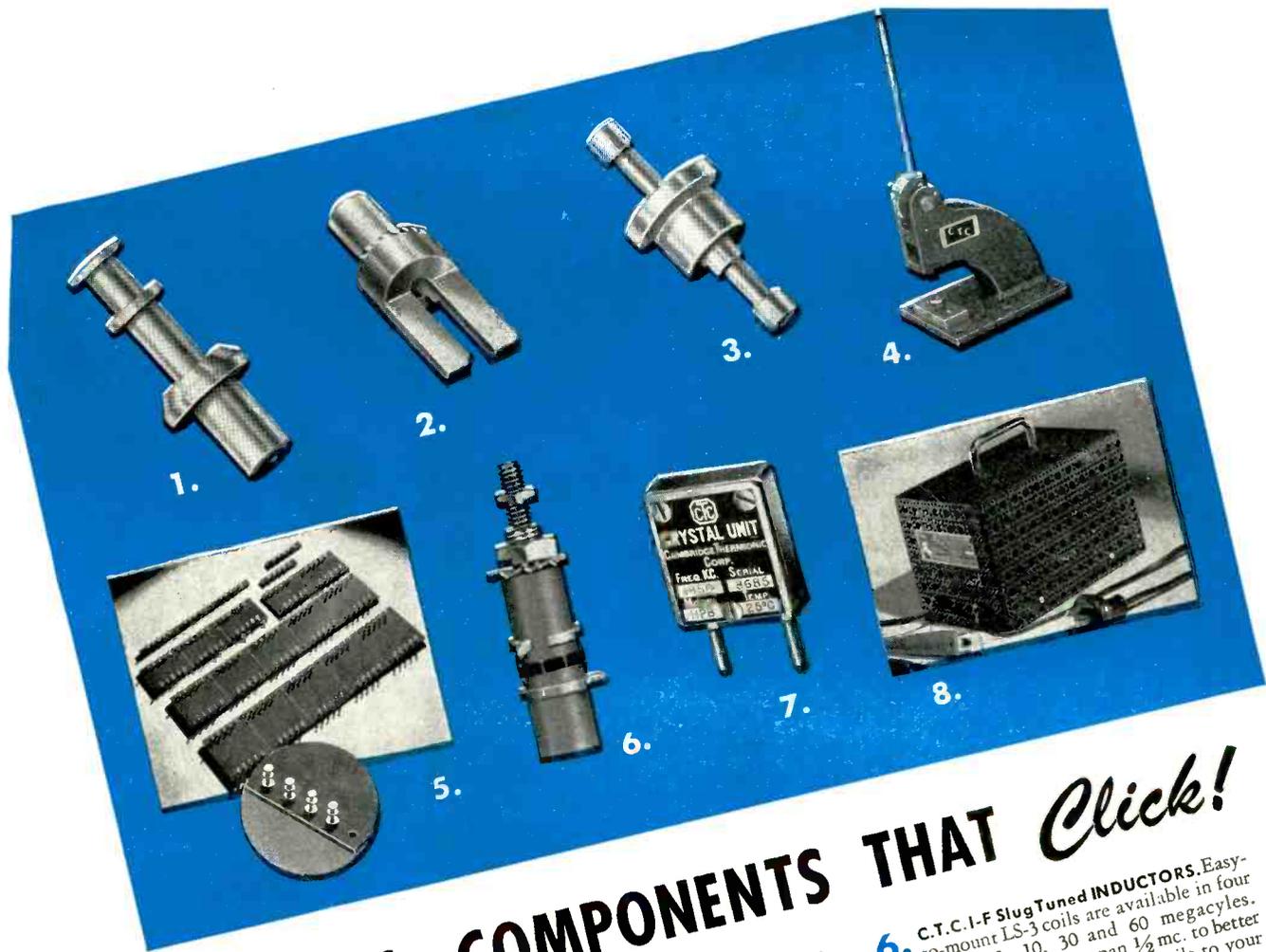
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- 1. C.T.C. TURRET TERMINAL LUGS.** A short cut to speedy assembly. Heavily silvered brass lugs that firmly swage to terminal boards. Lugs heat quickly assuring neat positive wiring. Stocked to fit $\frac{1}{32}$ ", $\frac{1}{16}$ ", $\frac{3}{32}$ ", $\frac{1}{8}$ ", $\frac{3}{16}$ " and $\frac{1}{4}$ " boards. Available with single soldering space and in Midget sizes.
- 2. C.T.C. SPLIT TERMINAL LUGS.** A 0.50" hole through the lugs makes them ideal for manufacturers of transformers or other potted units requiring soldering after potting. Excellent for terminal boards, too, because wiring can be done from top or bottom without drilling. Brass, heavily silver plated to fit $\frac{3}{32}$ " boards.

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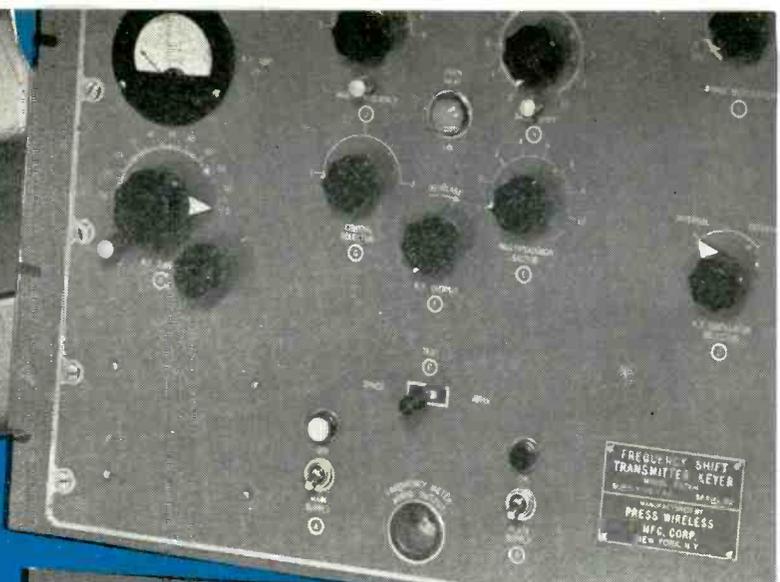
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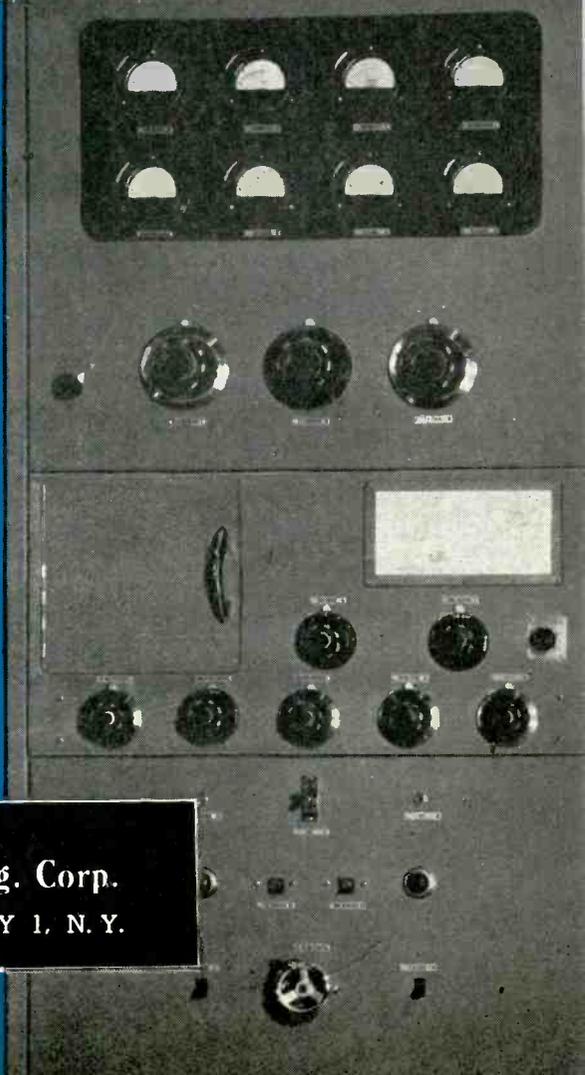
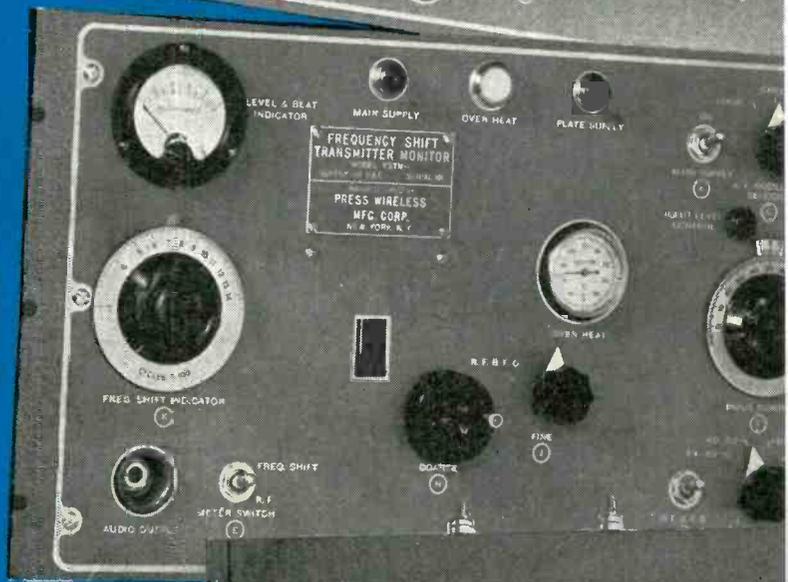
BUYERS' GUIDE

THE REFERENCE BOOK
OF THE ELECTRONIC
DESIGN ENGINEER



PRESS WIRELESS and COMMUNICATIONS

For nearly two decades Press Wireless engineers have been designing new radio transmitters and complete telecommunications systems to meet the increasing requirements of our own world-wide radio press circuits. During the war Press Wireless designed and built a complete line of modern radio transmitters varying from 400 watts to 50,000 watts for the US Army and Navy communication services. Incorporated in these units were years of engineering experience in meeting exacting performance requirements. This experience and the determination of our engineering staff to constantly improve existing equipment and develop new and better methods of radio communications is inherent in the entire line of Press Wireless products.



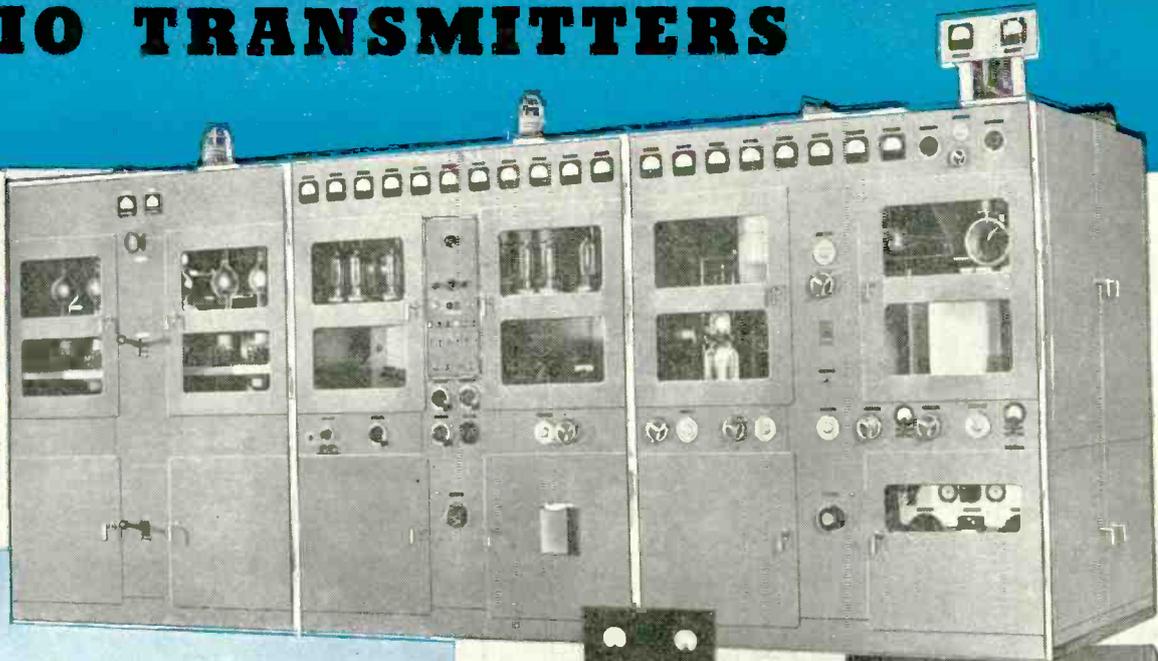
The following eleven pages contain the technical data on Press Wireless products and are indexed to the right for your convenience.

RADIO TRANSMITTERS	Page 2
AM MODULATORS	3
TRANSMITTER WATER COOLING UNIT ..	3
FREQUENCY-SHIFT TRANSMITTER KEYS ..	4
FREQUENCY-SHIFT CONVERTER	5
FREQUENCY-SHIFT TRANSMITTER MONI- TOR	5
MUXPLEX TRANSMITTING SYSTEM....	6
MUXPLEX RECEIVING SYSTEM	7
RADIO RECEIVERS	8
AMPLIFIERS	9
PHOTO-FAX SCANNER	10
TRANSMITTING KEYS	10
PHOTO-FAX TRANSCIEVER	11
FACSIMILE PAGE RECORDER	11
INK TAPE RECORDER	12



PRESS WIRELESS Mfg. Corp.
38-01 35TH AVENUE, LONG ISLAND CITY 1, N. Y.

RADIO TRANSMITTERS



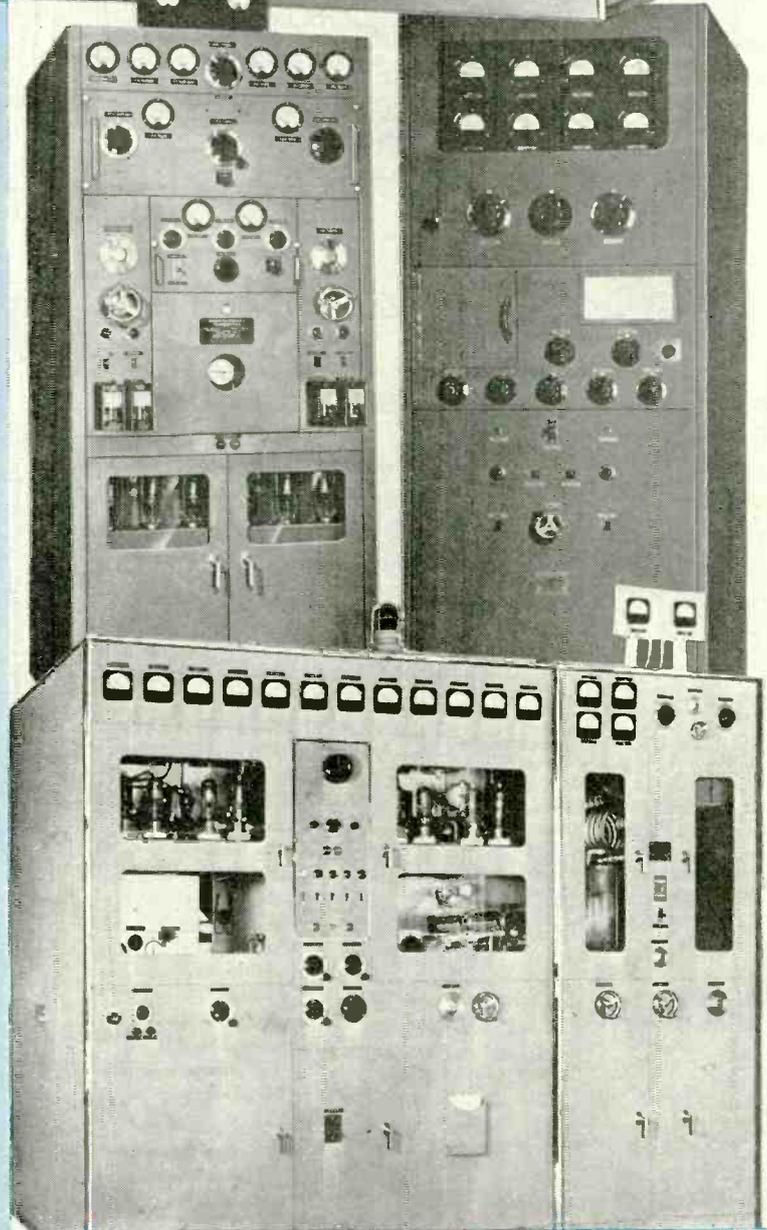
These modern radio transmitters contain many outstanding features including wide frequency range—flexibility—high efficiency—economy of operation—low maintenance—and reliability. All Press Wireless transmitters operate with on-off keying through electronic circuits, frequency-shift keying (FS), voice modulation and MODUPLEX* where frequency-shift keying and amplitude modulation appear simultaneously on the same r-f carrier.

Forced-filtered air is used for cooling all sections except the final of the 50 kw transmitter for which is provided a separate water-cooling unit to maintain the high r-f power output capabilities of the transmitter. Heavy, direct point-to-point inductance shorting bars employed in the tank circuits of all Press Wireless transmitters above 600 watts rated carrier power result in an extremely low r-f resistance path and a rapid, dependable band change over method. Tank capacitors can be connected either in series or in parallel to give optimum L-C ratios for any operating frequency.

All transmitters and associated equipments built by Press Wireless are thoroughly treated to inhibit corrosion and fungus attack. High voltage sections throughout all units are provided with door-interlock control circuits and fast-acting overload relays to protect both operating personnel and equipment.

MODEL T50CF-1 is actually two transmitters in one. Rated carrier output of the entire unit is 50 kilowatts over the full operating frequency range of 4 to 21 megacycles. Final tubes used are GL880's. Complete controls and an individual power supply for the exciter and driver stages provide a medium-power 3-kilowatt r-f carrier on CW or FS—separate and independent of the power amplifier section. Separate controls and high-voltage power supply for the PA make this section available as an independent Class-C final unit for use with a suitable double-sideband Class-B modulator-driver. The PA may be adjusted for operating as a Class-B linear amplifier with a suppressed-carrier exciter or other r-f driver source. An elaborate automatic recycling control circuit protects the entire unit from overload hazards. An automatic shut-down circuit cuts off the transmitter when the keying line is idle for a pre-set interval from 2 to 30 minutes.

* MODUPLEX is a Press Wireless trade mark.



RADIO TRANSMITTERS

MODEL T20CF-1, employing GL889R final tubes, delivers 20 kilowatts over a continuous frequency range of 4 to 21 megacycles. The automatic re-cycling control circuit and automatic shut-down features incorporated in T50CF-1 are also built into this unit.

MODEL T5CF-1 covers 2 to 23 mc with a rated CW carrier output power of 5 kw. Simplicity of design and operation are outstanding features of this transmitter. Like the rest of the Press Wireless transmitter family, T5CF-1 may be keyed by an external Frequency Shifter or conventional on-off keying source, voice modulated by a companion modulator or used on MODUPLEX dual-channel transmission with FS and AM. The final stage uses ZB3200 tubes.

MODEL T2.5CF-1 is compactly designed to give full 2500 watts CW carrier output over a continuous range of 2.5 to 23 megacycles but occupies less than a square yard of floor space. Welded steel framework construction is used throughout. The average PA plate efficiency of the 2 GL8002R final tubes of T2.5CF-1 is 70%. These tubes are run well below their maximum rated output power level. Overall efficiency

is high with only 8 kw a-c line power consumption for full 2500 watt carrier. This transmitter contains also a built-in-frequency-shifter circuit so that F-S carrier signals may be transmitted without requiring a separate external shifter.

MODEL T.4CM-1 Radiotelephone-telegraph transmitter made communications history on the battlefields of France, Belgium, Holland, Germany and the Philippines with 600 watts F-S carrier power transmitting high-speed news traffic direct to the United States. Rated at 400 watts radiophone and 600 watts CW, this unit uses 810-type tubes in the final and push-pull modulator stages. T.4CM-1 covers 2.1 to 18 megacycles over a continuous range, using band switching. Complete automatic control is provided to turn the transmitter carrier on or off by remote operation when a signal appears on the keying line.

Press Wireless Manufacturing Corporation will deliver any of these high-quality transmitters with associated equipment for complete radio telecommunications system within approximately five months from the receipt of your order.

Send for free engineering literature on these transmitters.

PRESS WIRELESS TRANSMITTERS — TYPICAL CHARACTERISTICS

Press Wireless Model Number	T. 4CM-1	T2. 5CF-1	T5CF-1	T20CF-1	T50CF-1
FREQUENCY RANGE (continuous)	2.1-18 megacycles	2.5-23 megacycles	2-23 megacycles	4-21 megacycles	4-21 megacycles
FREQUENCY CONTROL	3 crystal and VFO	5 crystals and VFO	6 crystals or VFO	6 crystals	6 crystals
CRYSTAL RANGE	2.1-4.5 megacycles	2-4 megacycles	2-4 megacycles	2-4 megacycles	2-4 megacycles
TYPES OF EMISSIONS	CW, FS, AM	CW, FS, AM	CW, FS, AM	CW, FS, AM	CW, FS, AM
RATED CARRIER POWER CW or FS Telephony	600 watts ¹ 400 watts	2500 watts 1500 watts ²	5000 watts ¹ 2500 watts ²	20,000 watts ¹ 5000 watts ²	50,000 watts ¹ 15,000 watts ²
KEYING SPEED On-off (relay) on-off (vt keying) Frequency shift	150 wpm 500 wpm 700 wpm	230-240 wpm > 500 wpm > 800 wpm ¹	> 200 wpm > 500 wpm > 700 wpm ¹	no > 400 wpm > 700 wpm ¹	no > 400 wpm > 700 wpm ¹
OUTPUT IMPEDANCE	70 ³ or 600 ohm	600-1000 ohms	400-800 ohms	550-650 ohms	550-650 ohms
COOLING SYSTEM	forced air	forced air	forced air	forced air	forced air, water (PA)
OVERLOAD PROTECTION	yes	yes	yes	automatic recycling	automatic recycling
POWER REQUIREMENTS: Frequency and phase Voltage Wattage (rated output)	40-60 cycle, 1 phase 90/130, 200/240 2200	50-60 cycle, 3 phase 220/230 8,000	50-60 cycle, 3 phase 220 230 18,000	60 cycle, 3 phase 207-253 35,000	60 cycle, 3 phase 207-253 120,000
DIMENSIONS (H x W x D) inches	71 x 28 x 25½	77 x 33 x 36	79 x 66 x 36	84 x 108 x 56	84 x 216 x 56
WEIGHT (pounds)	1,100	1,700	2,550	9,000	19,000

¹ with an external Frequency Shift Keyer (FSTK-1).

² When properly modulated by companion modulator unit.

³ With lowered efficiency at higher frequencies.

AM MODULATORS

All Press Wireless transmitters have been designed to provide high-quality amplitude radiotelephone communication service as well as CW radiotelegraph operation; however, only the model T.4CM-1 400/500 watt transmitter contains its own built-in modulating circuits. Separate, complete, high-level modulator bays are available for all other transmitters.

The modulators follow the general mechanical design of companion transmitters and are styled to match the r-f units. All of these units utilize forced, filtered air cooling throughout with water cooling also used in a portion of the modulator for T50CF-1. The frequency response is excellent for amplitude modulation with low distortion. The units have been designed to work at standard input levels of 1 milliwatt in 600 ohms (0 VU) for required power output. These equipments are not recommended for FM service.

Illustrated data sheets will be sent at your request.

TRANSMITTER WATER COOLING UNIT Model WC50-1

This circulating water-cooling unit has been designed specifically to function with the T50CF-1 transmitter and its companion modulator. Two all-bronze pumps, each furnishing 25 gallons-per-minute at 72 pounds pressure are driven by separate 5-horsepower electric motors. Only one of the pump units is normally in operation; the other section is immediately available for emergency use. The motors require three-phase, 220 volts, 50/60 cycle power and are tropically insulated. The large radiator dissipates sufficient heat under normal conditions; however, if the water temperature rises above a preset point, a large fan circulates air through the radiator baffles to speed cooling. The 3-phase, 1½-horsepower fan motor is similar to the pump motors. The pumps, radiator, fan, and expansion tank with level indicator are mounted together on an open-type steel frame. An illustrated descriptive sheet is available.

RADIO-FREQUENCY CARRIER SHIFT



The recent developments in Radio-Frequency Carrier Shift transmission have definitely established practical and dependable long-haul radio-teleprinter service for the first time in communications history. Misprints and drop-outs, common to on-off teleprinter circuits, resulting from amplitude disturbances in AM operation are effectively eliminated with frequency-shift transmission.

Since the r-f carrier in a frequency-shift circuit is held at constant amplitude while the frequency is shifted 100 to 1000 cycles, limiting can be employed at the receiving end to achieve a ten to fifteen decibel gain or better due to a vastly improved signal-to-noise ratio. This method not only allows successful radio-teleprinter operation but greatly improves the reliability and fidelity of radio-photo, facsimile and high-speed Morse keying circuits.

Press Wireless, using at present twelve international, 24-hours-a-day radio press channels on carrier shift operation, has pioneered in research, development, manufacture and use of frequency-shift equipment for complete radio systems. The dependable performance built into each unit manifests Press Wireless' engineering endeavors in pursuit of constant improvement in global telecommunications.

FREQUENCY-SHIFT TRANSMITTER KEYER Model FSTK-1 . . .

The hard, practical experience accumulated by our communications engineers over many years has been built into this new frequency-shift keyer to afford all the advantages of FS transmission.

This precision unit provides the basic oscillatory circuit shifted by the signal intelligence for Morse code, teleprinter, photos or facsimile. Using carrier frequency shift, it is also possible to transmit voice as an amplitude modulated component simultaneously with the FS signal, thereby affording two independent service channels on a single r-f carrier.

FSTK-1 is universally adaptable to any transmitter when used with Frequency Shift Keyer Coupler model FSC-1 and will increase the effective signal strength more than ten to fifteen decibels. The unit delivers 2 watts of r-f drive for the buffer-keyer stage of a CW transmitter. The output frequency ranges from 1.0 to 6.7 megacycles using crystals in a temperature-controlled oven. Keying speeds better than 700 words-per-minute may be used. FSTK-1 has a linear shift up to 1000 cps and provides a greatly improved transmission medium for photos and facsimile. The entire unit with self-contained power supply weighs approximately 100 pounds and may be standard 19" rack mounted. Operates on 110/220 volts, 50/60 cycles, 175 watts line power source.

CHARACTERISTICS FOR MODEL FSTK-1

Frequency range	1.0-6.7 megacycle
Frequency shift	linear to 1000 cycles
Input impedance	.75 ohms (from external oscillator)
Output impedance	75 ohms
Output voltage and power	8-12 volts, 2 watts from 1 to 6.7 mc.
Keying speed	better than 700 wpm.
Power requirements	110/220 volts, 50/60 cps.
Dimensions	15" (wide) x 15-3/4" (high) x 15" (deep)
Weight	105 pounds
Mounting	standard 19" relay rack
Tube complement	2-6J5, 2-6SA7, 1-807, 1-6N7, 1-6H6, 1-6SJ7, 1-6SN7, 1-5T4, 3-OD/VR150

FREQUENCY SHIFT CONVERTER

Model FSRK-1

The production of Frequency Shift Converter Keyer FSRK-1 resulted from years of "lab" research and field development. This very compact precision unit may be used with any good communications receiver equipped with a beat-frequency oscillator. The 600-ohm input connects to the audio output of the receiver and no modifications are required.

When the audio-shifted tones from the receiver enter the converter-keyer they pass through a band-pass filter, an amplifier, and then into 60 decibel limiting stages which effectively eliminate all amplitude variation of the signal caused by noise. After further amplification, the signal passes through a discrimination circuit and the resulting direct current may key an internal 1000 cycle sine-wave oscillator for line-tone output or may be used to key a self-contained 60-milliampere neutral d-c or a 30 milliampere polar d-c output. The latter two will operate teleprinters or tape recorders locally or over short land lines.

A zero-center-reading, front panel meter indicates any frequency drift at transmitter, or receiver, while two small neon lamps glow on "mark" and "space" signals when the receiver is properly adjusted. The linear operating curve of the discriminator output permits satisfactory drift tolerance for practical employment minimizing attention to receiver readjustment.

Constructed for cabinet or 19" rack mounting and weighing 115 pounds the unit contains three power supplies for the various circuits and occupies 18 inches of panel space. Operates on 10 volts, 50/60 cycles, 125 watt source.



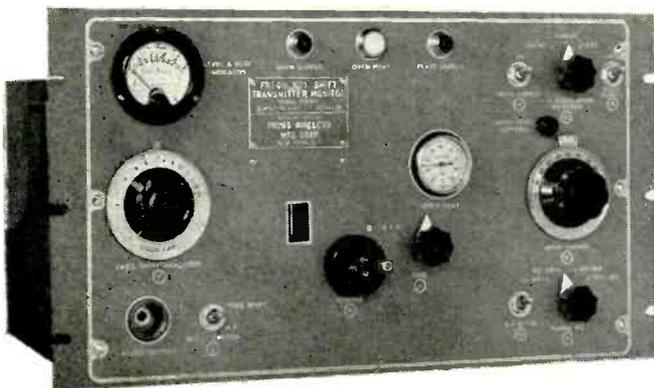
CHARACTERISTICS FOR MODEL FSRK-1

Input impedance	600 ohms
Input signal	FS audio from 100 to 800 cycle shift
Output impedance	
a. Tone keying	600 ohms
b. Polar or neutral D. C.	1800 ohms
Output signal	
a. Tone	1000 cycles (on-off)
b. Polar DC	±30 MA
c. Neutral DC	60 MA
Keying speed	teleprinter 60 wpm Morse keying to 400 wpm
Power required	115 volts, 50/60 cycles, approximately 125 watts
Dimensions	18" (high) x 19" (wide) x 13-1/2" (deep)
Weight	approximately 115 pounds
Tube complement	5-6SL7, 3-6J5, 3-6SJ7, 3-6H6, 1-6SN7, 1-6B4G, 2-5U4G, 1-6Y6G, 1-OD3/VR-90, 2-OD3/VR-150

FREQUENCY SHIFT TRANSMITTER MONITOR

Model FSTM-1

Since in a Frequency Shift System the transmitted intelligence is a function of frequency deviation rather than amplitude variation, it is highly important that a careful and accurate check be made of the r-f carrier frequency to avoid misprints or drop-outs in mechanized circuits which might result from an incorrectly tuned FS transmitter. In the FS method, however, the frequency deviations are an extremely small percentage of the basic carrier frequency normally requiring that two or three pieces of high-grade test equipment be assembled to make the check for "mark" and "space" conditions of the carrier.



Frequency Shift Transmitter Monitor FSTM-1 is a simple-to-operate, single, compact, precision unit which can be used to make rapid determinations of frequency deviations from 400 to 1400 cycles per second over a carrier frequency range of 2 to 26 megacycle. Visual meter and aural zero-beat indicators are provided for the check tuning adjustments while a direct reading accurately calibrated dial indicates the amount of shift in cycles-per-second. Critical frequency components, including the r-f crystal oscillator, are contained within a thermostatically controlled oven.

Despite its small size, the FSTM-1 contains its own power supply and when mounted in a standard 19" rack occupies only 10 1/2" of panel space. The unit consumes 100 watts of 110 volt 50/60 cycle power.

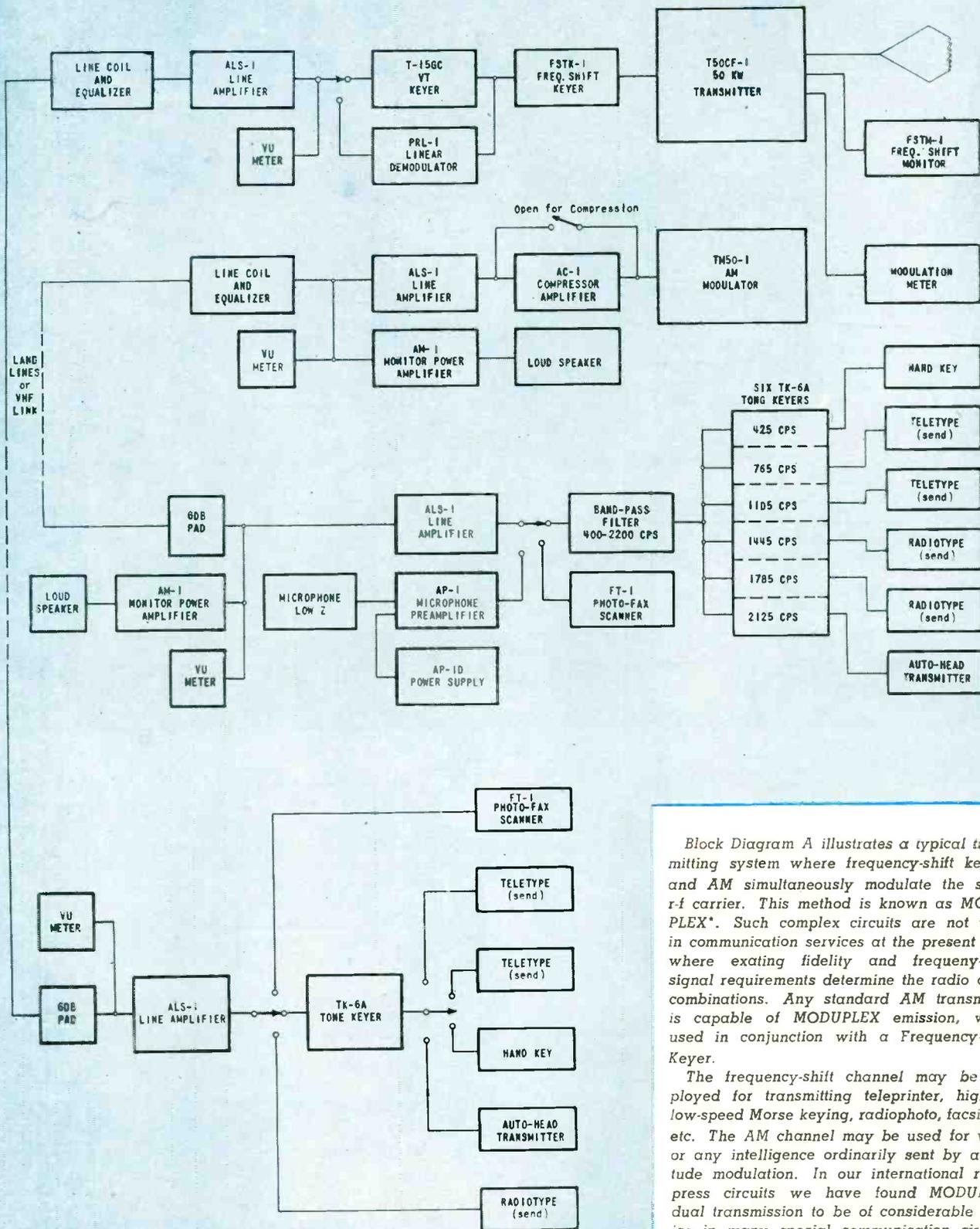
Write for descriptive literature

CHARACTERISTICS FOR MODEL FSTM-1

Frequency range	2-26 mc.
Frequency shift measurement	400 to 1400 cps.
R-F input requirements	100 to 500 Millivolts
Input impedance	75 ohms
Power requirements	110/220 volts 50/60 cps. approximately 100 watts
Dimensions	19" (wide) x 10 1/2" (high) x 14" (deep)
Weight	75 pounds
Tube complement	1-6J5, 1-6K6GT/G, 2-6SJ7, 1-6ACT, 1-6SL7GT, 1-OD3/VR150 1-5Y3GT/G



TYPICAL MODUPLEX* TRANSMITTING SYSTEM



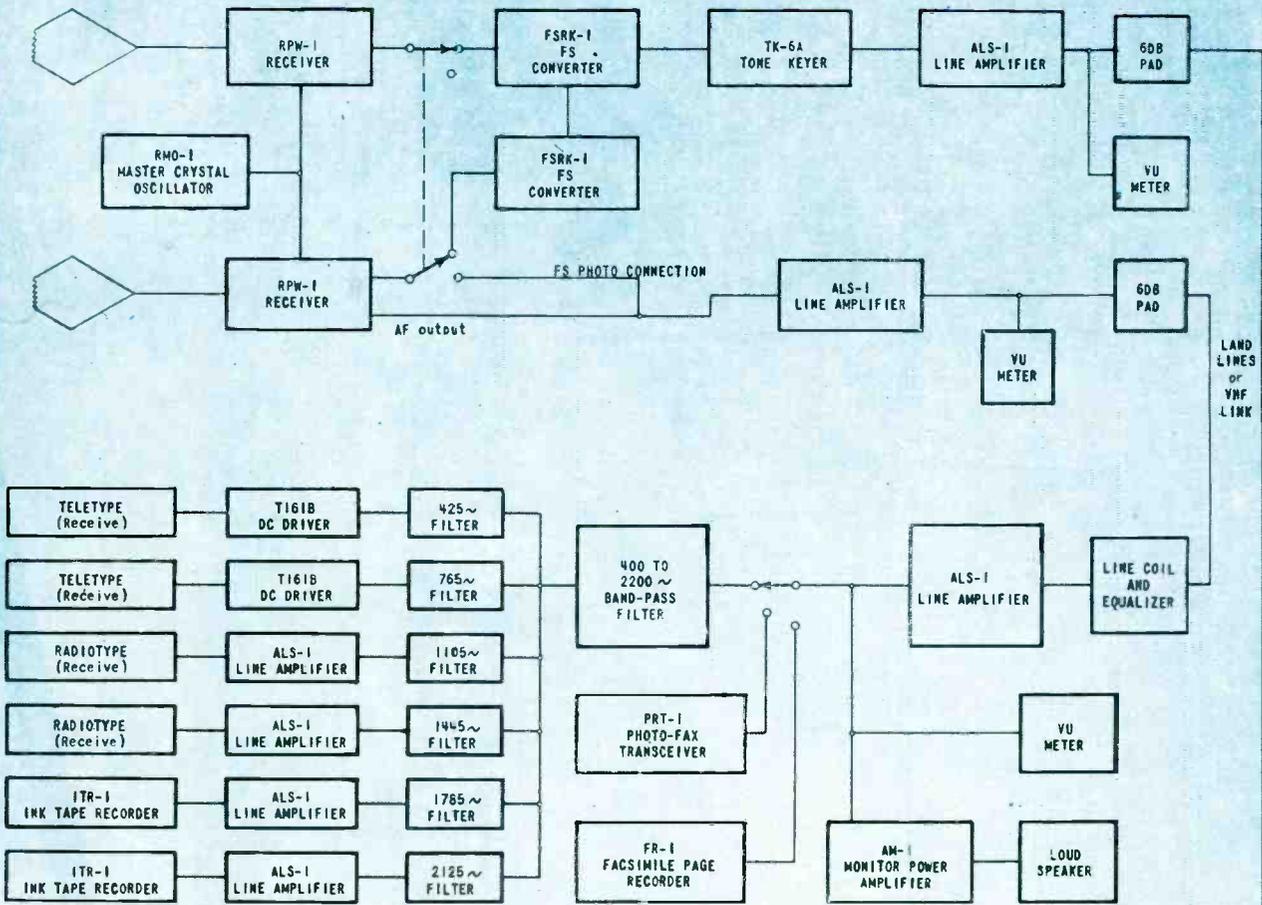
Block Diagram A illustrates a typical transmitting system where frequency-shift keying and AM simultaneously modulate the same r-f carrier. This method is known as MODUPLEX*. Such complex circuits are not used in communication services at the present time where exacting fidelity and frequency-shift signal requirements determine the radio circuit combinations. Any standard AM transmitter is capable of MODUPLEX emission, when used in conjunction with a Frequency-Shift Keyer.

The frequency-shift channel may be employed for transmitting teleprinter, high or low-speed Morse keying, radiophoto, facsimile, etc. The AM channel may be used for voice or any intelligence ordinarily sent by amplitude modulation. In our international radio-press circuits we have found MODUPLEX dual transmission to be of considerable service in many special communication circuits.

* MODUPLEX is a Press Wireless trade mark.

PRESS WIRELESS

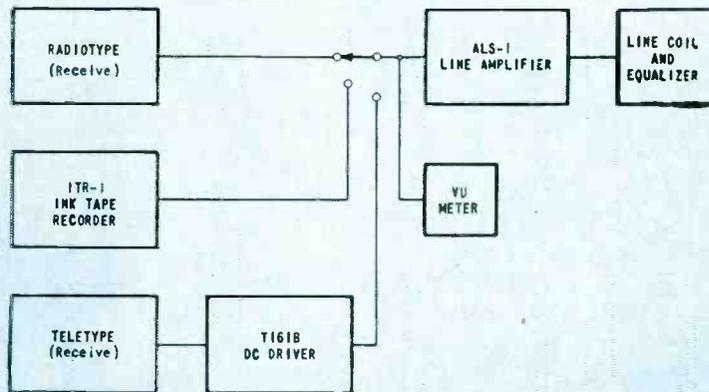
TYPICAL MODUPLEX* RECEIVING SYSTEM



Receiver system Block Diagram B shows components of a typical MODUPLEX receiving system. For sake of completeness, it is of greater complexity than most actual installations. In many circuits only the frequency-shift or amplitude-modulated component is utilized at a given receiving station. When a non-directive transmitting antenna is used, receiving stations may be located in many varying directions and distances. If diversity reception is not required, only one receiver, one FS Converter, and one linear amplitude-modulation detector are used. The XAD-1 represents this linear detector in the block diagram.

Standard communication-type receivers such as you may now have in service may be converted into satisfactory receivers of MODUPLEX. The new Press Wireless Receiver RPW-1 is essentially a high-quality communication receiver, but its design embodies refinements that make it especially suited for Frequency Shift and MODUPLEX reception. Any standard AM receiver will extract the amplitude-modulated signal.

* MODUPLEX is a Press Wireless trade mark.



PRESS WIRELESS

PRESS WIRELESS RADIO RECEIVERS . . .

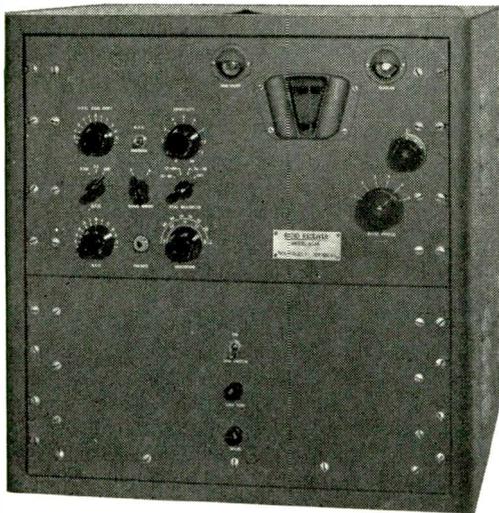
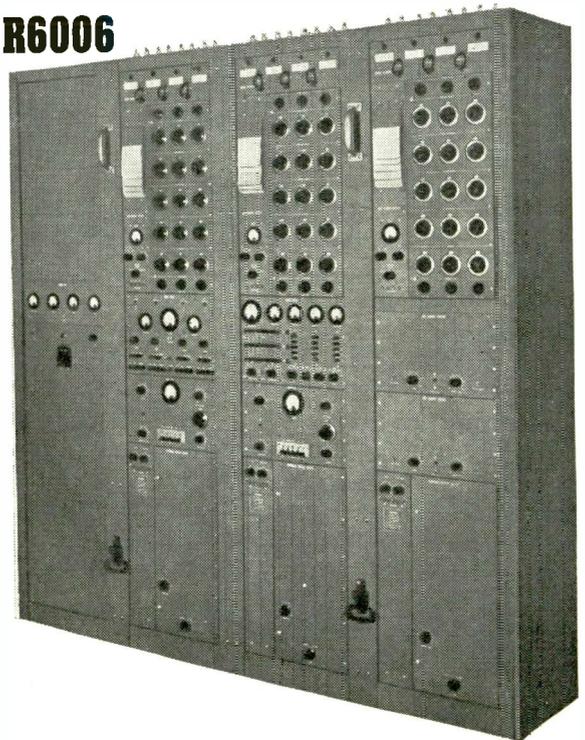
TRIPLE DIVERSITY RADIO RECEIVER Model R6006

In commercial radio systems where long-haul, continuous reliability is required—particularly for telephony—the excellent quality performance of this system, designed by top engineers who really know communications problems, will prove indispensable.

Model R6006 Triple-Diversity Receiving equipment comprises 3 separate and identical h-f superheterodyne receivers, together with auxiliary units for switching and combining their outputs. Frequency range of 3 to 24 mc is covered in three bands with a maximum sensitivity of better than 2 microvolts. A common, automatic-gain-control system causes the receiver with predominating input signal to take over output circuits when operating in diversity. Intermediate-frequency bandwidths of 1, 2, and 4 kc are instantly selectable. (Other bandwidths available.) Receivers utilize double-intermediate-frequency conversion at 450 kc and 50 kc. Slow, medium, or fast time constants may be applied to the AGC system for optimum performance requirements.

Equipment contained in 4 bays measuring 7½' high, 7' 3" long and 17½" deep. 3 of the bays contain the separate r-f chassis, separate i-f chassis, switching control, power control, tone keying, and audio amplifying panels. Fourth bay holds voltage-regulated master power supply for entire equipment.

Any combination of four tone keyers or audio amplifiers are available at the output. Since provisions have been made for three land-line connections, it is possible to use one of the receivers on a given signal feeding one line while operating the remaining two receivers singly or in dual diversity.



GENERAL COMMUNICATIONS RADIO RECEIVER Model R6028

Meeting a persistent need for a crystal-controlled, wide-band radio receiver in the communications field, Radio Receiver R6028 covers a range of 560-kilocycles to 30-megacycles in six bands. The circuit is essentially a 16-tube superheterodyne design provided with crystal high-frequency and beat-frequency oscillators for extreme stability. Self-excited HFO and BFO are also provided. A unique but simple circuit has been incorporated in R6028 to permit precision tuning of the crystal HFO and provide straight-line frequency response relationship to calibration. Instantaneous band-width selection of 3 kc or 6 kc is available at the front panel.

Receiver R6028 and its separate power supply may be standard rack-mounted but are normally supplied mounted together in a unit steel cabinet weighing 150 pounds when assembled. Operates on 110/220 volt, 50/60 cycle, 100 watt power source.

Coming - Out Of Our Laboratory - SOON! DELUXE RADIO RECEIVER MODEL RPW - 1 - AM - MODUPLEX* - FS

- Complete coverage 100 kc to 40 mc
- Continuous band spread
- 8-Position band switch
- Simultaneous AM and FS operation
- Easy adaptation to diversity
- Connections for external XTAL HFO-BFO
- Overall response flat 100 to 6000 cps
- Variable I-F band switch
- Variable crystal I-F filter
- Temperature-compensated HFO and BFO
- Improved noise limiter
- Adjustable AVC circuit
- Calibrated "S" meter
- Regulated critical voltages
- Antenna input impedances 75 or 200 ohms
- Output impedance 4 or 600 ohms
- Fly-wheel tuning controls
- Self-contained power supply
- 110 or 220 v, 50/60 cycle
- A.S.A. parts
- Complete tropicalization
- Rack or cabinet mounting

*MODUPLEX is a PRESS WIRELESS trade-mark

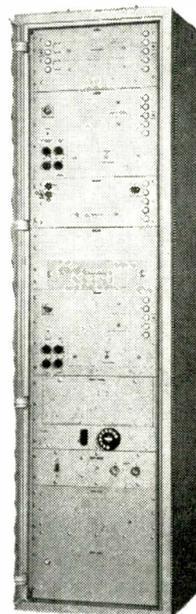
... A QUALITY STANDARD IN PERFORMANCE

DUAL DIVERSITY RADIO RECEIVER Model R6019A

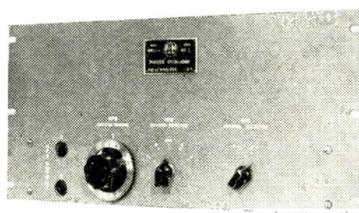
Dual Diversity Radio Receiver R6019A provides the exacting degree of frequency stability, sensitivity and selectivity required by modern, high-grade communications systems. Troublesome frequency drift encountered in conventional receiver heterodyne oscillators has been reduced to a minimum with the design of this equipment by employing crystal HFO and BFO circuits. The two identical superheterodyne receivers operate between 2.4 and 23 megacycles in five fixed, pretuned bands. The unit may be entirely remote-controlled with assur-

ance of precise receiver tuning. A standard, telephone type dial mounted on the front panel turns the equipment on or off, instantly selects any one of the five pre-tuned channels and any one of four diversity antenna combinations. An auxiliary dial on a 950-ohm loop may be used at remote positions.

The complete unit comprised of 42 vacuum tubes, associated circuits and single-phase 110/120 volt power supply is contained in a seven-foot steel cabinet provided with front and rear full-length doors.



RECEIVER MASTER OSCILLATOR Model RMO-1



For radio circuits employing high-speed Morse keying, teleprinter, photo and facsimile transmission which demand increasing frequency sta-

provides constant-frequency heterodyning voltages which may be applied to any existing conventional self-excited-oscillator receivers. If you operate a conventional SE receiver singly or in dual diversity, you can use RMO-1 to bring present equipment to top performance. HFO range is 2 to 24 mc using isolating multipliers. BFO frequency approx. 465 kc.

Positions provided for mounting 4 HFO and 2 BFO crystals with front-panel selection. A calibrated control permits precision adjustment of the high-frequency oscillator circuit. Plate and filament voltages for RMO-1 are obtained from the receiver with which it is used.

bility. Crystal-controlled HFO and BFO in this unit

AMPLIFIERS



COMPRESSOR AMPLIFIER

Model AC-1

Compression of excessive program peaks by Compressor Amplifier AC-1 will permit a higher average-mean voice modulation level. With this compression the significant increase in modulation capabilities of an amplitude-modulated transmitter results in gains of 2 to 3 db achieving a greater effective coverage area without an increase of input power.

Frequency response is flat within ± 1 db from 50 to 10,000 cps. A maximum, linear overall gain of 45 decibels is available at low input levels. The input level may be varied from -30 to $+10$ vu, the amplifier still retaining its compression characteristics. Input signal variations as great as 20 db above the compression threshold will cause a variation of only 2.5 db in the output. Design of the AC-1 provides rapid compression action on peaks or bursts in approximately 0.5 millisecond. Compression release may be selected for 250 or 750 milliseconds.

In the linear portion of operation below the compression threshold contributed distortion is less than 0.5 per cent at the output. With 15 db of compression, distortion rises only to 1.5%. Noise level is -60 db below compression threshold. Impedances are standard 600 ohms. The amplifier with its self-contained power supply occupies $8\frac{3}{4}$ " of standard 19" rack space and requires 50 watts of 110/115 volt, 50/60 cycle, a-c power. A detailed engineering bulletin is available on request.

LINE AMPLIFIER

Model ALS-1

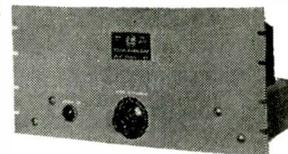
Fills a constant need for a linear, distortion-free, audio amplifier to increase the power level at either end of a transmission line. Push-pull input and output stages provide a gain of 45 db at an output level of $+20$ vu. The amplifier, with its maximum input signal of 0 vu, has a maximum low distortion of 1.0% RMS. Frequency response is flat within ± 2 db on all frequencies from 30 to 15,000 cycles with a maximum noise level of -70 vu. The unit may be used in radio program transmission, recording, and tone code amplification. Built on an $8\frac{3}{4}$ " standard 19" rack panel, with a self-contained power supply. Consumes 30 watts of 115 volt, 50/60 cycle power.



MONITOR POWER AMPLIFIER

Model AM-1

Monitor Power-Amplifier Model AM-1 delivers 3 to 5 watts of audio power to drive monitoring loud speakers, electro-acoustical equipment or certain types of modulators. This unit provides a low-distortion characteristic of only 1% RMS at the 3-watt level. The transmission gain is 50 decibels with a frequency response flat within ± 2 db from 30 to 15,000 cps. Maximum noise level is -70 vu. Input-output impedances are standard 600 ohms. Power supply is self-contained, the unit may be 19" rack-mounted, operates from 110 volt, 50/60 cycles, 50 watt power source, weighs approx. 40 lbs.



MICROPHONE PREAMPLIFIER

Model AP-1

Microphone Pre-amplifier AP-1 provides 40 decibels of audio gain with less than 1% RMS distortion for zero vu output. The frequency response is flat within ± 1 db over a range of 50 to 8000 cps. Model AP-1 is designed to match any standard 600-ohm impedance required at the input of succeeding speech amplifier units. Model AP-1 operates from 110 volt, 50/60 cycle, 50 watt a-c power source with separate power supply. The preamplifier and power supply may be rack-mounted occupying $15\frac{1}{4}$ " of rack space.



PRESS WIRELESS FACSIMILE

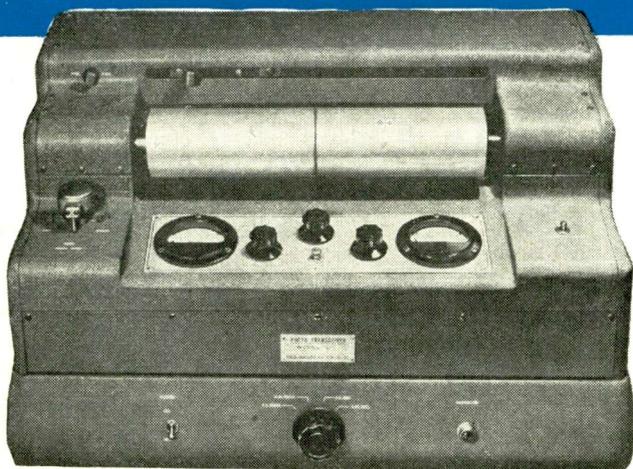


PHOTO-FAX SCANNER Model FT-1

All the high-quality photo and facsimile transmission features of the PRT-1 Photo-Fax Transceiver (q.v.) including the precision optical, electrical and mechanical components, have been incorporated into this photo-fax scanner. This unit will transmit either frequency-shift audio tones with a 2100 to 3000 cps range or an amplitude-modulated 1800 cycle note. The unit weighs 85 pounds and uses a separate 55 pound power supply. Power requirements are 110/220 volts, 50/60 cycles, approximately 300 watts. For further information, see PRT-1 characteristics pertaining to transmission.



TRANSMITTING TONE KEYER Model TK-6A

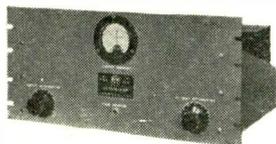
This Transmitting Tone Keyer provides a keyed, constant amplitude, sine-wave audio pulse that may be fed into an ordinary telephone line or a v-h-f link for channelized transmission to a distant point. Six standard frequencies (425, 765, 1105, 1445, 1785 and 2125 cps) are provided, any one of which may instantly be selected by a front panel pointer knob. High frequency stability is achieved by use of both positive and negative feedback.

Input keying may come from a polar current or from any short-to-ground keying device. High keying speed without the generation of undue harmonics or too exacting adjustment has been attained with a patented thyration trigger circuit. An 8 vu output signal is delivered to a 500 ohm load on all frequencies and on all keying signal levels and speeds with less than 5 per cent harmonic distortion.

8 3/4" panel height per unit, standard 19" rack mounting and a self-contained 110/115 volt, 50/60 cycle a-c power supply recommend this unit for channelized operation.

POLAR DC DRIVER Model T-161B

To accurately operate teleprinters, ink tape recorders, or similar devices from a keyed tone signal, Model T-161B Polar DC Driver accepts square-wave, keyed audio tones from -20 vu to +20 vu and delivers 18 milliamperes of direct-current pulses. An automatic-level-control circuit assures a constant output current during normal line level variations in keying voltage. Input impedance is 600 ohms; output, 1800 ohms. Power supply is self-contained. The unit occupies 8 3/4" of a standard 19" relay rack.



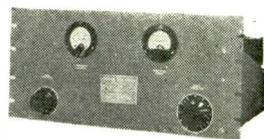
KEYERS

VACUUM TUBE TRANSMITTER

KEYER Model T-156C

VT Keyer T-156C accepts keyed audio tones over an exceptionally wide range of frequencies and levels and delivers a well-filtered and electronically-regulated d-c bias voltage for a transmitter keyer stage or Frequency Shifter. Line levels varying as much as -20 to +20 vu can easily be accommodated over a keying-tone frequency range of 200 to 10,000 cycles or better. Since the unit contains an automatic level-control circuit, unstable transmission losses as great as 6 decibels will not appreciably affect the output keying pulse. Line noise and cross-talk is effectively eliminated when it occurs 6 db or more below the signal input level. Input impedance is 500 ohms; output 50,000 ohm. Input and output attenuator controls on the front panel permit a wide range of settings for accurate operation to meet various circuit requirements.

T-156C keyer contains its own 110-volt, 50/60 cycle power supply, consuming approximately 50 watts.



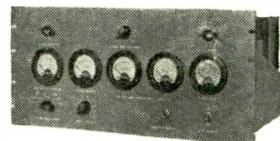
RECEIVING DIVERSITY TONE

KEYER Model R-626

Model R-626 Receiving Diversity Tone Keyer takes the keyed d-c output from the signal detector of any radio receiver providing a minimum of one volt and will deliver any one of six standard communication filter tones with constant amplitude up to approximately +20 vu to a 600 ohm line. The keyer will accurately respond to keying speeds of 400 cps or better and provides a front panel control to shape the keyed audio output. An outstanding feature includes a convenient i-f monitoring circuit for checking the exact adjustment of the receiver intermediate frequency.

The diversity feature permits coupling the d-c signal detector output of two or three receivers in parallel to a common 20,000 ohm input terminal when operating on diversity reception. It is also possible to utilize this feature in remote fixed-frequency receiver operation where day-to-night transmitting frequencies are changed.

Power supply is self-contained and operates on 110 volt, 50/60 cycle, 50 watt power source. The unit weighs 47 pounds and mounts in a standard 19" rack.



PRESS WIRELESS



Model
PRT-1

PHOTO-FAX TRANSCEIVER

Photo-Fax Transceiver PRT-1 combines in a single unit all the precision optical, electrical and mechanical components required to send and record photographs, blueprints, maps, charts or any black-and-white copy with utmost fidelity and quality. This dual-purpose equipment is the only electrical equipment necessary to convert an ordinary signal center to a two-way photo-traffic station.

Recorded images from the transceiver have sufficient detail to permit two-diameter photographic enlargements or more in many applications. The index of cooperation, 289.5 at 102.3 lines-per-inch, yields definition greater than ordinarily required for printed photos.

The input and output circuits operate on audio frequency-shifted tones between 2100 cps and 3000 cps retaining to a very high degree the latitude and definition of the original copy during unfavorable conditions of line noise.

This audio FS output also permits radiophoto transmission and reception by sub-carrier frequency shift. Provision for recording by conventional amplitude modulation using any frequency between 1200 cps and 3000 cps is incorporated. AM transmitting tone is 1800 cps.

Precision frequency circuit elements, accurate to 1 part in 100,000 control the rotating speed of the scanning drum. This drum is divided into two 7" sections so that one may be used to scan or record 7" x 8½" copy, while the other is being loaded or 14" x 8½" copy may be attached to the two drums which then can be run in tandem.

Operation of the transceiver is sufficiently simple so that office personnel can successfully operate this unit in addition to their other duties. Maintenance usually is no more involved than routine dusting, lubrication, and tube checking.

The Photo Transceiver weighs 85 pounds, and is powered by a separate 55-pound power supply, requiring 300 watts of either 115 or 230 volt, 50/60 cycle power.



FACSIMILE PAGE RECORDER

Model FR-1

The improved fidelity of radio facsimile copy is an important feature of Facsimile Page Recorder model FR-1. This equipment is fully self-contained and is equipped for recording facsimile signals on frequency-shift circuits. A greater over-all circuit reliability and a vast improvement in the record copy results from the ability to utilize r-f carrier shift transmission. Continuous electro-chemical recording is provided so that copy may be withdrawn and used immediately after recording without further processing or developing.

Model FR-1 operates on frequency-shift audio signals from 2100 to 3000 cps with 300 cycle drift tolerance. This unit will also operate on AM circuits having a minimum amplitude variation of 16 decibels from black to white on any frequency between 1200 and 5000 cps.

The FS input level required is zero decibels. AM input ranges from zero to -30 db, minimum. The 100-line-per-inch, continuous copy is 8" wide. The entire unit with self-contained power supply weighs 80 pounds and operates from 100/130, 200/260 volts, 50/60 cycle line source consuming 250 watts.

PRODUCTION FACILITIES

Press Wireless Manufacturing Corporation owns and operates complete facilities for production of entire radio communications and radio broadcasting systems at Hicksville, Long Island, New York. Here radio units from 50,000 watt transmitters to small line amplifiers are constructed by skilled craftsmen in modern production buildings.

At Hicksville, a thoroughly efficient and experienced manufacturing staff is available with an

individual consideration for your particular problem. Coupled with our extensive engineering service, we are prepared to produce quickly radio equipment to meet your requirements in limited or mass quantities whether the unit or system of units be highly specialized or "standard."

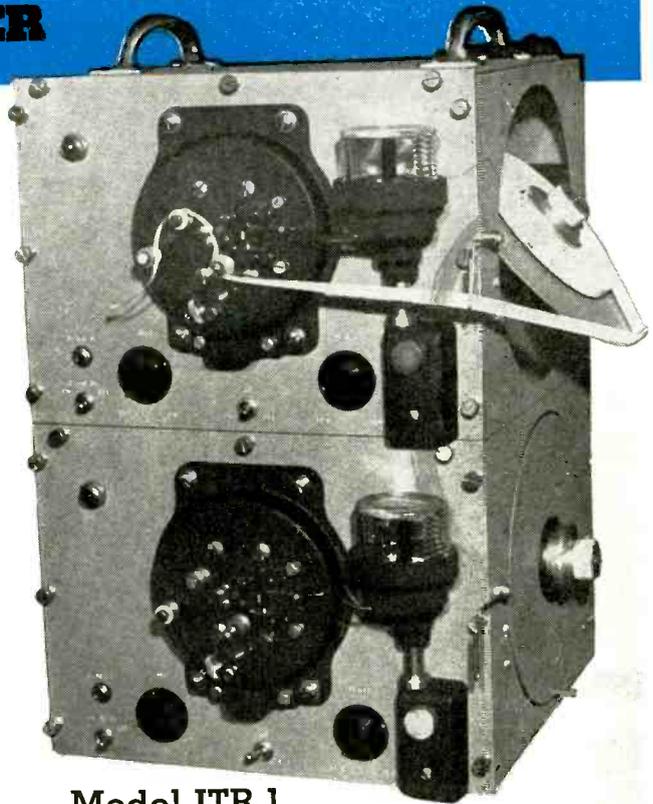
If you have a radio production problem that requires immediate action and careful supervision, we invite your inquiry concerning this service.

INK TAPE RECORDER

Moving large volumes of ultra-high-speed vital news traffic has been a regular routine in Press Wireless' international radio communications circuits. The development of this high-speed Ink Tape Recorder is daily meeting the requirements of the Press of the United States. The precision equipment shown in dual form above records automatic high-speed Morse signals in ink on a narrow paper tape. The instrument will deliver perfectly readable tape at keying speeds up to 1200 five-letter words per minute—an average of over 70,000 words-per-hour.

Instead of holding currents, continuous driving power and relatively long mechanical linkages between signal coil and recording pen, a mechanically strong but light weight coil moving in the uniform field of a very high flux permanent magnet is fastened directly to an extremely short shank hollow pen.

One model of the recorder accepts keyed audio tones from 425 cps to 5000 cps at standard level and line impedance. Keying weight is adjustable and a monitor jack is provided on the front panel.



Model ITR-1

ENGINEERING SERVICE AND SYSTEMS DESIGN

Press Wireless regularly encounters many installations of radio communications circuits which necessitate the advice and assistance of experienced technical specialists in every phase of radio systems design. These experts are at your disposal to solve your problems. We are prepared to furnish you with a complete radio engineering service. The broad overall function of this department is to assure complete dove-tailing between your specific technical requirements and your performance specifications. We will make basic field test investigations to determine optimum antenna locations, advisability and practicability of directional array radiators, check comparisons of methods of transmission and power levels, prescribe, design, manufacture and install equip-

ments for any radio system or systems to meet your needs.

Ample facilities are provided in our new engineering laboratory for development work in connection with special problems in all types of telecommunication radiophone, radiofacsimile and related fields. This service is extensive and complete on AM and Frequency-Shift transmitting and receiving apparatus. Press Wireless invites you to avail yourself of these facilities. A letter or phone from you will receive prompt, courteous attention and consideration. Address your inquiry to Press Wireless Manufacturing Corporation, S. E. Department, 3801 35th Avenue, Long Island City, N. Y., or call Ravenswood-8-6130.



Press Wireless Manufacturing Corporation has available and in preparation Engineering Bulletins and Descriptive Data Sheets giving in more detail the purpose, application and technical characteristics of most units listed in this guide. This literature is available upon request.

Be certain to send for literature discussing the significant facts and conspicuous advantages of Radio Frequency Carrier Shift (Frequency Shift) transmission.

Reprints of the Press Wireless section of this guide will be supplied on your request when sent on company letterhead.



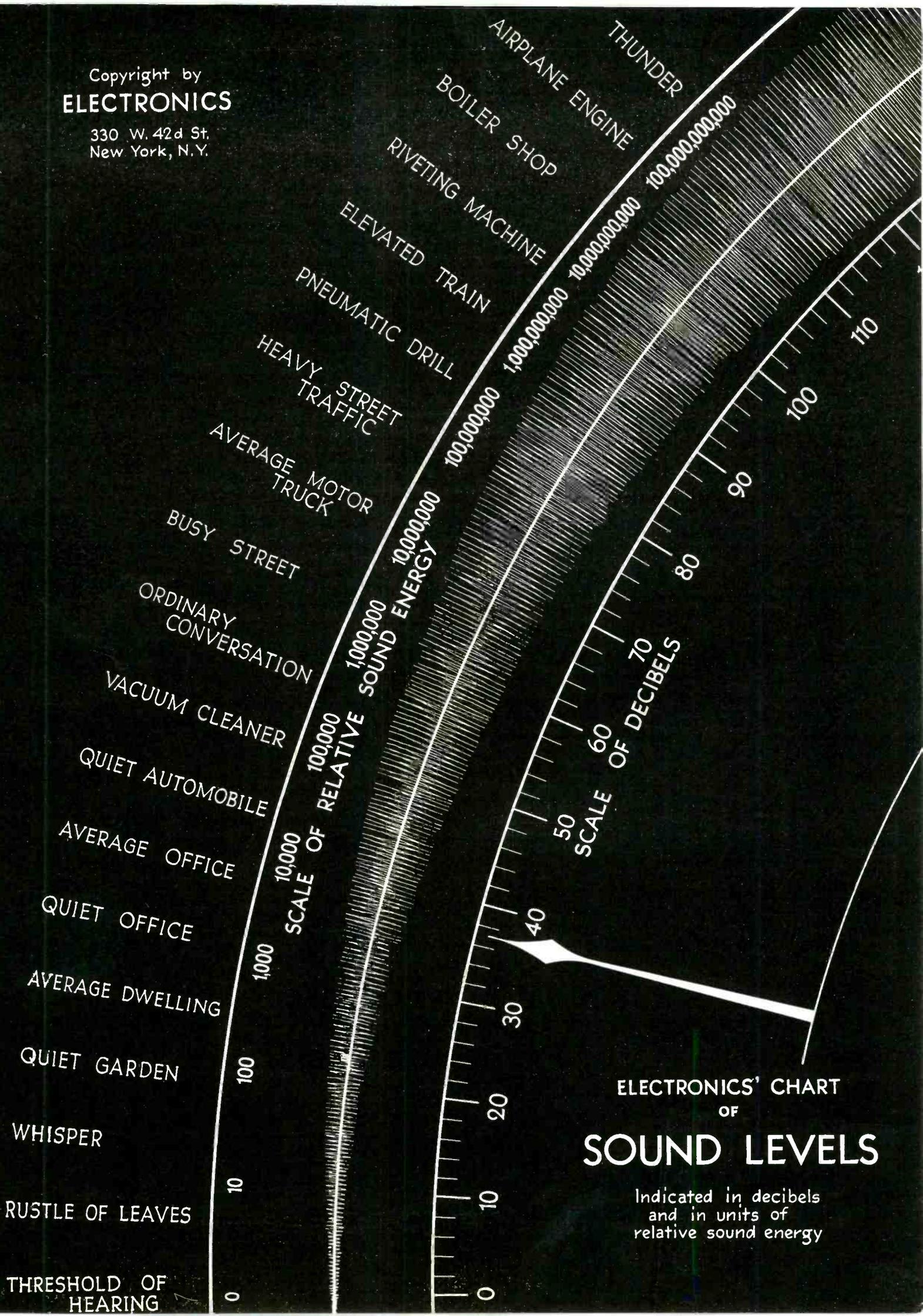
PRESS WIRELESS MANUFACTURING

C O R P O R A T I O N

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ELECTRONICS

330 W. 42d St.
New York, N.Y.



ELECTRONICS' CHART
OF
SOUND LEVELS

Indicated in decibels
and in units of
relative sound energy

FCC Frequency Allocations

Proposed U. S. allocations below 25 mc and final U. S. allocations above 25 mc. All values are in megacycles (one megacycle equals 1000 kilocycles). Wavelength in meters can be found by dividing 300 by the frequency value in megacycles

Frequency in mc	United States Allocations	Frequency in mc	United States Allocations	Frequency in mc	United States Allocations
Up to 0.1	Fixed	6.6-6.9	Fixed, aero. fixed	27.455-28	Gov. and non-gov. fixed and mobile
0.1-0.16	Coastal, marine relay, ship, mobile press, fixed, Alaskan	6.9-7	Government	28-29.7	Amateur
		7-7.3	Amateur	29.7-30	Gov. and non-gov. fixed and mobile
0.16-0.2	Fixed	7.3-8.2	Fixed, aero. fixed, Alaskan	30-30.5	Government
0.2-0.28	Air navigation aids	8.2-8.275	Coastal, marine relay, ship	30.5-32	Non-gov. fixed and mobile
0.28-0.32	Maritime beacons	8.275-8.285	Mobile (distress and calling freq. 8.28 mc)	32-33	Government
0.32-0.415	Air navigation aids	8.285-8.7	Coastal, marine relay, ship, mobile press	33-34	Non-gov. fixed and mobile
0.415-0.49	Coastal, marine relay, ship	8.7-8.9	Aeronautical mobile	34-35	Government
0.49-0.51	Mobile, distress & calling frequency 0.5 mc (500 kc)	8.9-9	Fixed, aero. fixed, coastal telephone	35-36	Non-gov. fixed and mobile
0.51-0.535	Mobile (telegraphy)	9-9.5	Fixed, aero. fixed	36-37	Government
0.535-1.605	Broadcasting (non-gov)	9.5-9.7	International broadcast	37-38	Non-gov. fixed and mobile
1.605-1.8	Police, aviation, relay broadcast, special, Alaskan, disaster communication including amateur disaster networks	9.7-9.99	Fixed, aero. fixed	38-39	Government
		9.99-10.2	Government (standard freq. 10 mc)	39-40	Non-gov. fixed and mobile
1.8-2	Navigation aids	10.2-11.3	Fixed, aero. fixed	40-40.96	Government
2-2.05	Government	11.3-11.5	Aeronautical mobile	40.96-41	Scientific, industrial and medical
2.05-2.065	Ship telegraph	11.5-11.7	Fixed, aero. fixed	41-42	Government
2.065-2.075	Mobile (distress and calling frequency 2.07 mc)	11.7-11.9	International broadcast	42-44	Non-gov. fixed and mobile
2.075-2.1	Ship telegraph	11.9-12.3	Fixed, aero. fixed	44-50	Television channel No. 1
2.1-2.25	Ship telephone, relay broadcast	12.3-12.415	Coastal, marine relay, ship	50-54	Amateur
2.25-2.3	Police point-to-point, ship telephone, aviation, special, relay broadcast	12.415-12.425	Mobile (calling frequency 12.42 mc)	54-60	Television channel No. 2
2.3-2.35	Coastal telegraph, marine relay	12.425-12.95	Coastal, marine relay, ship, mobile press	60-66	Television channel No. 3
2.35-2.495	Police, ship telephone, Alaskan	12.95-13.05	Government	66-72	Television channel No. 4
2.495-2.505	Government	13.05-13.25	Fixed, aero. fixed	72-76	Non-gov. fixed and mobile
2.505-2.7	Coastal harbor telephone, Alaskan	13.25-13.35	Fixed, aero. fixed, coastal telephone	76-82	Television channel No. 5
2.7-2.85	Fixed, maritime mobile telephone, police point-to-point, special emergency, relay broadcast, Alaskan	13.35-13.6525	Fixed, aero. fixed	82-88	Television channel No. 6
		13.6525-13.6675	Industrial, scientific, and medical tuned to 13.66 mc	88-92	Non-commercial educational f-m
2.85-3.125	Aeronautical mobile	13.6675-14	Fixed, aero. fixed	92-106	Frequency-modulation broadcasting
3.125-3.2	Aeronautical fixed	14-14.4	Amateur	106-108	Facsimile
3.2-3.33	Government	14.4-14.985	Fixed, aero. fixed	108-118	Government
3.33-3.45	Forestry	14.985-15.1	Government	118-122	Airport control
3.45-3.5	Government	15.1-15.3	International broadcast	122-132	Aero. mobile (primarily non-gov.)
3.5-4	Amateur	15.3-16.4	Fixed, aero. fixed	132-144	Government
4-4.1	Fixed, except aeronautical fixed	16.4-16.555	Coastal, marine relay, ship, mobile press, aeronautical	144-148	Amateur
4.1-4.135	Coastal, marine relay, ship	16.555-16.565	Mobile (calling freq. 16.56 mc)	148-152	Government
4.135-4.145	Mobile (distress and calling frequency 4.14 mc)	16.565-17.1	Coastal, marine relay, ship, mobile press, aero.	152-162	Non-gov. fixed and mobile
4.145-4.5	Coastal, marine relay, ship, mobile press	17.1-17.6	Fixed, aero. fixed	162-174	Government
4.5-4.89	Fixed, aero. fixed, coastal telephone, Alaskan	17.6-17.7	Fixed, aero. fixed, coastal telephone	174-186	Television and government
4.89-5.01	Government	17.7-17.9	International broadcast	186-216	Television fixed and mobile
5.01-5.3	Fixed, aero. fixed	17.9-19.985	Fixed, aero. fixed	216-220	Government
5.3-5.5	Fixed, aero. fixed, Alaskan	19.985-20.015	Government	220-225	Amateur after Jan. 1, 1949; interim allocations are 216-231 Radar distance indicators (British); 231-236 Government (within interference range of above); 235-240 Amateur Military, and civil aviation channels
5.5-5.8	Aeronautical mobile	20.015-20.5	Fixed, aero. fixed		Glide path air navigation aids
5.8-6	Fixed, aero. fixed	20.5-21	Fixed, aero. fixed, coastal, marine relay, ship, mobile press, aeronautical		
6-6.2	International broadcast	21-21.5	Amateur		
6.2-6.3	Coastal, marine relay, ship	21.5-21.7	International broadcast		
6.3-6.45	Fixed, aero. fixed	21.7-24.985	Fixed, aero. fixed		
6.45-6.6	Aeronautical mobile	24.985-25.015	Government (standard frequency 25 mc)		
		25.015-27.185	Gov. and non-gov. fixed and mobile		
		27.185-27.455	Scientific, industrial and medical, centered on 27.32 mc	225-328.6	
				328.6-335.4	

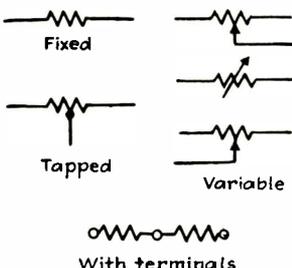
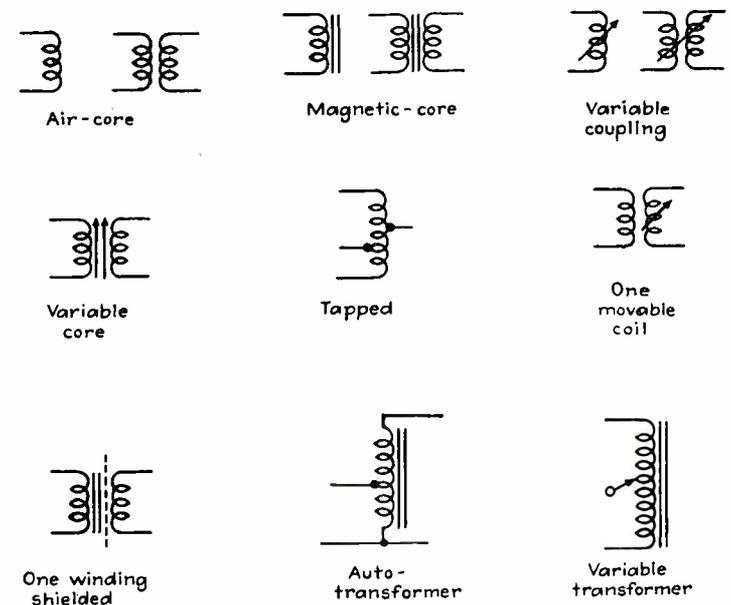
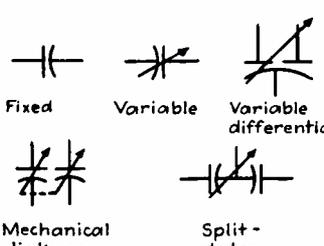
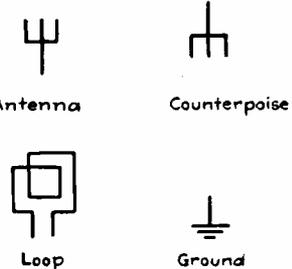
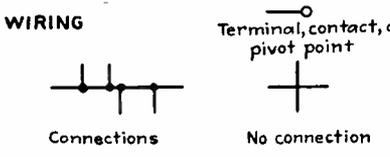
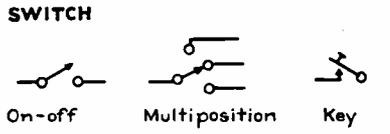
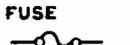
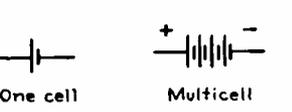
Frequency in mc	United States Allocations	Frequency in mc	United States Allocations	Frequency in mc	United States Allocations
335.4-400	Military, and civil aviation channels	1375-1425	Non-government	5250-5650	Amateur
400-420	Government, including radiosonde	1425-1600	Government	5650-7050	Non-gov. fixed and mobile
420-450	Amateur and air navigation	1600-1700	Air navigation aids	7050-8500	Government
450-460	Non-gov. fixed and mobile	1700-1750	Meteorological	8500-9300	Government
460-470	Citizen's radio	1750-2100	Non-gov. fixed and mobile	9300-9600	Navigation aids
470-480	Facsimile broadcasting	2100-2300	Government	9600-10000	Government
480-920	Television	2300-2450	Amateur	10000-10500	Amateur
920-940	Experimental broadcast services	2450-2700	Non-gov. fixed and mobile	10500-13000	Non-gov. fixed and mobile
940-960	Fixed and experimental broadcasting	2700-2900	Meteorological and air navigation aids	13000-16000	Government
960-1215	Navigation aids	2900-3700	Navigation aids	16000-18000	Non-gov. fixed and mobile
1215-1295	Amateur	3700-4000	Non-government	18000-21000	Government
1295-1375	Non-gov. (television relay)	4000-4200	Air navigation aids (altimeters)	21000-22000	Amateur
		4200-4400	Non-government	22000-26000	Government
		4400-5000	Government	26000-30000	Non-gov. fixed and mobile
		5000-5250	Instrument landing air navigation aids	30000-Up	Experimental

Allocations for Various Services

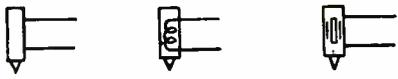
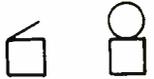
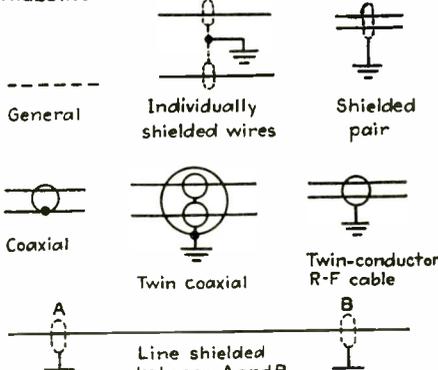
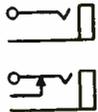
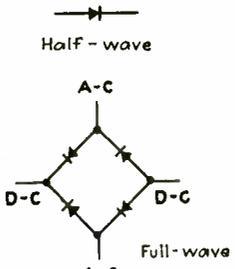
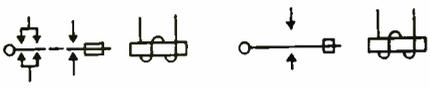
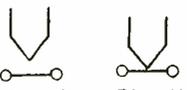
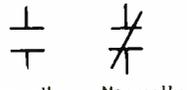
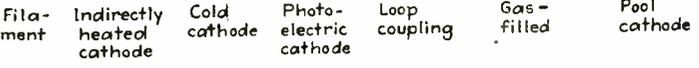
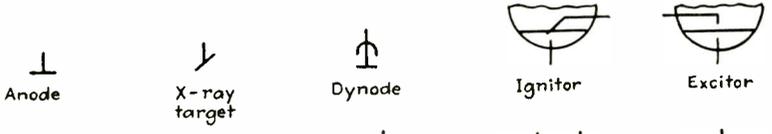
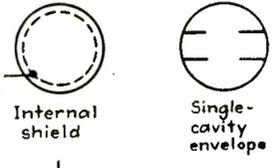
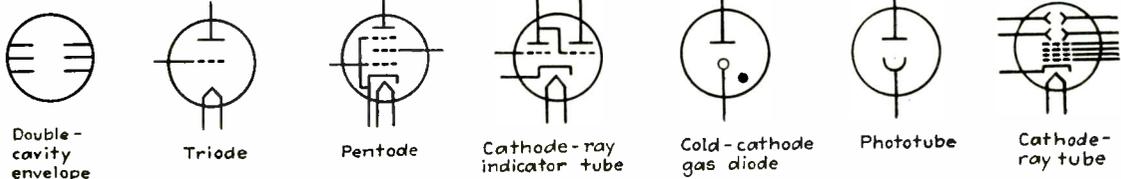
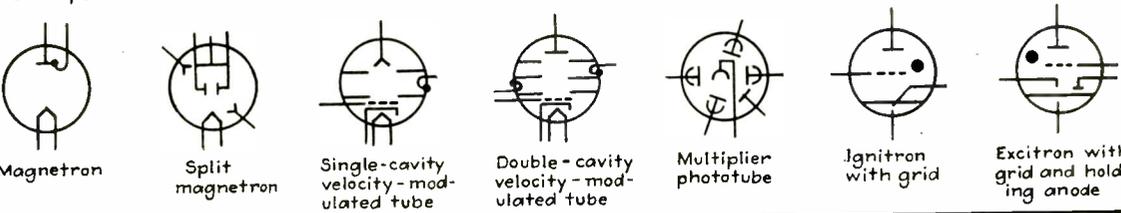
A regrouping of the values on the opposite page, to show at a glance the portions of the radio-frequency spectrum available to a particular type of service. In many instances allocations are shared with other services, so that only a limited number of channels is available in the indicated allocation. All values are in megacycles.

Aeronautical Fixed and Mobile	7-7.3	Coastal, Marine Relay, & Ship	11.5-11.7	Government	1375-1425
0.160-0.2	14-14.4	0.1-0.16	11.9-12.3	2-2.05	1750-2100
1.605-1.8	21-21.5	0.415-0.51	13.05-14	2.495-2.505	2450-2700
2.25-2.3	28-29.7	2.05-2.495	14.4-14.985	3.2-3.33	3700-4000
2.85-3.2	50-54	2.505-2.85	15.3-16.4	3.45-3.5	4200-4400
4.5-4.89	144-148	4.1-4.89	17.1-17.7	4.89-5.01	5650-7050
5.01-6	220-225	6.2-6.3	17.9-19.985	6.9-7	10500-13000
6.3-6.9	420-450	8.2-8.7	20.015-21	9.99-10.2	16000-18000
7.3-8.2	1215-1295	8.9-9.0	21.7-24.985	12.95-13.05	26000-30000
8.7-9.5	2300-2450	12.3-12.95	25.015-27.185	14.985-15.1	Relay Broadcast
9.7-9.99	5250-5650	13.25-13.35	27.455-28	19.985-20.015	25.015-27.185
10.2-11.7	10000-10500	16.4-17.1	29.7-30	24.985-27.185	27.455-28
11.9-12.3	21000-22000	17.6-17.7	30.5-32	27.455-28	29.7-30
13.05-14	Broadcasting—Facsimile	20.5-21	33-34	29.7-30.5	152-162
14.4-14.985	106-108	30-40	35-36	32-33	920-960
15.3-16.55	Broadcasting—Frequency Modulation	30-40	37-38	34-35	1295-1375
16.565-17.7	92-106	42-44	39-40	36-37	1750-2100
17.9-19.985	Broadcasting—International	152-162	42-44	38-49	2450-2700
20.015-21	6-6.2	Experimental	72-76	40-40.96	2700-4000
21.7-24.985	9.5-9.7	25.015-27.185	152-162	41-42	3700-4000
25.015-27.185	11.7-11.9	27.455-28	186-216	108-118	4200-4400
27.455-28	15.1-15.3	29.7-30	450-460	132-144	5650-7050
29.7-30	17.7-17.9	920-960	940-960	148-152	10500-13000
118-132	21.5-21.7	30000 up	1375-1425	162-186	16000-18000
225-328.6	Broadcasting—Standard	Fixed Public Service	1750-2100	216-220	26000-30000
335.4-400	0.535-1.605	Up to 0.1	2450-2700	400-420	Relay Press, Motion Picture Studios, Power, Petroleum
1375-1425	Broadcasting—Television	0.1-0.2	3700-4000	1425-1600	25.015-27.185
Aids to Navigation	44-50	1.605-1.8	4200-4400	2100-2300	27.455-28
0.2-0.415	54-72	2.25-2.3	5650-7050	4400-5000	29.7-30
1.8-2	76-88	2.35-2.495	10500-13000	7050-8500	42-44
108-118	174-216	2.7-2.85	16000-18000	8500-9300	152-162
328.6-335.4	480-920	3.125-3.200	26000-30000	9600-10000	Rural Telephone
400-460	Citizens Radio	4-4.1	Geophysical	13000-16000	1325-1375
460-1145	460-470	4.5-4.89	25.015-27.185	18000-21000	1750-2100
1600-1750		5.01-5.5	27.455-28	22000-26000	2450-2700
2700-3900		5.8-6	29.7-30		3700-4000
4000-4200		6.3-6.45	30.5-32	Police & Fire	4200-4400
5000-5250		6.6-6.9	33-34	1.605-1.8	5650-7050
9300-9600		7.3-8.2	35-36	30-44	10500-13000
Amateur		8.9-9.5	37-38	72-76	16000-18000
1.605-1.8		9.7-9.99	39-40	152-162	26000-30000
3.5-4		10.2-11.3	42-44	940-960	
			152-162	Railroad	
				152-162	

Graphical Symbols for

<p>RESISTOR</p>  <p>Fixed</p> <p>Tapped</p> <p>Variable</p> <p>With terminals</p>	<p>COIL</p>  <p>Air-core</p> <p>Magnetic-core</p> <p>Variable coupling</p> <p>Variable core</p> <p>Tapped</p> <p>One movable coil</p> <p>One winding shielded</p> <p>Auto-transformer</p> <p>Variable transformer</p>		
<p>CAPACITOR</p>  <p>Fixed</p> <p>Variable</p> <p>Variable differential</p> <p>Mechanical linkage</p> <p>Split-stator</p>	<p>ANTENNA SYSTEM</p>  <p>Antenna</p> <p>Counterpoise</p> <p>Loop</p> <p>Ground</p> <p>WIRING</p>  <p>Terminal, contact, or pivot point</p> <p>Connections</p> <p>No connection</p> <p>SWITCH</p>  <p>On-off</p> <p>Multiposition</p> <p>Key</p> <p>FUSE</p>  <p>HEATER ELEMENT</p>  <p>BATTERY</p>  <p>One cell</p> <p>Multicell</p> <p>GENERAL</p>  <p>Place legend in or near box</p> <p>A-C VOLTAGE SOURCE</p>  <p>MOTOR or GENERATOR</p>  <p>Use only with identifying notation</p> <p>LAMP</p>  <p>BALLAST</p>  <p>METER</p>  <p>A - Ammeter MA - Milliammeter μA - Microammeter V - Voltmeter W - Wattmeter G - Galvanometer</p>		
<p>MICROPHONE</p>  <p>General</p> <p>Single-button</p> <p>Double-button</p> <p>Capacitor</p> <p>Moving-coil</p> <p>Velocity</p> <p>Crystal</p>			
<p>LOUDSPEAKER</p>  <p>General</p> <p>Magnetic</p> <p>P-M dynamic</p> <p>Electrodynamic</p>			

Electronic Diagrams

<p>PHONE</p>  <p>Single Double</p>	<p>PICKUP or CUTTING HEAD</p>  <p>General Electromagnetic Crystal</p>	<p>ALARM</p>  <p>Buzzer Bell</p>					
<p>CRYSTALS</p>  <p>Detector Piezoelectric</p>	<p>SHIELDING</p>  <p>General Individually shielded wires Shielded pair</p> <p>Coaxial Twin coaxial Twin-conductor R-F cable</p> <p>Line shielded between A and B</p>	<p>JACK</p> 					
<p>RECTIFIER (dry-disk)</p>  <p>Half-wave</p> <p>A-C</p> <p>D-C D-C</p> <p>A-C Full-wave</p>	<p>VIBRATOR</p>  <p>Synchronous Nonsynchronous</p>	<p>PLUG</p> 					
<p>THERMO-COUPLE</p> 	<p>THERMOELEMENT</p>  <p>Indirectly heated Directly heated</p>	<p>SOLENOID</p>  <p>Plunger-type</p>					
<p>Abstracted from American Standards Association publications Z32.10-1944 and Z32.5-1944. Note that all lines are the same thickness. Leads can come out of symbols any convenient way.</p>		<p>RELAY (deenergized)</p>  <p>Make Break</p>	<p>CONTACTORS</p>  <p>Normally open Normally closed</p>				
<p>TUBES</p>  <p>Grid Deflecting electrode</p>  <p>Filament Indirectly heated cathode Cold cathode Photo-electric cathode Loop coupling Gas-filled Pool cathode</p>  <p>Anode X-ray target Dynode Ignitor Excitor</p>  <p>Internal shield Single-cavity envelope</p>  <p>Double-cavity envelope Triode Pentode Cathode-ray indicator tube Cold-cathode gas diode Phototube</p>  <p>Cathode-ray tube</p> <p>Magnetron Split magnetron Single-cavity velocity-modulated tube Double-cavity velocity-modulated tube Multiplier phototube Ignitron with grid Excitron with grid and holding anode</p>							

SOLID DIELECTRIC

Solid dielectric cables were a product of the war. Rigid gas-filled lines previously used were good electrically but when coaxial conductors became a vital part of electronic apparatus going into all manner of vessels in the fleet, something new was required. That something new was a "coax" with a solid dielectric, with losses lower than rubber insulated coaxes, flexible enough to use without the need for elbows and prefabricated bends, a cable that did not need to be filled with gas.

Cross Index of Cables Showing

AN-No.	W.E.	W.E.M.Co.	G.E.	Raytheon	Sub Sig	RCA	Philco	F.T.R.
RG-5/U								
RG-6/U	KS-9168		K35J675-1	73-5099			5L-1325	B or K-332
	KS-9226		K35J717				5L-1169	B or K-342
RG-7/U		21B-255- 7/30-XV RG-7/U K-31		73-5100			5L-1275	
							5L-1378	K-31
							5L-1047	K-49
RG-8/U			K-52J121	73-5062		K-252340-1	5L-1048	B or K 45
			K-34J104-1	73-5097		K-253559-1		
						K-871757-1		
						2, 3, 4		
RG-9/U	D-163581	B-452	K-43J523	73-5016		K-99208-1		
						K-99209-1	5L-1234	B or K45L
RG-10/U			K-34J104-2	73-5060		K-871812-1	5L-1235	B or K#45H
				73-5111		M-4224185		
						501		
RG-11/U				73-5069		PT-5	5L-1339	B or K80
				73-5080		K-188487-155	5L-1245	K59 or K#80
						K-251130-1,		
						2-3-4-5-6-7		
RG-12/U	KS-8525		K35J958	73-5027P1		K-99211-1		B or K#49A
				73-5027P2		KS-8525		or 80A
RG-13/U				73-5023		K-99212-1		B or K 492
RG-14/U	KS-9269			73-5087P1		K-99214-1	5L-1250	B-302
				or P2		P-721954-		K-302
				73-5034P1		501, 502, 503,		
				or P2		504		
				RMA-10				
RG-17/U	KS-9269					K-99217-1		K-12
RG-18/U						K-99218-1		K-12A
RG-19/U								K-13
RG-20/U								K-13A
RG-21/U	KS-9230					K-99221-1		K-702
RG-23/U								B or K 602
RG-24/U								B or K#602A
RG-25-U	KS-9347					K-99225-1	5L-1297	
	KS-9351							
	D-164630							
	D-165748							
RG-26/U	KS-9347						5L-1408	
	D-165749							
RG-27/U	KS-9036			73-5068	325BA			
	D-163015			73-5112				

COAXIAL CABLES

Solid dielectric cables, in general, are tough and strong and take severe punishment. The insulation is tough and hard and normally not too easily stripped from the inner conductor, a fact occasioned by the necessity of forming the insulation tightly around the center conductor to increase the corona starting voltage. Data from "Installation and Maintenance of Transmission lines, Waveguides, and Fittings" by permission of the Bureau of Ships, Electronics Division, Navy Department.

Manufacturers' Designations

Sperry	R.E.L.	Navy	Army	Bendix	AN	Other	Magnavox	Hazeltine	Galvin
P690191								CA-1121A	30X104898
	AS-48	62064	WC-547		RG-63/U	NAF-47024 -109	460335	CA-1214	
	10536								
P690281	PT-5 17266	CASSF-50-1 PT-5	PT-5 WC-543 WC-549	C-63134 C-60429 C-58240	RG-31/U		460429	CA-2002 CA-1137 CA-7100A	30A82345
RP30				C-63473		NAF-47024-107			30A42113
		CASSF-50-1A						CA-1119	30A107793
RP34		CASSF-70-1	WC-552 WC-562			NAF-47024-108 PT-7	460175 460295 460296 460322	CA-1038	30X101142
		CASSF-70-1A 62040		C-62535		21B-290-7/26- XXV RMA-10			
RMA-10									
	25278	CASSF-50-2 CASSF-50-2A CASSF-50-3 CASSF-50-3A							30K101915
							460297		
805910 218597	62101					A-2			
						A-1			
		62102				B-1			

AN-No.	W.E.	W.E.M.Co.	G.E.	Raytheon	Sub Sig	RCA	Philco	F.T.R.
RG-28/U						K-99228-1		
RG-34/U				B or K#48 B or K#482 73-5023				K#48 K482
RG-35/U						K-99235-1 M-427820-1		K-14A
RG-38/U	D-163296			73-5035				
RG-39/U	KS-8086 KS-8498 D-163480				62039 62040	M-422482-4	5L-1169	
RG-41/U	KS-7152 KS-8498 D-168592 D-168571 700 KS-9167					M-422482-4		
RG-42/U								K-718
RG-57/U							5L-1049	K-56
RG-58/U						K-99258-1	5L-1386 5L-1304 5L-1287 5L-1290	K-35
RG-59/U			73-5050 73-5000P1 73-5000P2 73-5105 Belden-8401 Belden-8664		Belden-8401	K-99259-1 K-90	5L-1359 5L-1411 5L-1343 5L-1370 5L-1386 5L-1350 25-3,000,000 5L-1320 5L-1321 5L-1396 5L-1319	K-32
RG-62/U		21B-255 7/30-XV		73-5122				K-90
RG-63/U			K43J659	73-5127				K-91
RG-64/U	KS-9311 KS-9347						5L-1442	
RG-65/U								K-71
RG-73/U			K43J659				5L-1419	K-902
RG-74/U				73-5887P-2 73-5087P-1				K-302A
RG-79/U			K43J659					K-91A
RG-55/U	KS-9137 KS-9138 KS-9667 KS-9275 KS-9311 D-163581 KS-9310 KS-8623						5L-1395 5L-1292 5L-1394	K-378
RG-77/U								
RG-78/U								

STANDARD R-F CABLE LIST IN ORDER

D.O.D.	Type RG-U	Number of braids	Nominal Impedance (Ohms)	Jacket (1)	Armored	Remarks
0.116	55	2	53.5	III		Small size i-f cable
0.116	58	1	53.5	I		General purpose—small size flexible cable
0.146	59	1	73.0	I		General purpose—small size video cable
0.146	62	1	93.0	I		Low capacitance cable
0.146	71	2	93.0	III		Low capacitance cable
0.185	5	2	53.5	I		Small microwave cable
0.185	6	2	76.0	II		Small i-f microwave double shield cable
0.185	21	2	53.0	II		Special attenuating cable
0.250	41	1	67.5	IV		Cable designed for twisting
0.280	9	2	51.0	II		Medium size—low level circuit cable
0.280	13	2	74.0	I		Double shielded i-f cable
0.285	8	1	52.0	I		General purpose—med size flexible cable
0.285	10	1	52.0	II	X	Armored RG-8/U
0.285	11	1	75.0	I		Med flexible video and communication cable
0.285	12	1	75.0	II	X	Armored RG-11/U

1. Jacket Types:

- I Vinyl. II Non-Contaminating resin. III Polyethylene. IV Neoprene. V Synthetic Rubber.

Comparison of Open Wire, Solid Dielectric Lines and Waveguides

Characteristics	Parallel open wires	Bead supported	Stub supported	Solid dielectric (Polyethylene)	Coaxial rubber	Waveguide	Pulse cables
Insulation resistance	O. k. in dry air—drops in rain	O. k. in dry air or nitrogen	O. k. dry or slightly wet	O. k. dry or wet	O. k. dry—drops when wet. Varies with temperature	O. k.	Same as rubber
Corona voltage and Dielectric strength	Depends on dry air and spacing—low	Depends on dry air—depends on size—low	Depends on size—low	Depends on size—high	Depends on dry air—size—med high	Depends on size—dry air—pressure—low	Depends on size—dry air—high
Dielectric constant	Low—air (1)	Low—air plus beads (1 +)	Low—air (1)	Medium (2.3)	Medium high 3-4	.....	High (5-6)
Power factor	Low in dry air, goes up in wet	Low in dry air, goes up in wet	O. k. dry or slightly wet	O. k. dry or wet	High dry—higher wet. N. G. for H. F.	.....	Same as rubber
D—C conductor resistance	Low—goes down with size	Same	Same	Higher than concentrics; goes down with size	High—goes down with size	Low—goes down with size	High—goes down with size
Ease of installation	Easy	More difficult	Difficult	Easier than concentric	Same as solid dielectric	Same as bead-supported	Same as rubber
Ease of maintenance	Easy	Very difficult	Not very	Easy	do	Easy	
Flexible	Somewhat—depends on size	Some—depends on size	No	Yes, flexibility goes down with size	Yes, more than solid dielectric	No	Same as rubber
Mechanically strong	Yes, but separators are weak points	Yes, beads are weak points	Yes, but stubs are fragile	Yes, but can be mistreated	Yes	Yes, but can be crushed	Yes
Can be sealed	Yes	Yes, but you have to do the right job	Yes	Yes	Yes	Yes	Yes
Self-shielding (electrical)	No	Yes	Yes	Yes, depends on the braid construction	Same as solid dielectric	Yes	Same as solid dielectric
Fire resistive	Yes	Yes	Yes	Yes—except largest size	Not completely	Yes	Same as rubber
High temperature resistant	Yes, depends on material of separators	Yes, depends on rubber gaskets or solder	Yes, same as bead supported	180°F—200°F. for short time	220°F—250°F for short time	Yes, depends on rubber gasket or solder	Same as rubber
Transmission at high frequency	Limited by spacing	Good at low-med freq losses high at microwave	Good at high freq not at low—need spec for each	Good—at low and med not so good at microwave	Poor—loss too high	Best—but each freq needs spec guide—	Poor—loss too high
Stand shock-vibration	Good	Fair—beads are weak points	Good—stubs are weak points	Very good	Very good	Very good	Very good
Low temperatures	Yes	Yes, but allow for expansion	Same as beaded	Yes	Yes	Yes but allow for expansion	Yes



Capacitors AND FILTERETTES



METAL CASED OIL CAPACITORS "OIL-MITES"

Types OM and OMT . . . Designed for filter and by-pass applications in equipment which must withstand extremes of temperature and humidity. Low power factor—never exceeding .008 at 1 kc is an especially valuable characteristic of all "Oil-Mites".

Contained in deep-drawn seamless metal cases, hermetically sealed to withstand all potential, thermal cycle, and humidity requirements of JAN-C-25 specification. Cases in which Tobe "Oil-Mites" are furnished are generally smaller than called for in JAN-C-25 specs., which is achieved without impairing performance or life-test characteristics, by using mineral oil as an impregnant (stable as to both capacitance and power factor thru temp. range of -55 to +185°F.). Furnished in steel or non-magnetic housing conforming to JAN-C-25 specs. Case A is 2¼" high; 5/8" thick; 1½" wide. Case B is 2¼" high; 1¾" thick; 1½" wide. Both types—1½" mounting centers.

Type Number		Mfd.	Case Size
Std. Lug	Stubby Lug		
100 VOLTS D-C			
OM-104	OMT-104	4.0	B
400 VOLTS D-C			
OM-402	OMT-402	2.0	B
600 VOLTS D-C			
OM-6001	OMT-6001	.01	A
OM-6005	OMT-6005	.05	A
OM-610	OMT-610	.1	A
OM-625	OMT-625	.25	A
OM-650	OMT-650	.50	A
OM-601	OMT-601	1.0	A
OM-602	OMT-602	2.0	B
1000 VOLTS D-C			
OM-10005	OMT-10005	.05	B
OM-1010	OMT-1010	.1	B
OM-1025	OMT-1025	.25	B
OM-1050	OMT-1050	.5	B
OM-1001	OMT-1001	1.0	B

TOBE CAPACITORS AND FILTERETTES

THE following pages describe capacitors and Filterettes for use in all branches of electronics as well as for diversified applications in the production of electrical apparatus. Conforming to design standards accepted in the electrical industry, Tobe capacitors include the features whose necessity has been demonstrated on the proving grounds of war, while their processing and assembly follow rigid specifications whose strict observance is the pride of every Tobe employee.

Dimensions, terminal arrangements, housings, mounting provisions, and electrical ratings of these capacitors suit varied installation and service requirements. Design modifications can be made to adapt these standard constructions to special applications. The broad experience and practical imagination of Tobe engineers are available for this service.

HIGH TEMPERATURE CAPACITORS

Temperatures up to 135° C are withstood successfully by capacitors now available in styles similar to OM and RLO "Oil-Mites." These high-temperature units are examples of special developments made by Tobe engineers to meet particular service requirements. Inquiries solicited on specialized capacitor designs for laboratory, research, and industrial applications.

Specifications for All "Oil-Mite" Types . . .

WINDINGS: extended-foil, non-inductive.

IMPREGNATION: mineral oil.

CASE: Types OM, OMT, OMM, OMIU seamless drawn steel; non-magnetic case (copper or brass) can be furnished; hold-down bracket is separate. Types SPG, SPW, SPGT, OMIC, SPGM, OD rigid flange-type mounting bracket soldered to case for upright or inverted mounting. Type RLO, non-magnetic; drawn steel can be furnished.

TERMINALS: non-removable tinned copper solder lugs riveted to phenolic bushings.

TERMINAL SEALS: oilproof gaskets between all adjacent surfaces in terminal assembly; terminal lug solder-sealed to assembly rivets; metal-to-glass-sealed terminals can be furnished if specified.

CASE SEAL: drawn base telescoped in case and soldered all around. Type RLO; drawn base soldered to capacitor case.

CASE FINISH: tinned over all.

MARKINGS: type number, voltage and capacitance rating, and terminal identification ink-stamped on case.

CAPACITANCE TOLERANCE: ±20% below 1 mfd.; ±10% for 1 mfd. and over.

RESISTANCE INDEX: (product of microfarads and megohms): 2000 minimum at 25°C.

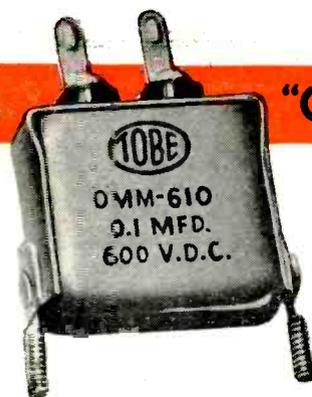
DISSIPATION FACTOR: less than 0.008 at 1000 cycles.

OPERATING TEMPERATURE: -67 to +185°F.

JAN Specification: C-25.

Additional Details for Other Types on Next Page

A concise, factual summary of Tobe Deutschmann "OIL-MITE" types is contained on the following page. If particular electrical characteristics for your requirements are not included, consult our engineering staff which will gladly cooperate.



"OIL-MITES"—METAL CASED CAPACITORS

Types OMM and OMIU:

With design and structural features that permit them to be contained in smaller cases than used for conventional "Oil Mites", these units are particularly applicable to by-pass and filter circuits in apparatus where space is at a premium. Seamless metal cases, hermetically sealed, and phenolic-insulated solder-lug terminals assembled in leak-proof fashion. Reversible hold-down bracket

permits upright or inverted mounting; mounting centers are 1 1/2". Available without mounting brackets. All capacitors in this group have 2 terminals; the dual-section units have common connection internally soldered to bottom of metal case, hence upright mounting recommended where circulating ground currents must be minimized. OMM is 1 1/2" wide, 1/4" thick, 1 3/8" high; OMIU, same but 1 3/4" high.

Type Numbers — Type OMM					
Mfd.	100 Volts D-C	200 Volts D-C	400 Volts D-C	600 Volts D-C	1000 Volts D-C
0.01	OMM-1001	OMM-2001	OMM-4001	OMM-6001	OMM-10001
0.02	OMM-1002	OMM-2002	OMM-4002	OMM-6002	OMM-10002
0.05	OMM-1005	OMM-2005	OMM-4005	OMM-6005	OMM-10005
0.10	OMM-110	OMM-210	OMM-410	OMM-610	OMM-1010
0.25	OMM-125	OMM-225	OMM-425	OMM-625	
2 X 0.05	OMM-1205	OMM-2205	OMM-4205	OMM-6205	
2 X 0.10	OMM-1210	OMM-2210	OMM-4210	OMM-6210	

Type Numbers — Type OMIU					
Mfd.	100 Volts D-C	200 Volts D-C	400 Volts D-C	600 Volts D-C	1000 Volts D-C
0.01	OMIU-1001	OMIU-2001	OMIU-4001	OMIU-6001	OMIU-10001
0.02	OMIU-1002	OMIU-2002	OMIU-4002	OMIU-6002	OMIU-10002
0.05	OMIU-1005	OMIU-2005	OMIU-4005	OMIU-6005	OMIU-10005
0.10	OMIU-110	OMIU-210	OMIU-410	OMIU-610	OMIU-1010
0.25	OMIU-125	OMIU-225	OMIU-425	OMIU-625	OMIU-1025
0.50	OMIU-150	OMIU-250	OMIU-450	OMIU-650	
1.0	OMIU-101	OMIU-201			
2 X 0.05	OMIU-1205	OMIU-2205	OMIU-4205	OMIU-6205	
2 X 0.10	OMIU-1210	OMIU-2210	OMIU-4210	OMIU-6210	

Numbers for upright mounting; add B for inverted mounting.



Types SPG, SPW, SPGT, BET

"Oil-Mite" construction; with rigid flange-type brackets soldered to container for mounting. Open-ended slots facilitate mounting. Has brackets for upright or inverted mounting. SPW like SPG but terminals parallel to narrowest dimen. of case. SPGT similar to SPG except short solder-lug terminal is used. BET similar to SPG except provided with shorter terminal lug and has hot-tinned case to which hot-tinned bracket is soldered.

Mfds.	Volts d-c	Case Size	Style	Style	Case Dimen.
0.01	600	A	SPG-6001	SPW-6001	A 2 5/16" high, 2 5/16" wide, 1 1/16" thick
0.05	600	A	SPG-6005	SPW-6005	
0.1	600	A	SPG-610	SPW-610	
0.25	600	A	SPG-625	SPW-625	
0.50	600	A	SPG-650	SPW-650	B 2 9/32" high, 1 13/16" wide, 1 1/4" thick
1.0	600	A	SPG-601	SPW-601	
0.05	1000	A	SPG-10005	SPW-10005	C 2 5/16" high, 2 5/16" wide, 1 15/16" thick
0.1	1000	A	SPG-1010	SPW-1010	
0.25	1000	A	SPG-1025	SPW-1025	
0.5	1000	A	SPG-1050	SPW-1050	
4.0	100	B	SPG-104	SPGT-104	C 2 5/16" high, 2 5/16" wide, 1 15/16" thick
2.0	400	B	SPG-402	SPGT-402	
2.0	600	B	SPG-602	SPGT-602	
1.0	1000	B	SPG-1001	SPGT-1001	
2.0	500	C		BET-31-A	
3 X 0.5*	500	C		BET-32-A	

* Three sections, one side of each grounded to case.

When type designations are suffixed T, units furnished with stubby soldering lugs.



Types SPGM, OMIC, OD

Types SPGM, OMIC, and OD hermetically sealed, oil-impregnated, oil-filled paper-dielectric capacitors designed for minimum space. Rigid flange type bases with open-ended slots provide mountings interchangeable with those of capacitors made under JAN C-25 specs. and generally these capacitors are smaller than correspondingly rated units. Common connection on dual units

made to one end terminal; common connection on triple units made to end of container opposite terminals.

Type OMIC in 0.01, 0.02, 0.05, 0.10, 0.25 Mfd for 100, 200, 400, 600 and 1000 V.d-c; in 0.50, 2x0.05, 2x0.10 Mfd for 100, 200, 400, 600 V.d-c; in 1.0 mfd for 100, 200V. d-c. Type SPGM in 0.01, 0.02, 0.05, 0.10 mfd for 100, 200, 400, 600, 1000V. d-c; in 0.25, 2x0.05, 2x0.10 mfd for 100, 200, 400, 600V. d-c. Type OD in .05, .1, .25, .05-.05, .1-.1, .05-.05-.05, .1-.1-.1 mfd for 600V. d-c; same for 1000V. d-c except .25 and .1-.1-.1 mfd. SPGM is 2 5/16" wide, 1 1/4" high, 1/8" thick. OMIC is 2 5/16" wide 1 1/4" high, 1/8" thick. OD is 2 5/16" wide, 1 1/4" high, 1/8" thick.



Type RLO

Type RLO provides convenience and versatility of popular "bath-tub" design with operating advantages of oil-impregnated and oil-filled construction. Seamless, drawn cases hermetically sealed and tinned for corrosion protection; when specified, a lacquer finish can be substituted. Projecting ears on ends of case for mounting. Heavy, tinned-copper soldering terminals, supported on molded phenolic insulators, can

be located on top, bottom, or side of drawn metal case. Location of terminals indicated by suffix letters added to type designation as follows; for terminals on bottom, suffix L (example RLOL-650); for terminals on the top, suffix is N (example, RLON-650); RLO indicates side terminals. Can be used thru temp. range of -55 to +185°F. CASE STYLES A-2: 1 1/8" thick, 1" wide, 3/4" high; B-1: 2" thick, 1 1/4" wide, 3/4" high; C-3: 2" thick, 2" wide, 1 1/4" high.

In case A-2, available sizes in mfd are 0.01, 0.02, 0.05, 0.1, 0.25, 0.5, .05-.05, .1-.1, .25-.25, .05-.05-.05, .1-.1-.1 for 600V. d-c; and mfd 0.01, 0.02, 0.05, 0.1, 0.25, .05-.05, .1-.1 for 1000V d-c. In case B-1 available sizes in mfd are 1.0, .5-.5, .25-.25-.25 for 600V. d-c; and 0.5, .25-.25, .1-.1-.1 for 1000V. d-c. In case C-3 available sizes in mfd are 2.0, 1-.1, .5-.5-.5, for 600V. d-c; and 1.0, .5-.5, .25-.25-.25 for 1000V. d-c.

MOLDED OIL PAPER CAPACITORS



Designed for use where requirements are for compact, easily installed capacitors capable of withstanding temperature and humidity beyond usual limits for tubular paper by-pass capacitors. Non-inductively wound, paper-dielectric sections are thoroughly vacuum-dried, impregnated in mineral oil, and molded in mica-filled phenolic housings. Moisture seal, contributing to long life, is afforded by neoprene coating applied to wire leads and mold-cured to leads and case; a lacquer coating, applied to completed capacitor, seals the phenolic and minimizes the moisture absorption. Provide sufficient capacitance for adequate by-passing in many types of circuits, and are recommended to supersede paper tubulars where dependable, consistent performance is a "must". Suitable for use at radio frequencies up to 40 mc.

The oil-impregnated paper-dielectric capacitor molded in mica filled phenolic case is the only important capacitor improvement that came out of the war. These units, designed to with-

stand climatic conditions encountered by military apparatus, are the correct units

to use for operation under extremes of humidity and temperature.

The structural advantages of molded phenolic case, rectangular shape for convenient stacking, and mineral oil impregnation for stability and low power factor through wide ranges of temperature are made available in the commercial type molded oil paper capacitors. These units, built with insulation factors comparable to those of paper tubulars, are also priced comparable to paper tubulars. From the standpoint of size, life, and stability, the Tobe commercial type molded paper capacitors are desirable for most applications where it has been customary to use paper tubulars. Commercial types designated by "C"; example APC.

Type AP

Body Dimensions: 11/16" long, 29/64" wide, 7/32" thick.

Capacitance Range: 1,000 to 10,000 mmfd

Voltage Range: 120 to 400 d-c

400 volt units, 1,000 mmfd only. 200 volt units, from 2,000 to 6,000 mmfd. 120 volt units, 10,000 mmfd only. Type APC—800 volt units, 500 to 1,500 mmfd. 600 volt units, 500 to 2,000 mmfd. 400 volt units, 500 to 3,000 mmfd. 200 volt units, 500 to 10,000 mmfd. Type CN—400 volt units, 1,000 mmfd only. 200 volt units, 2,000 to 6,000 mmfd. 120 volt units, 10,000 mmfd only.

Type DP

Body Dimensions: 13/16" long, 13/16" wide, 19/64" thick.

Capacitance Range: 1,000 to 50,000 mmfd

Voltage Range: 120 to 600 d-c

600 volt units, 1,000 to 10,000 mmfd. 300 volt units, 20,000 mmfd only. 150 volt units, 30,000 mmfd only. 120 volt units, 40,000 to 50,000 mmfd. Type DPC—1,600 volt units, 1,000 to 2,000 mmfd. 1,200 volt units, 1,000 to 4,000 mmfd. 1,000 volt units, 1,000 to 7,000 mmfd. 800 volt units, 2,000 to 10,000 mmfd. 600 volt units, 3,000 to 10,000 mmfd. 400 volt units, 4,000 to 20,000 mmfd. 200 volt units, 20,000 to 50,000 mmfd. Type CN—800 volt units, 3,000 mmfd only. 600 volt units, 6,000 to 10,000 mmfd. 300 volt units, 20,000 mmfd only.

Type MP

Body Dimensions: 1-11/64" long, 41/64" wide, 17/64" thick.

Capacitance Range: 1,000 to 100,000 mmfd

Voltage Range: 120 to 800 d-c

800 volt units, 1,000 to 10,000 mmfd. 600 volt units, 3,000 to 10,000 mmfd. 400 volt units, 4,000 to 20,000 mmfd. 200 volt units, 20,000 to 50,000 mmfd. 120 volt units, 100,000 mmfd only.

Type FP

Body Dimensions: 1-15/32" long, 49/64" wide, 21/64" thick.

1,000 volt units, 2,000 to 8,000 mmfd. 800 volt units, 1,000 to 10,000 mmfd. 600 volt units, 4,000 to 20,000 mmfd. 400 volt units, 5,000 to 30,000 mmfd. 200 volt units, 20,000 to 50,000 mmfd. 120 volt units, 100,000 mmfd only. Capacitance Range: 1,000 to 100,000 mmfd. Voltage: 120 to 1,000 d-c

Type EP

Body Dimensions: 1-15/32" long, 49/64" wide, 13/32" thick.

Capacitance Range: 5,000 to 200,000 mmfd

Voltage Range: 120 to 1,000 d-c

1,000 volt units, 5,000 to 15,000 mmfd. 800 volt units, 20,000 to 40,000 mmfd. 600 volt units, 50,000 mmfd only. 500 volt units, 60,000 mmfd only. 400 volt units, 80,000 to 100,000 mmfd. 120 volt units, 100,000 to 200,000 mmfd.

SPECIFICATIONS . . . WINDING: non-inductive, extended-foil type. **IMPREGNATION:** mineral oil. **CASE:** molded of mica-filled phenolic. **TERMINALS:** bare tinned No. 18 copper leads welded into rigid clamps. **TERMINAL SEAL:** mold-cured neoprene, bonding wire leads to phenolic case. **CASE SEAL:** non-hygroscopic lacquer finish over entire case. **MARKINGS:** type designation and ratings ink-stamped on case. **CAPACITANCE TOLERANCE:**

plus 60%, minus 20% per AWS C75/221. Can be furnished to $\pm 10\%$. **SHUNT RESISTANCE:** 50,000 megohms at 25° C.; 1,000 megohms at 85° C. **DISSIPATION FACTOR:** 0.004 to 0.006 at 1000 cycles. Type EP; 0.008 max. at 1 kc. **OPERATING FREQUENCY:** up to 40 megacycles. **OPERATING TEMPERATURE:** from minus 55° C. to plus 85° C. **AWS SPECIFICATION:** C75/221; characteristics A and E. **JAN SPECIFICATION:** 71-4917.

High Voltage Oil Impregnated CAPACITORS

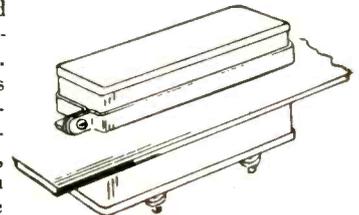


TELEVISION TYPE CAPACITORS Designed to meet all requirements for television service, these hermetically sealed mineral oil-filled capacitors can be furnished in wide variety to your performance specifications.

Typical units are

Type	Volts d-c	Mfd.	Dimensions	Terminals
VRC-8011	8000	0.1	3 3/4" X 2 1/4" X 4 1/8"	2
VRC-16005-TI	16000	0.05	3 3/4" X 1 3/4" X 5 3/8"	1

Type TRS Designed for use in filter, transmitting, and timing circuits, capable of withstanding transient voltages and temperatures encountered in such service. For filter circuit applications, capacitors are rated in terms of R.M.S. voltage at input to rectifier. Extended-foil, non-inductive type, impregnated and filled with mineral oil and contained in hermetically sealed steel cases of squeeze-seam construction, furnished with permanently attached mounting feet, hook hold-down brackets, or adjustable wrap-around brackets. Either of the separate brackets provides for upright or inverted mounting; adjustable feature of the wrap-around bracket permits capacitor to be set into a sub-panel or chassis with terminals at any desired distance above mounting surface. Terminal assemblies are oil-tight constructed with insulation adequate to rated voltage of capacitor. Heavy shakeproof-type soldering lugs assembled to terminal studs handle connecting wires in sizes up to number 15.



BRACKET STYLE. The universal, clamp-around bracket illustrated on this page is available for use with all TRS capacitors except sizes 20, 21, and 22*. Especially useful in applications where space above or below chassis or sub-panel is limited or where wiring can be simplified by adjusting height of capacitor terminals with respect to other circuit components. Sketch at the right shows universal bracket being used in such an application. When this mounting bracket is required, add the suffix "U" to type number of capacitor; for example: TRS-601-U.

* See chart below.

The hook hold-down brackets available for all TRS capacitors. These brackets facilitate mounting units in either upright or inverted position. Hook hold-down bracket with spade lugs is designated by the letter "H" as a suffix to type number; for example: TRS-601-H. Flange-type hook bracket provides for same mounting centers as type U and type P mountings. This bracket is designated by the suffix "F"; for example: TRS-601-F.

SPECIFICATIONS . . .

WINDING extended-foil, non-inductive, **IMPREGNATION:** mineral oil. **CASE:** lead coated steel, squeeze-seam type. **TERMINALS:** brass studs with number 10/32 threads assembled to molded phenolic or glazed porcelain bushings; shakeproof solder lugs furnished. **TERMINAL SEAL:** oilproof gaskets between all adjacent surfaces in terminal assembly. **CASE SEAL:** all seams

soldered for hermetic seal; metal-to-glass-sealed terminal can be furnished when required. **CASE FINISH:** tinned over all. **MARKINGS:** type number, voltage, and capacitance rating and terminal identification ink-stamped on case. **CAPACITANCE TOLERANCE:** ±10%, 1 mfd. and over; ±20%, below 1 mfd. **OPERATING TEMPERATURE:** minus 67 to plus 185° F. **JAN SPECIFICATION:** C-25.

Mfd.	603 V. D-C		1000 V. D-C		1500 V. D-C		2000 V. D-C		2500 V. D-C		3000 V. D-C		4000 V. D-C		6000 V. D-C	
	TRS-Type No.	Case	TRS-Type No.	Case	TRS-Type No.	Case	TRS-Type No.	Case	TRS-Type No.	Case	TRS-Type No.	Case	TRS-Type No.	Case	TRS-Type No.	Case
.03									25003	1						
.10					1510	1	2010	1			30001	5				
.20											30002	6				
.25					1525	1	2025	2			3025	6			600025	12
.50	650	1	1050	1	1550	3	2050	3			3050	8				
1.0	601	1	1001	3	1501	4	2001	7	2501	14	3001	16	4001	18	6001	22
2	602	3	1002	4	1502	9	2002	12	2502	15	3002	19				
3	603	4														
4	604	7	1004	10	1504	13	2004	16	2504	20	3004	22				
5	605	3	1005	12												
6	606	13			1506	15										
8	608	11	1008	13												
10	6010	12	10010	15												
12	612	13	10012	16												
15			10015	17												
20	6020	15														
40	6040	21														
50	6050	22														

The above type numbers identify capacitors without mounting provision. When mounting feet are required add "P" to the type number. For the hook type bracket add "H" and for the universal wrap-around bracket add "U".

CASE DIMENSIONS — Inches			
Size	Width	Thickness	Height
1	1 1/4	1 1/4	2 1/4
2	"	"	2 1/4
3	"	"	2 5/8
4	"	"	4
5	2 1/4	1 3/4	2
6	"	"	2 1/4
7	"	"	3 1/4
8	"	"	4
9	"	"	4 1/4
10	"	"	4 3/4
11	3 3/4	1 3/4	3 1/4
12	"	"	4
13	"	"	4 3/4
14	"	1 3/4	3 3/4
15	"	"	4 3/4
16	"	2 3/4	4
17	"	"	4 3/4
18	"	"	5
19	"	3 3/4	4 3/4
20	"	4 3/4	4
21	"	"	4 3/4
22	"	"	4 3/4

* MTG CTRS 4 3/8 X 3 3/8 INCHES

CAPACITORS FOR A-C SERVICE

TYPES FCO, FCR, OMAC

FOR FLUORESCENT LAMP USE

To meet special a-c requirements inherent in fluorescent lamp applications and in other a-c services, Tobe Types FCO, FCR, and OMAC were developed, using mineral oil as impregnant. Oil-filled and oil-impregnated, these units have hermetically sealed, seamless drawn cases with corrosion-resistant finish. For convenient installation under limited space requirements, these capacitors are supplied in either cylindrical or flat cases. Compact Type OMAC is expressly

suitable for economy of space requirements and has wide application in starting circuits of small motors. Constant capacitance and negligible change in power factor throughout a wide temperature range are accomplished to an extremely high degree in all these units.

DIMENSIONS . . . Type FCO: Height: 4½", width: 2¾", thickness: 1¾". Type FCR: Height: 2¾", diameter 2". Type OMAC: Height: 2¼", width: 1½", thickness: 1⅝" or ⅝".



COMPACT TYPE						ROUND TYPE				OVAL TYPE Can be furnished in a wide variety of capacitance and voltage ratings. Write for details.
220 Volts A-C			330 Volts A-C			330 Volts A-C		440 Volts A-C		
Type Number	Mfd.	Case Thickness	Type Number	Mfd.	Case Thickness	Type Number	Mfd.	Type Number	Mfd.	
OMAC-221	1.0	¾"	OMAC-331	1.0	¾"	FCR-33 X 2.5	2.5	FCR-43 X 1.5	1.5	
OMAC-222	2.0	1 1/16"				FRC-33 X 3.0	3.0	FCR-43 X 2.0	2.0	
						FCR-33 X 3.5	3.5			
						FCR-33 X 5.0	5.0			

TYPE PRF . . .

Designed for intermittent or continuous A-C service and for power factor correction, PRF oil-filled, oil-impregnated capacitors are furnished in hermetically sealed steel cases with solder-lug terminals on a leak-proof insulator assembly. In higher voltage ratings, solder-lug terminals are provided with cup type bushings for a longer leakage path. Dependable service in ambient temperatures

up to 75° C. accomplished with stable capacitance and stable power factor.

Mounting provisions for Type PRF capacitors are the same as for Type TRS and include a permanently attached base plate, designated by the suffix "P"; hook hold-down bracket with spade-lug, designated "H"; flange type hook hold-down bracket, designated "F"; and universal wrap-around (adjustable) bracket, designated "U".

110 to 330 Volts A-C				440 Volts A-C				660 Volts A-C				TYPE PRF BASES		
Mfd.	Type Number	Base	Height	Mfd.	Type Number	Base	Height	Mfd.	Type Number	Base	Height	Base	Thickness	Width
1	PRF-331	A*	2¾"	1	PRF-441	A*	2¾"	1	PRF-661	A*	4"	A*	1 1/16"	1 1/8"
2	PRF-332	A*	2¾"	2	PRF-442	A*	4"	2	PRF-662	B	4 1/4"	B	1 1/8"	2 1/4"
3	PRF-333	A*	4"	3	PRF-443	B	3 3/4"	3	PRF-663	C	3 3/4"	C	1 1/8"	3 3/4"
4	PRF-334	B	3 3/4"	4	PRF-444	B	4 1/4"	4	PRF-664	D	3 3/4"	D	1 1/8"	3 3/4"
5	PRF-335	B	4 1/4"	5	PRF-445	C	4"	5	PRF-665	D	4 1/4"	E	2 1/4"	3 3/4"
6	PRF-336	B	4 3/4"	6	PRF-446	C	4 3/4"	6	PRF-666	E	4 3/4"	F	2 3/4"	3 3/4"
8	PRF-338	C	4"	8	PRF-448	D	4"	7	PRF-667	E	4 3/4"	G	3 1/8"	3 3/4"
10	PRF-3310	C	4 3/4"	10	PRF-4410	D	4 3/4"	8	PRF-668	F	4 3/4"	H	4 1/8"	3 3/4"
12	PRF-3312	D	4"	12	PRF-4412	E	4 3/4"	10	PRF-6610	G	4 3/4"			
15	PRF-3315	D	4 3/4"	15	PRF-4415	G	4"	12	PRF-6612	H	4 3/4"			
20	PRF-3320	E	4 3/4"	20	PRF-4420	H	4 3/4"	15	PRF-6615	H	5 3/4"			
25	PRF-3325	G	4 3/4"	25	PRF-4425	H	5 3/4"	20	PRF-6620	H	7 1/4"			
30	PRF-3330	H	4"	30	PRF-4430	H	6 1/4"							
40	PRF-3340	H	4 3/4"											
50	PRF-3350	H	5 3/4"											
60	PRF-3360	H	6 3/4"											
80	PRF-3380	H	8 3/4"											

* Cup bushings cannot be furnished with these units. DESIGNATE MOUNTING PROVISIONS BY USING SUFFIX LETTERS AS DESCRIBED ABOVE.

TYPES FCO, FCR, OMAC . . . WINDING: extended-foil, non-inductive. IMPREGNATION: mineral oil. CASE: seamless drawn case with corrosion-resistant finish. TERMINALS: solder-lug terminals riveted to phenolic bushings. TERMINAL SEAL: leakproof terminal assembly. CASE SEAL: drawn base telescoped in case and soldered all around. MARKINGS: type number, voltage rating, and capacitance rating ink-stamped on case. CAPACITANCE TOLERANCE: ±10%. POWER FACTOR: at 60 cycles does not exceed one per cent. OPERATING TEMPERATURE: minus 40° C. to plus 85° C. LIFE TEST PERFORMANCE: minimum of 1000 hours at 140% of rated voltage at 85° C.

TYPE PRF . . . WINDING: extended-foil, non-inductive. IMPREGNATION: mineral oil. CASE: lead-coated steel, squeeze-seam type. TERMINALS: heavy-duty solder-lug. TERMINAL BUSHINGS: phenolic discs for 300-volt units; molded phenolic cup bushings for 440 and 660-volt units. Cup bushings optional on 330-volt units. TERMINAL SEAL: leak-proof assembly. CASE SEAL: all seams soldered for hermetic seal. MARKINGS: type number, voltage and capacitance ratings ink-stamped on case. CAPACITANCE TOLERANCE: ±10%. OPERATING FREQUENCY: 60 cycles. OPERATING TEMPERATURE: up to 75° C.



TOBE DEUTSCHMANN FILTERETTES . . .

Radio noise heard in broadcast and short-wave receivers can often be stopped by applying TOBE FILTERETTES to electrical apparatus operated nearby. Common household, office and industrial apparatus, as listed on the next page, normally generate radio noise impulses that may be carried for considerable distances along power or telephone circuits, from which the man-made "static" is radiated to the input circuits of the radio or television receiver. The correct FILTERETTE,

installed on the electrical noise-maker, confines the noise to its source and thus enhances enjoyment of the radio programs.

TOBE FILTERETTES are electric filters that strain the radio noise out of the power circuits without interfering with the operation of the apparatus on which they are installed. Constructed to meet Underwriters' Laboratories requirements, they are available in styles and standard ratings to suit all needs for radio noise elimination in the broadcast and short-wave bands.

FILTERETTES FOR PERMANENT INSTALLATION

The Filterettes in this group are designed for installation by the electrical contractor or maintenance electrician. They conform to Underwriters' requirements for installation with conduit or BX and are designed for ease and convenience of mounting and connection. Hinged-covered steel cases are provided for knockouts of suitable size for conduit entrance and heavy-duty screw terminals accept conductors directly or with lug terminals. These five units supersede all previous designs in compactness and efficiency.



1217



1209

1168AD



1197



OIL BURNER FILTERETTE

FILTERETTE 1217

For use with refrigerators, call systems, relays, traffic beacons, small sign flashers, dish washers, printing press motors, and small generators. Contained in steel knockout box $8\frac{7}{8}$ " by $3\frac{1}{4}$ " by $1\frac{1}{8}$ ", with $\frac{1}{4}$ " mounting holes on $2\frac{1}{8}$ " x $6\frac{1}{8}$ " centers in back of box. For operation at 250 volts a-c or d-c; handles up to 10 amp.; screw terminals; frequency range—300 KC to 400 MC. List price \$12.50 each.

FILTERETTE 1209

For use with larger motors, d-c generators, rotary-converters, and electro-medical equipment. Contained in steel knockout box $4\frac{1}{8}$ " x $7\frac{3}{8}$ " x $3\frac{1}{4}$ " with #4 mounting holes on $3\frac{1}{4}$ " x 6" centers; screw terminals have 10-32 slotted hex head screws, with lockwashers; rated 50 amperes at 250 volts a-c or d-c. List price \$26.00 each.

FILTERETTE 1168

For marine service, or for use in refrigerating plants and where high humidity is encountered. Contained in case housing $8\frac{3}{4}$ " by $6\frac{1}{4}$ " by $4\frac{1}{8}$ ", with rigid cover held on by six swing bolts; integral mounting lugs with $\frac{3}{8}$ " holes on $9\frac{1}{8}$ " x $5\frac{1}{8}$ " centers. Rated 40 volts a-c or d-c; handles up to 55 amperes; 10-32 terminal screws. List price \$34.00 each.

FILTERETTE 1197

For marine service at 250 volts a-c or d-c and loads up to 50 amperes. Cast housing $6\frac{3}{8}$ " by $5\frac{1}{8}$ " by $3\frac{3}{8}$ " has integral lugs for mounting on 4" by 4" ctrs. Cover held on by four screws. List price \$34.00 each.

OIL BURNER FILTERETTE

For use with any type of oil burner; connects between ignition transformer and control wiring; sealed in drawn steel case 3" x $3\frac{3}{4}$ " x 6", finished to match oil burner transformer; insulated flexible leads for connection rated 5 amperes 125 volts a-c.

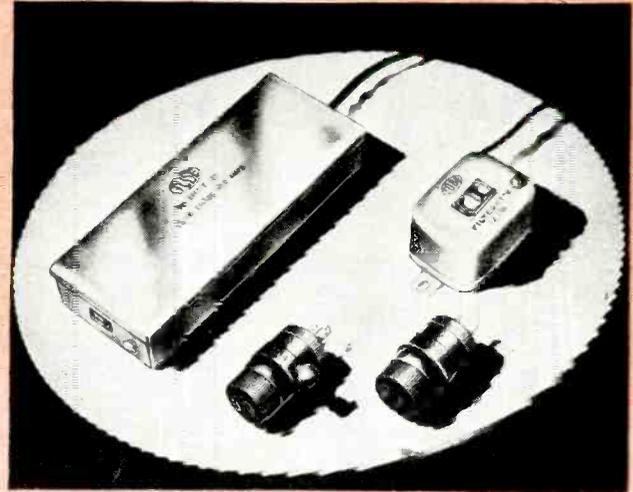
... Stop Radio Noise

PLUG-IN FILTERETTES

For portable equipment. The Filterettes in this group are designed for easy installation with portable equipment. No tools nor skill are required; anyone can make a successful installation by following the simple instructions furnished with each Filterette.

FILTERETTE 1214

For use with appliances driven by universal, or d-c, motors. Typical uses are: with vacuum cleaners, hair dryers, sewing machines, food mixers, and cash registers. Most effective in the broadcast band and adjacent short-wave bands. Plastic case is 1½" by 2¾"; unit weighs 2½ oz. Operates on 125 volts a-c or d-c at current up to 15 amperes. List price \$1.98 each.



FILTERETTE 1215

For use with electric razors of any make; similar in appearance and structure to the Style 1214 Filterette described above; size and rating same as Style 1214. List price \$1.98 each.

FILTERETTE 1218

For use with office machines, large food mixers (commercial type), and light electromedical equipment. Contained in steel case 8¾" by 3½" by 1½"; has six-foot rubber-insulated cord and standard two-contact receptacle; screw is provided for return connection to frame of noise maker. For use on 125/250

volt a-c or d-c circuits at loads up to 10 amperes; operates over a frequency range of 300 KC to 30 MC. List price \$12.50 each.

FILTERETTE 1220

For more efficient noise reduction than is afforded by the Style 1214; use with portable appliances of the series motored or universal-motored type; this unit is generally recommended when the nearest radio station is more than 100 miles away. Contained in steel case 2¾" x 2¾" x 1¾" with strap bracket for mounting on 3½" centers. Has six-foot, rubber-insulated cord and plug, and two contact receptacle. Electrical rating: 125 volts a-c or d-c; 15 amperes. List price \$5.50 each.

MANUFACTURER'S TYPE FILTERETTES



To keep their products from causing radio noise, many manufacturers build into each of their appliances special Filterettes like these. Such appliances are labeled "FILTERIZED — will not cause radio noise." Write our engineering department for details of this design and label service.

SCREEN BOOTH FILTERETTES

These Radio Noise Filters have the necessary mechanical and electrical characteristics to meet broad requirements for industrial and laboratory service. Through their use, high-level radio noise present on electric power distribution circuits is kept from entering the shielded test rooms; thus the operation of extremely sensitive test instruments is made possible even when the test room must be located in close proximity to such serious sources of radio interference as welding or plating generators, repulsion motors, and high-frequency induction heating equipment.

RADIO NOISE CAUSES & CURES

Noise Source	Filterette	Noise Source	Filterette
Adding machine	1218	Generator	1209 or Special
Addressing machine	1218	Hair dryer	1214
Aerator	1214	Heating pad	1214
Air purifier	1214	Humidifier	1214
Autocall system	1217	Incubator—See Thermostat	
Barbers clipper	1214	Ironing machine (motor only)	1218
Battery Charger		Mailing machine	1218
Mercury arc rectifier	1209	Malted milk machine	1214
Rotary type	1209	Massage machine	1214
Tungar type—EX connected	1217	Mercury arc rectifier—	
Tungar type—Cord connected	1218	See Battery Charger	
Vibrator type	1214	Milk shake machine	1214
Beer pump	1218	Motors	
Billing machine	1218	Capacitor type	
Bookkeeping machine	1218	Repulsion	1217 or 1209
Calculating machine	1218	Series	1217 or 1209
Calorimeter	1217	Universal	1214
Carbonator—Cord connected	1218	Neon Sign—Repair sign	
Carbonator—BX connected	1217	Oil burner	1217
Cash register	1214	Ozonator	1214
Cellar pump	1214	Pipe threader	1217
Compressor	1207	Portable electric tool	1214
Converter	1209	Posting machine	1218
Counting machine	1218	Printing press	1217 or 1209
Cream tester	1214	Razor, Electric	1215
Dehydrator	1209	Refrigerator (domestic)	1218
Dental engine	1218	Rotary converter	1217 or 1209
Dental lathe	1218	Sewing machines	1214
Dial telephone—		Sign flashers	
call phone company		Four circuit	1-1147 per circuit
Diathermy apparatus	1209 or 1137	Two circuit	1-1147 per circuit
Dictating machine	1214	Single circuit	1217
Dishwasher	1218	Soda fountain equipment	1214
Egg beater	1214	Stoker	1217
Electric shaver	1215	Street cars	
Electro-medical apparatus	1209 or 1137	(Write for special bulletin)	
Elevator motor	1209	Teletype	1218
Elevator control contacts (shield control panel)		Thermostat	1217
Exciter	1217 or 1209	Traffic signal	1217
Fan	1214	Vacuum cleaner	1214
Farm lighting plant	1209 or 1217	Valve grinder	1214
Flasher	1147	Violet ray (With shielding)	1218
Floor polisher	1214	Voltage regulator	1217
Flour bleacher	1209 or 1217	Washing machine	1218
Food Mixer	1214	X-Ray (Special—write for recommendations)	
Fruit juice extractor	1218		

"N-ERG-Y" Speed-Flash CAPACITOR



The CAPACITOR for SUPER-SPEED FLASH

Has High Energy Storage in Small Space

With energy storage capacity of 100 watt-seconds at a peak rating of 2500 volts d-c, the new TOBE "N-Erg-Y" Capacitor is especially designed for use with portable speed-flash units. Here its compactness and light weight make for greater convenience in power unit structure, while its dependability under diversified operating requirements suits it to all types of indoor and outdoor service in modern super-speed photo-flash work.

The "N-Erg-Y" Speed-Flash Capacitor is contained in a hermetically sealed steel case only $6\frac{1}{2}'' \times 4\frac{5}{8}'' \times 3\frac{3}{4}''$; it weighs but $6\frac{1}{4}$ pounds. Heavy-duty screw terminals, supported on cup-type phenolic bushings, facilitate the connection of the large cables used to handle the high instantaneous currents which, with this capacitor, may be as great as 1250 amperes. Performance tests of this new capacitor indicate an expected life of at least 10,000 charge-discharge cycles at peak rating, as well as ability to hold the peak charge for approximately twenty-four hours. Compact 25 watt-second unit, 2500 volts d-c; $3\frac{3}{4}'' \times 2\frac{1}{2}'' \times 9\frac{7}{8}''$.



POWER FACTOR CORRECTION BLOCKS

Sectional Construction Permits Accurate Balancing

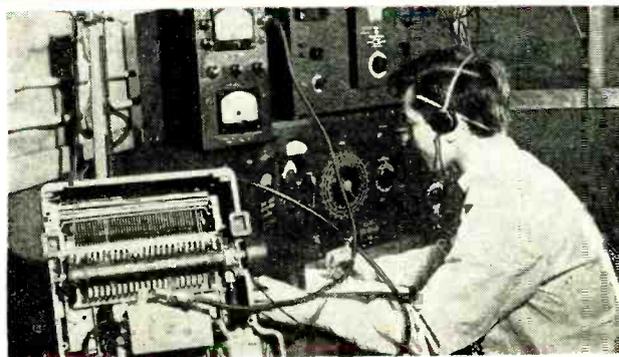


Constructed of 10 mfd. center-tapped units bolted into a rigid steel housing, the unit illustrated affords desirable flexibility and provides up to 2 KVA at 230 volts, 50-60 cycles. May be connected for either single phase or three-phase operation. Individual sections may be disconnected for accurate load balancing; and elements may be removed and replaced if necessary. The capacitor sections making up these power factor correction blocks are oil-impregnated and are hermetically sealed in oil-filled metal cases. Being of the mineral oil impregnated type, the capacitors show little drift through wide ranges of temperature and are capable of continuous operation at temperatures as high as 75° C.

Assembly contained in a 16 gauge steel housing, having provision for conduit entrance at one end. A wholly removable cover gives access to section terminals; sturdy solderlug terminals permit direct connection of circuit conductors up to #12. Overall dimensions of the 2 kva unit are: width, $9\frac{1}{2}''$; height, $6\frac{1}{2}''$; length, $14''$; other ratings can be furnished in proportionate sizes.

ENGINEERING SERVICE

No matter how complex your radio noise problem, it can be solved in the Tobe Filterette Laboratory. Here the cure of radio noise is the concern of an engineering staff equipped with every necessary instrument for analyzing radio interference. The cumulative experience of this group of specialists has produced efficient, practical means for minimizing disturbance of broadcast and short-wave radio reception.



LOOK FOR THIS TAG WHEN BUYING . . . it is assurance that your new appliance will not provoke blasts of "man made static" in your radio. WHEN SELLING . . . it tells the prospect that your product too has the added value of "no radio noise".

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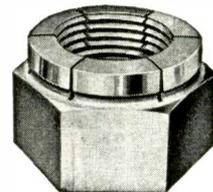


THE "UNBRAKO" SOCKET SET SCREW (A) WITH KNURLED POINT is a Self-Locker, because the knurled point digs-in and holds firm . . . against even the most stubborn vibration! Yet, this screw can easily be backed-out with a wrench and used again and again.

THE "UNBRAKO" SOCKET HEAD CAP SCREW (B) is a time- and money-saver, because its knurled head provides a slip- and fumble-proof grip, even for oily fingers, so it can be screwed-in faster and farther before it becomes necessary to use a wrench, and it helps to "doll up" the looks of any piece of machinery. Both screws in sizes from #4 to 1/2". Write for the "Unbrako" Catalog.

Knurling of Socket Screws originated with "Unbrako" in 1934.

"FLEXLOC" is of one-piece all metal construction, and every thread, including the locking threads, carries its share of the load. Thin nuts made thus, are especially superior. Its milled flexible top locks on a wide range of tolerances. Practically unaffected by heat to 650° F. It can be used over and over again without losing its ability to lock. Sizes from #6 to 1" in diameter; coarse and fine threads; millions in use. Write for Bulletin #582.



Pat'd & Pats. Pend.



"Hallowell" workbenches of steel are available in about 1300 ready-made styles, featuring interchangeable shelf, drawer, and cabinet units, so that you are sure of getting exactly what you need. Built for long, hard wear, they are sturdy and stand firm and rigid without costly bolting to the floor. 5 different leg heights, 7 standard lengths provide a variety of styles. Write for the "Hallowell" Shop Equipment Catalog. And remember . . . "Unbrako" and "Hallowell" products are sold entirely through distributors.



Fig. 732
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Drawer is extra

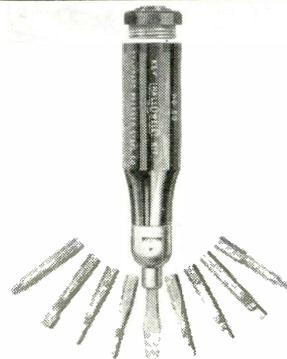


HALLOWELL Compact Speed Tool Kits WITH INTERCHANGEABLE BITS

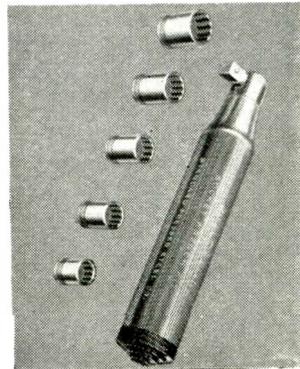
Illustrated: "SOCKET SCREW" KIT: with swivel bit-chuck. In two handle sizes, containing a total of 17 bits, including hex, Phillips and slotted screw driver bits.

"SOCKET WRENCH" KIT: With swivel bit-chuck. In two handle sizes, containing 12 point hexagon sockets for most all hex nuts and bolts from #4 up to and including 1/2".

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"HOME" KIT: Contains seven handy interchangeable tools for small household jobs.
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"SOCKET SCREW" KIT



"SOCKET WRENCH" KIT

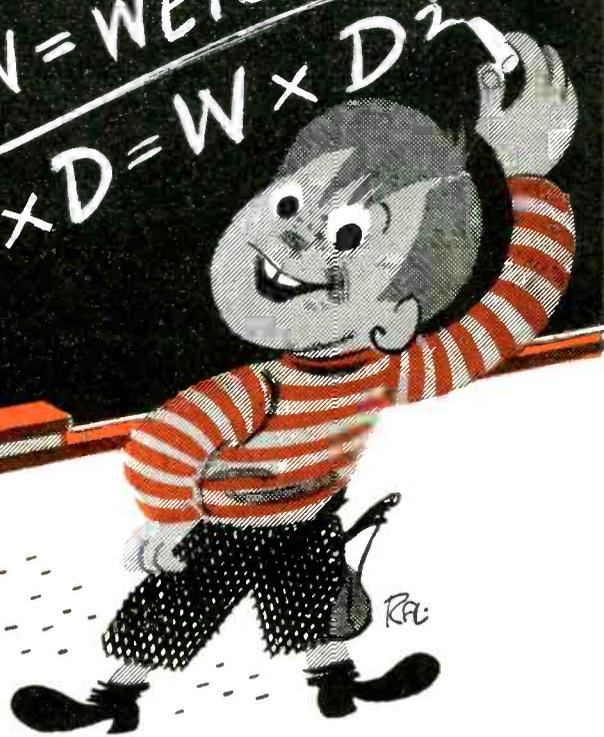
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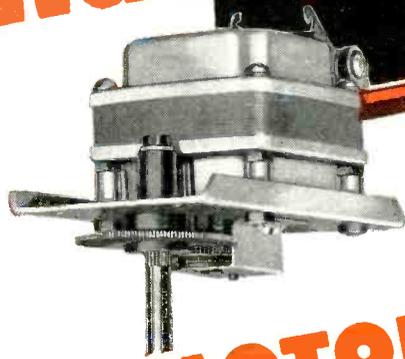
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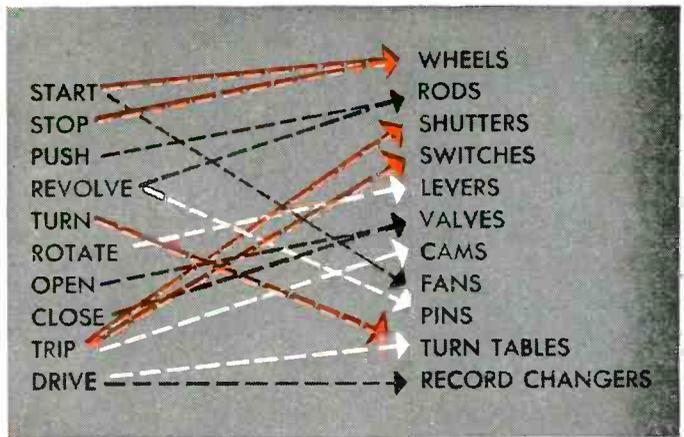


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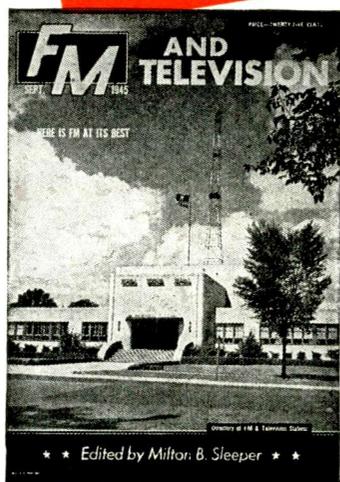
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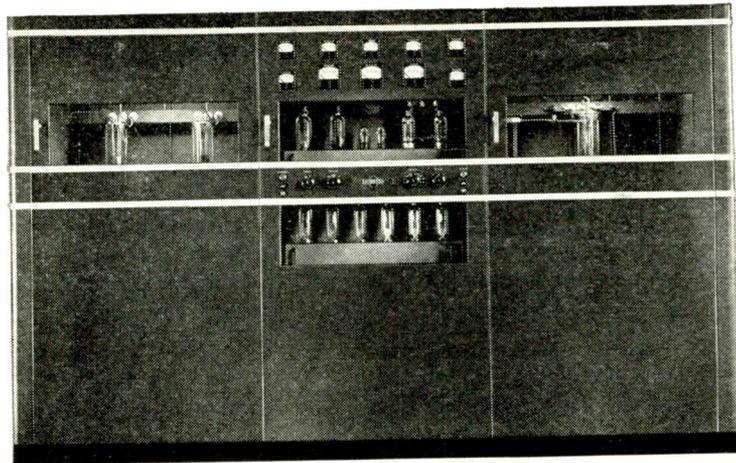
The products listed on the following pages are typical examples of the progressive Collins engineering standards. Advanced design, high quality components, and skilled craftsmanship combine to assure dependable and continuous performance.

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2. 20T, 1000/500 watts
3. 300G, 250/100 watts



The Collins 21A 5 kw AM Air Cooled Broadcast Transmitter

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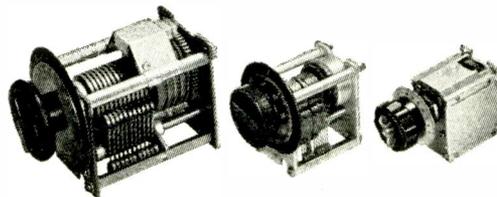


AM and FM Studio Equipment and Accessories

- | | |
|--|---|
| 4. 6P preamplifier | plifier, 4 channel, a-c or battery operated |
| 5. 6M program amplifier | |
| 6. 6X line amplifier and monitor | 9. 26W-1 limiting amplifier |
| 7. 12Y portable remote amplifier, 1 channel, a-c | 10. 212A-1 studio console |
| 8. 12Z portable remote amplifier, 4 channel, a-c or battery operated | 11. 212B-1 studio console |
| | 12. equalizers, mixing panels, jack strips, attenuators |

Frequency Modulation Broadcast Transmitters

13. 731A-1, 250 watts
14. 732A-1, 1,000 watts
15. 733A-1, 3,000 watts
16. 734A-1, 10,000 watts
17. 736A-1, 25,000 watts
18. 735A-1, 50,000 watts



Single-turn or multi-turn Autotune heads are available in a torque range of 4 to 25 inch pounds.

The Collins Autotune* is an electrically controlled means of mechanically repositioning adjustable rotary elements. Any combination of such components can be returned to any one of a number of preselected positions. By means of this system, radio transmitters and receivers can be completely retuned in a matter of seconds. The Autotune* system is readily adaptable to a variety of industrial control requirements.

*TRADE-MARK

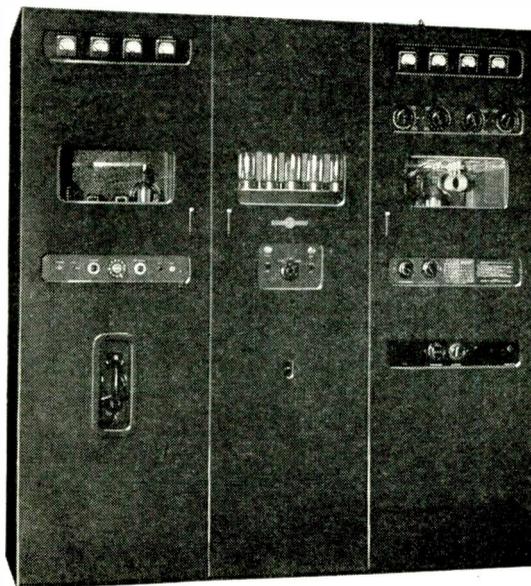
Collins AM Communication Equipment

Ground station transmitters:

1. 231D, 10 channel, 3-5 kw, 2-18.1 mc, Auto-tune* transmitter, crystal or master oscillator control.
2. 16F, 10 channel, 300-500 watts, 2-18.1 mc, Auto-tune* transmitter, crystal or master oscillator control.
3. 32RA, 4 channel, 50-75 watts, 1.5-15 mc, band-switching transmitter.

Ground station receivers:

4. 51L-1, manual tuning, 1.5-18.5 mc, 115 v. a-c communication receiver.
5. 51M-1, crystal controlled, double conversion, 118-132 mc, 115 v. a-c, VHF communication strip receiver.
6. 51N-1, crystal controlled, 2.5-15 mc, 115 v. a-c, communication strip receiver.



The Collins 231D AM Autotune* Communication Transmitter

Leadership in Radio Communications

Aircraft receivers:

7. 51 H-3, 1.5-18.5 mc, 10 channel Autotune* aircraft receiver, 1 ATR unit, self-contained crystal controlled calibration circuit.
8. 51K-1, 10 channel, 2.4-18.3 mc, crystal controlled Autotune* aircraft receiver.

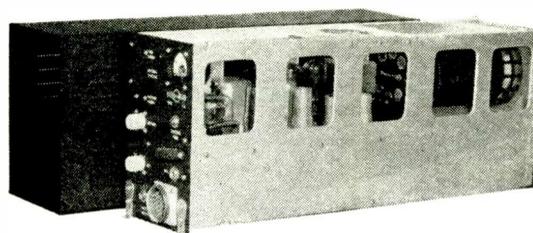
Aircraft transmitters:

9. 17E-2, 3105 kc and 6210 kc, 100 w, 1 ATR unit.
10. 17H-2, 200-1500 kc, 2.0-18.1 mc, 100 watt, Autotune* control.
11. 17K-1, VHF, 118-132 mc, crystal controlled, 1/2 ATR unit, 5 watts minimum output.

Aircraft transmitter-receiver:

12. 18S-1, 20 channel, crystal controlled, 2.5-15 mc, 100 watts, 1 1/2 ATR units.

17K-1, VHF Aircraft transmitter



Amateur Radio

- 30K-1, 300-500 watts input, bandswitching transmitter.
- 310A-1, variable frequency exciter.
- 75A-1, amateur band receiver, crystal accuracy.
- 32V-1, 120 watts input, phone or CW, variable frequency, bandswitching transmitter.
- 70E-8, variable frequency oscillator, 1600-2000 kc.

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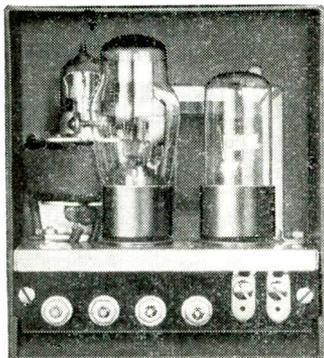
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ELECTRONIC SWITCH
Type ES-15-HB
Model 8336

ELECTRONIC SWITCHES

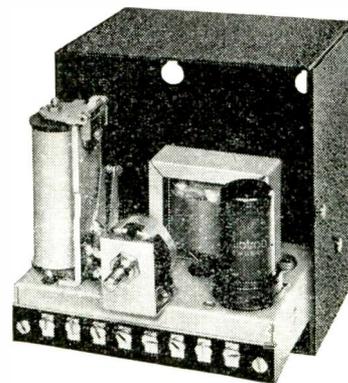
Installed between sensitive indicating devices and heavy loads — they insure constant accuracy of operation with only minute currents in the control circuit.

Applications — Used by machine tool, chemical instrument, electric and other manufacturers for pressureless limit switching, gauging, floatless control of liquid level, conductivity testing, and limit switching with precision or delicate contacts.

ELECTRONIC TIMERS

— of the single cycle type — using the characteristic time constant of a condenser and resistor network — to operate magnetic relays for pre-determined intervals — ranging from .05 seconds to 60 seconds.

Applications — Include welding, blueprinting, photographing, process cycling, heat treating, baking, spraying, etc.



ELECTRONIC TIMER
Type 59
Model 8289



LIGHT SOURCE
Type L 15
Model 8248

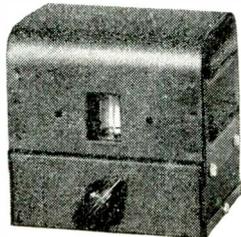


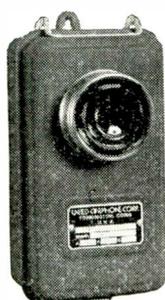
PHOTO-ELECTRIC CONTROL
Type 150
Model 5327

PHOTO-ELECTRIC CONTROLS

Utilizing the popular "electric eye" photo tube in conjunction with light source.

Applications are manifold and include controls for printing and packaging registration, door opening, safety, counting, sorting, burglar alarms, etc., etc. Illustrated are inexpensive units with applications to numerous control problems.

OTHER STANDARD UNITS WE MANUFACTURE INCLUDE:
SunSwitch Light Control, 3-in-1 Scanner Registration Control, Sweep Calibrators and Video Amplifiers



LIGHT SOURCE
Type L 18
Model 8255



PHOTO-ELECTRIC CONTROL
Type 72
Model 8267

FOR COMPLETE INFORMATION WRITE TO

LET OUR ENGINEERS HELP

The Controls described on the opposite page are typical standard units which may be ideal for your application. To help you decide

OUR FIELD ENGINEERS are listed below

Consult the engineer nearest to you. Advice and cooperation on selection and installation of the standard or special equipment you need is yours for the asking and gladly given.

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Tel.: 2098-W.
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Att.: Mr. Jas. J. Backer
Tel.: Main 8811
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Mr. John Herring
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Tel.: Waverly 3222
(All Canada but British Columbia)

Our engineering and production departments are prepared to develop and manufacture special controls to suit your applications.

Foreign Representative: Rocke International Corporation, 13 East 40th Street, New York. 16, New York. Telephone: Lexington 2-8555

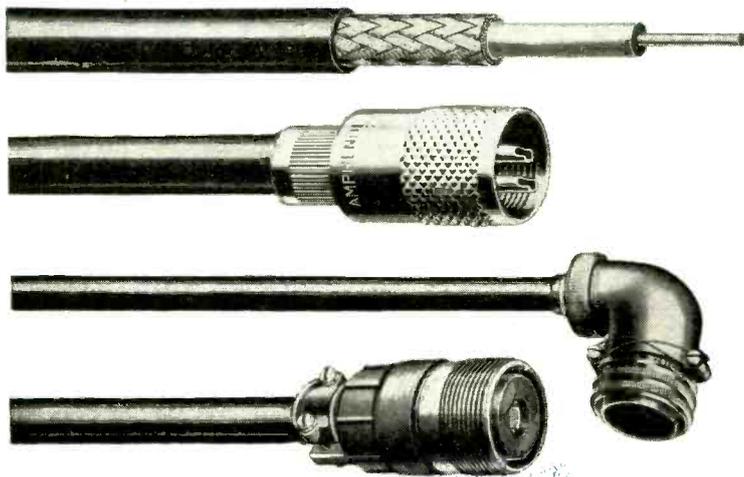
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INDUSTRIAL CONTROLS DIVISION

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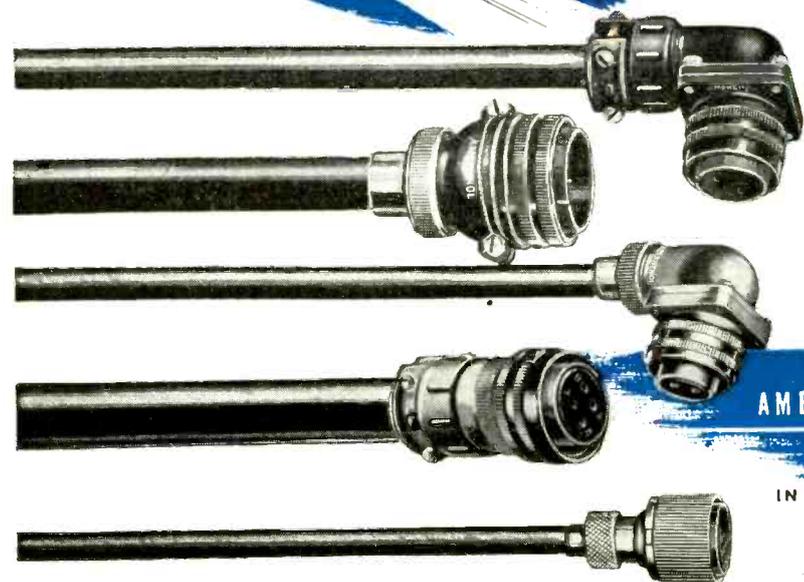


AMPHENOL

Components for Radio and Electronics



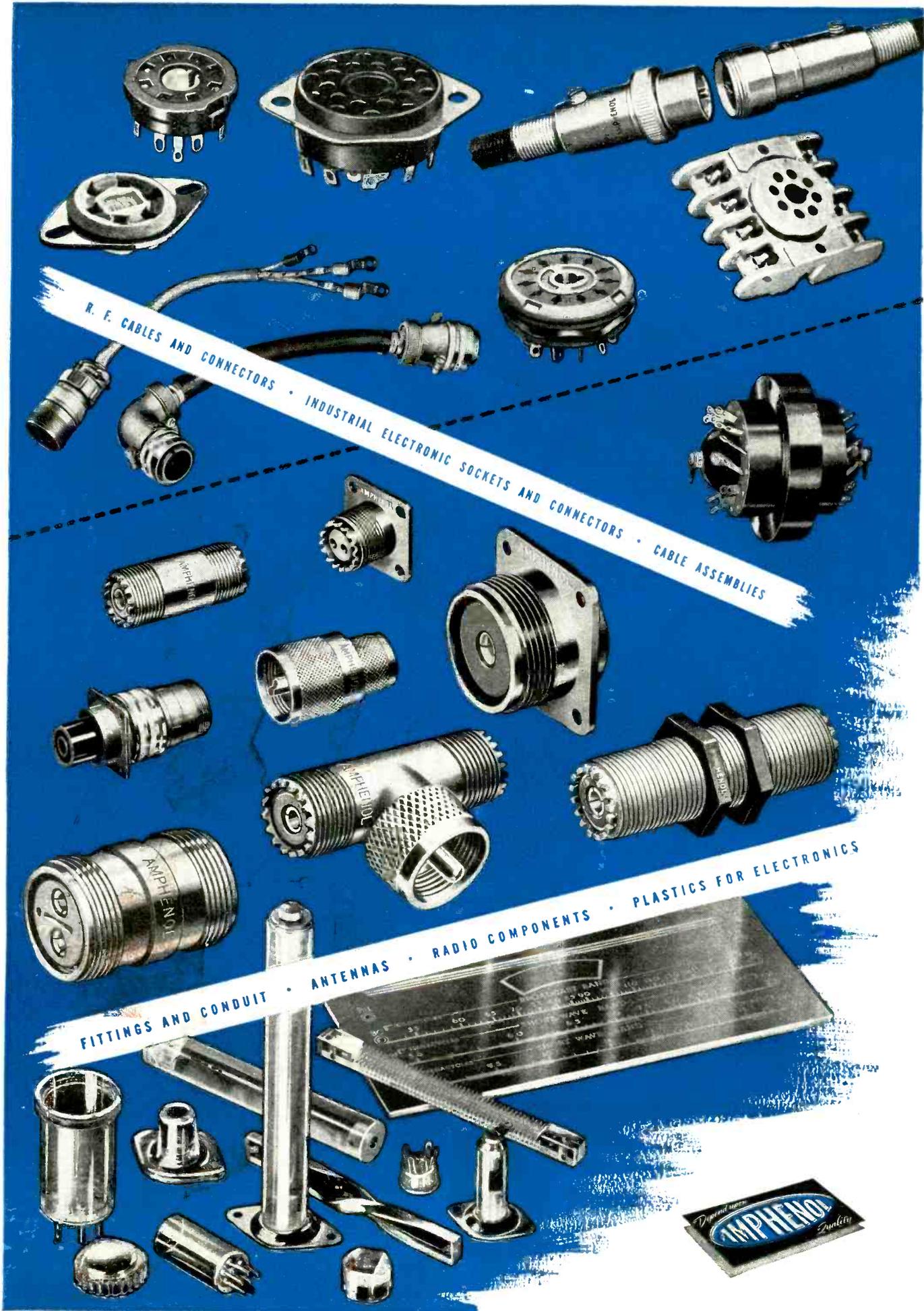
• Amphenol's tremendous facilities are devoted to the development and manufacture of radio-electronic components for a multitude of standard as well as new peacetime applications. Amphenol's technical knowledge and research, production skill and experience, acquired through the pioneer years and strengthened by extraordinary wartime production, are reflected in new and improved products with unsurpassed standards of quality and performance. Amphenol high standards of engineering together with the integrity built into every product are evidenced by the world-wide recognition and acceptance accorded the products bearing the Amphenol name.



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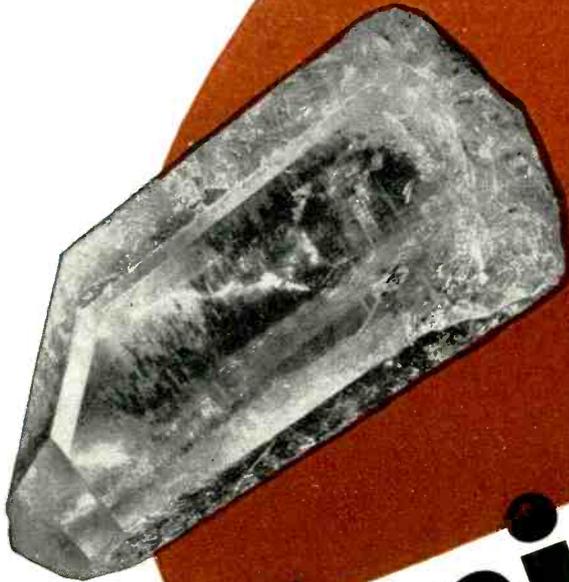
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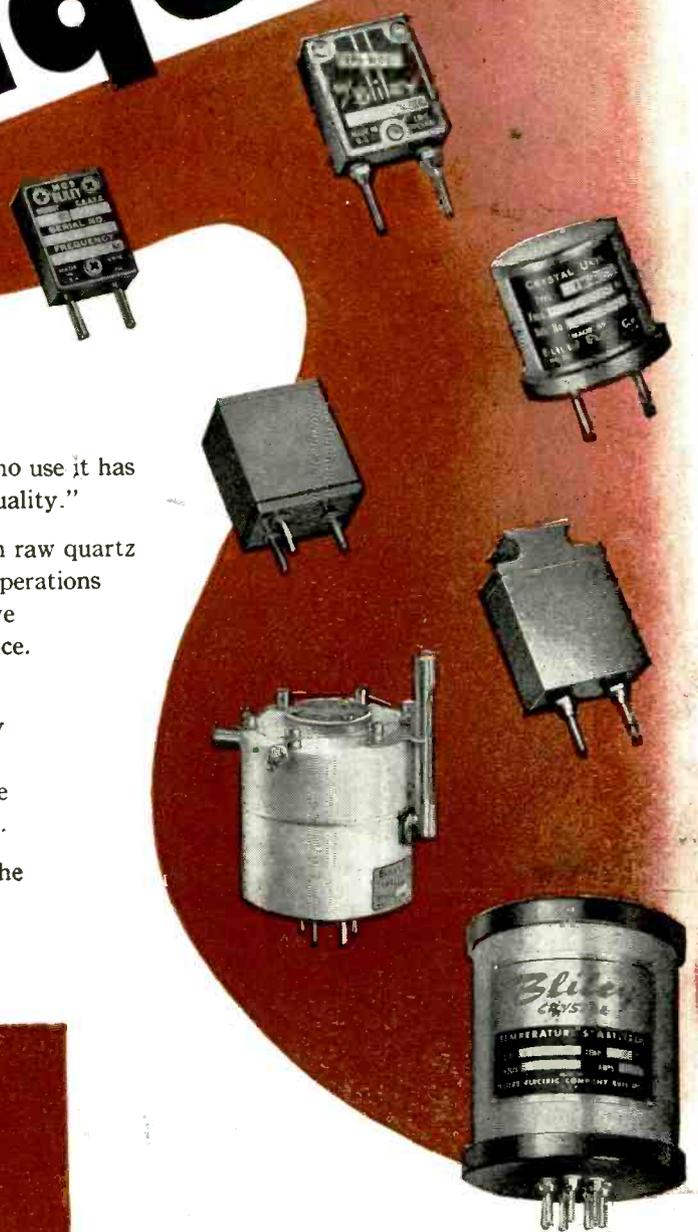
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Every product that enjoys the full confidence of those who use it has its "priceless ingredient." In Bliley crystals it's "techniquality."

Cutting, grinding, and finishing alone do not transform raw quartz into a sensitive frequency control device. Behind these operations there must be a background of technical skill and creative engineering that is gained only through years of experience.

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Bulletin 27 describes the crystal units engineered for the needs of today. Write for your copy.



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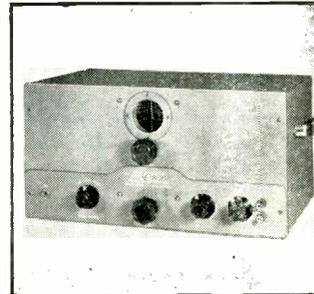
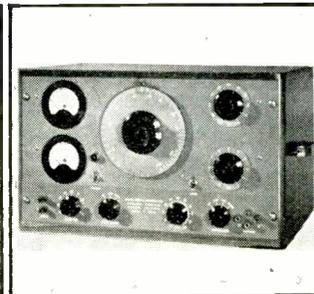
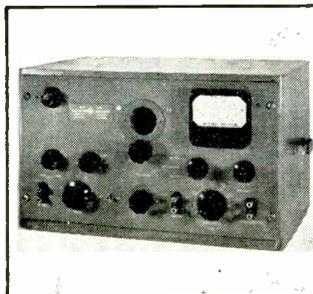
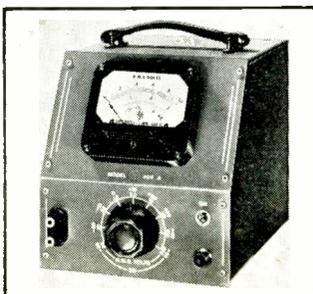
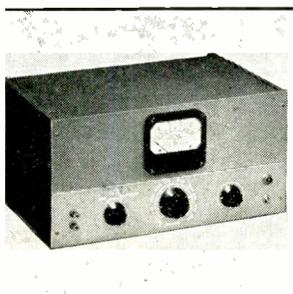
00A—Electronic Frequency Meter

400A—Vacuum Tube Voltmeter

330B—Noise and Distortion Analyzer

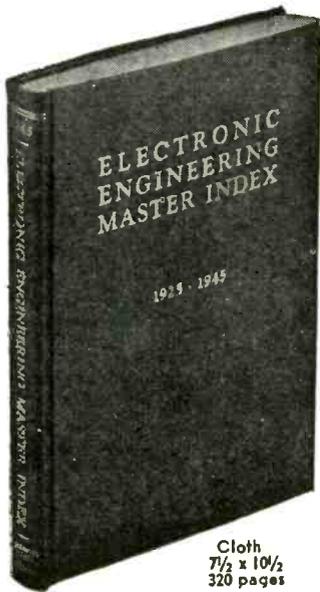
205AG—Audio Signal Generator

201B—Resistance-Tuned Audio Oscillator



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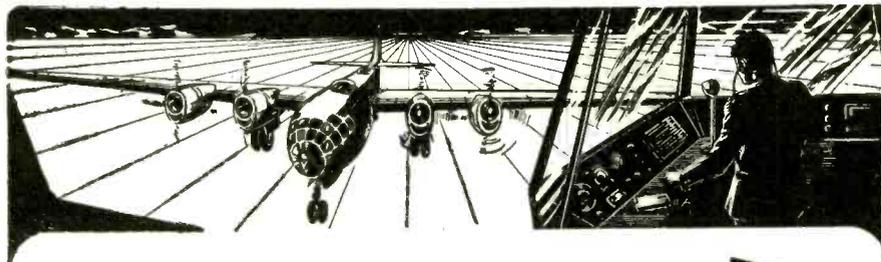
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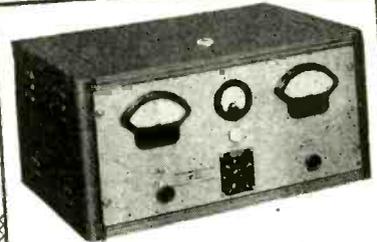


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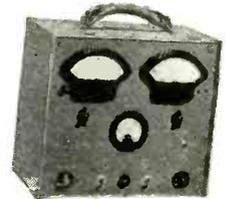
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Direct reading. No charts or complicated calculations necessary. Available for all the frequencies used by the Emergency Services, including the new 152-162 mc. band. Designed for operation on 110 V. AC 60 cycles.

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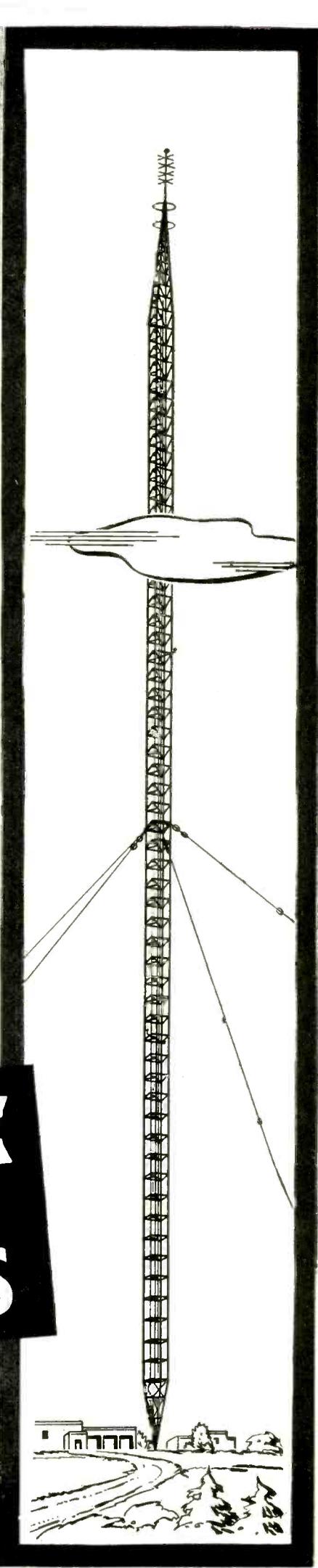
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• This well-known saying means exactly what it says. For Clarostat has the experience, background, engineering skill and production facilities to meet many resistance needs. Specifically:

EXPERIENCE BACKGROUND

Originally the American Mechanical Laboratories, Inc., later changed to Clarostat Mfg. Co., Inc., this organization has specialized in resistors, controls and resistance devices since 1920. It has contributed many developments to the radio-electronic electrical arts.

Originally the name "Clarostat" was applied to a precision adjustable resistor covering an unusually wide range of resistance values at the turn of a knob. This device solved the demand for a wide range of resistances to control the voltage outputs of the vacuum tubes which brought socket power supplies. Hundreds of thousands of these units installed not only in B-eliminators for receivers, transmitters, electronic test equipment, and other equipment, but also in many other applications.

In fixed resistors, Clarostat developed the famous "GREENOHMS", featuring the exclusive cold-setting thermoplastic coating that does not crack, peel, or flake despite repeated heat shocks and all operation and of heavy overloads. The "GREENOHMS" coating is a tough, insulating, non-combustible material. Clarostat's "GREENOHMS" coating is a tough, insulating, non-combustible material. Clarostat's "GREENOHMS" coating is a tough, insulating, non-combustible material.

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Products of "THE HOUSE OF RESISTORS"

GREENOHM TERMINAL SPECIFICATIONS



Wire-Wound Flexible Resistors

GLASOHMS (Glass-insulated) * FLEXOHMS (Ferro-ceramic)

Exclusively Clarostat's wire-wound resistors are available in two types: Glasohms and Flexohms. Both are glass-insulated units and feature the same rugged construction and electrical characteristics. They are available in a wide range of resistance values and power ratings. They are also available in a wide range of physical sizes and configurations. They are also available in a wide range of physical sizes and configurations.



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RESISTANCE... Series MT units are available in any resistance from 1 ohm minimum to 1000 ohm maximum. Only linear resistance is possible.

POWER RATING... Series 37 S with switch Mechanically interlocking slide with small wire-wound controls Series 43 and 43-S (see Bulletin 116).

RESISTANCE TOLERANCE... These controls incorporate the Clarostat standard and element which has already set new standards of performance and life among composition or carbon resistors. Matched mobility for unaided service. Exceptionally unimpaired to humidity, heat, cold, wear and age.

RESISTANCE ELEMENT... Consists of fine finely ground on a B proposed core, firmly held in a tight fit in the fibre base in such manner that each base.

SHAFTS... Two types of shafts are available. One provides for screw mounting in the base as a plate. The other provides for screw mounting in the base as a plate. (See Bulletin No. 120).

SERIES 37 and 37-S

Composition-Element Potentiometers and Rheostats

Space-saving controls of the composition element or carbon type. Series 37 without switch. Series 37 S with switch. Mechanically interlocking slide with small wire-wound controls Series 43 and 43-S (see Bulletin 116).

CONSTRUCTION... Resistance element is a special reactive coating permanently bonded on bakelite disc. Dual finger contactor of special alloy. Resistor contact is rigidly and firmly on glossy surface of resistance element.

RESISTANCE RANGE... Linear and tapered resistance from 1,000 ohms to 5 megohms.

SERIES PW-25 and PW-50

POWER RHEOSTAT

Full power rheostat with standard wiring without excessive temperature rise. Distances between these 52-watt PW-25 and 100-watt PW-50 power rheostats. The heat-treated winding is impervious to cold welding, not only centered and thereby conductive in the contact only, occurring for the exceptional power dissipation.

Tapered: Made on order to requirements.

TOLERANCE... Standard overall.

★ **What is standard and what can be made special by way of resistors, controls and resistance devices, is presented in these handy Clarostat Engineering Bulletins:**

TYPE OF PRODUCT **BULLETIN NO.**

Ballasts or Line Voltage Regulators	108
Composition-Elements Controls	112
Constant-Impedance Output Attenuator	111
Constant-Impedance Controls (L-pads, etc.)	102
Flexible Resistors (Glasohms and Flexohms)	105
Fluorescent Lamp Conversion Resistors	125
General Information	101
General Utility Accessory Resistors	125
Hardware for Controls	120
Humdingers (Compact Potentiometers)	103
Metal-Clad Molded Resistors	109
Multiple-Unit Controls	142
Power Resistors (Greenohms)	113
Power Resistor Decade Box	114
Power Rheostats	115
Tube Type Plug-In Resistors	107
Wire-Wound Midget Controls	116
Wire-Wound Standard Controls	118

(Additional bulletins from time to time)

★ Write for those bulletins of interest to you, stating Bulletin Nos. ★ Also send us that resistance problem or requirement.

Small Wire-Wound Resistors and Rheostats

SERIES 43 and 43-S

Control Hardware

SHAFTS * NUTS * WASHERS * INSULATOR COUPLING

Wire-Wound High-Wattage Resistor

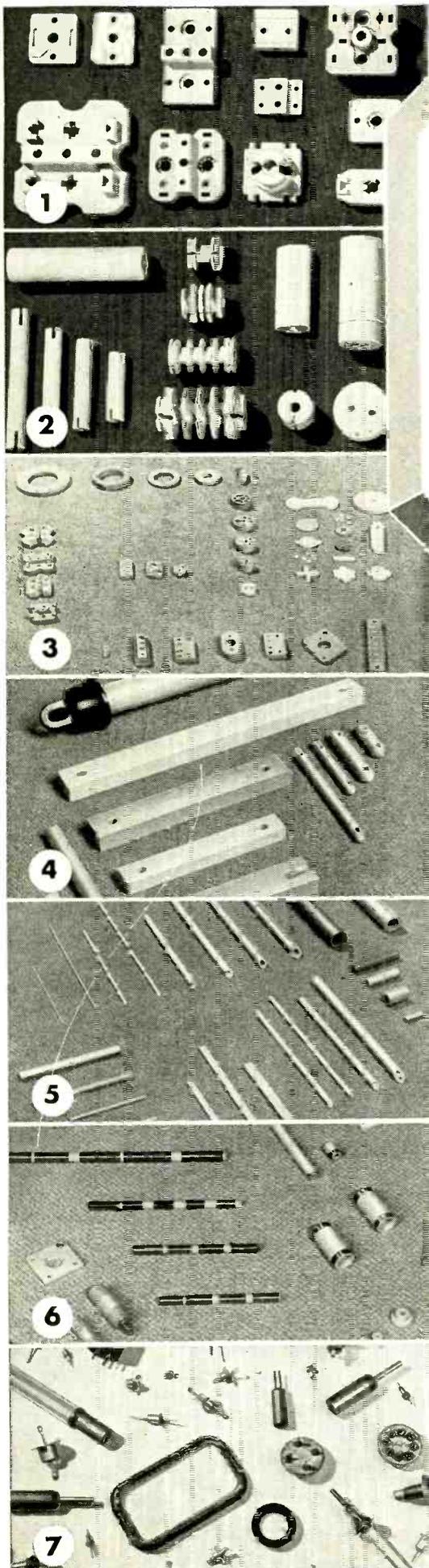
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Controls and Resistors

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Export Division: 25 WARREN STREET, NEW YORK 7, N. Y.

Cable Address: SIMONTRICE, NEW YORK



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STUPAKOFF Ceramic insulators and Kovar*-Glass hermetic seals are designed and made for use in transformers, resistors, relays, capacitors, instruments, gauges—and electronic tubes and equipment. The quality is precisely controlled from raw materials through every phase of production. That's why STUPAKOFF is your best choice for—

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STUPAKOFF padder and trimmer bases are mechanically strong, dimensionally accurate and electrically stable. Scientific testing insures maximum satisfaction.

2 RESISTOR CERAMICS

STUPAKOFF resistor ceramics are dense and sturdy, vitrified to withstand moisture, resistant to vibration and thermal shock.

3 PRESSED PARTS

STUPAKOFF pressed parts meet assembly line production demands and endure rigorous usage.

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6 METALLIZED CERAMICS

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7 KOVAR*-GLASS SEALS

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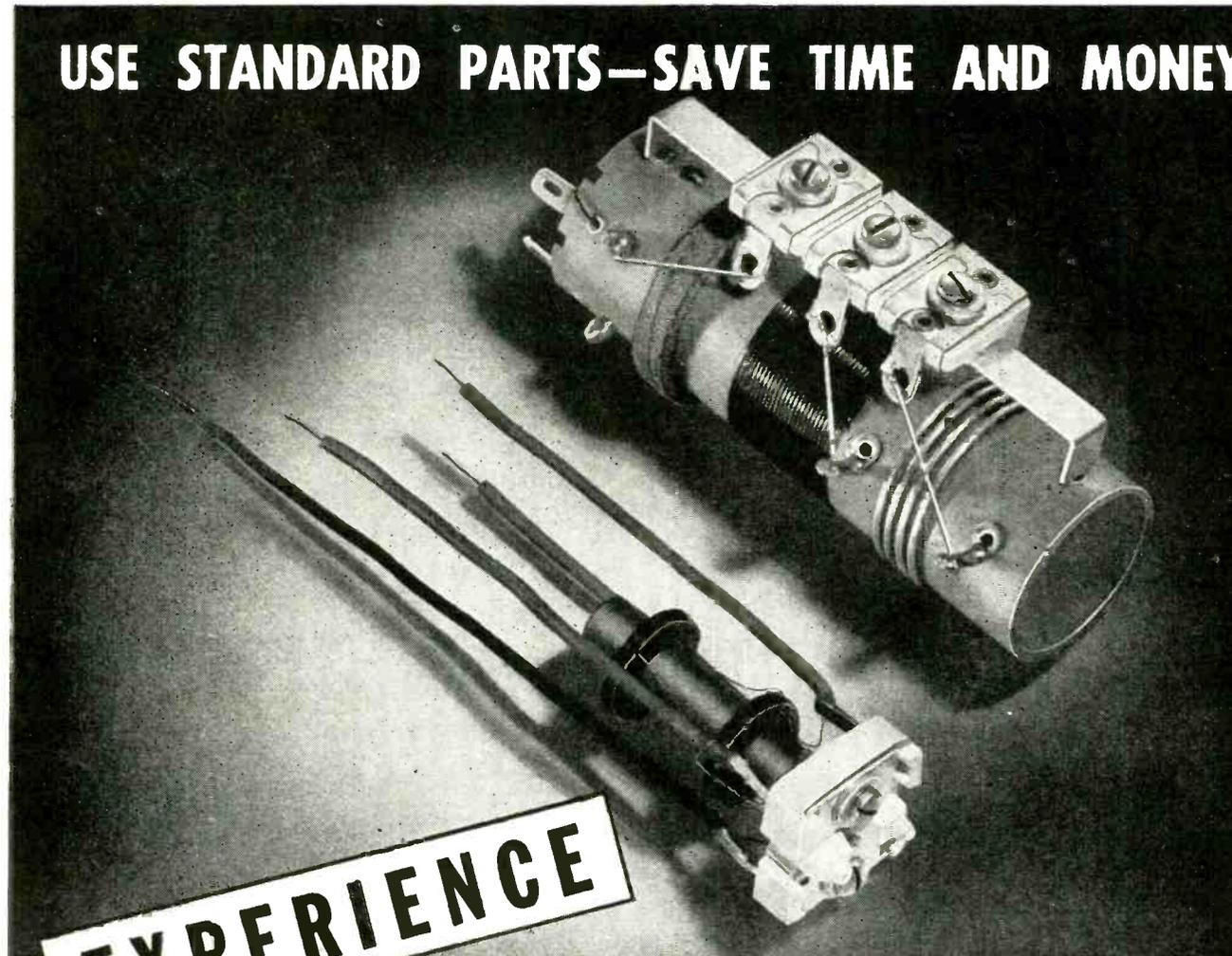
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Due to their inherent improved characteristics, TUNG-SOL Miniatures are found in high frequency circuits in which the use of the larger type tubes would be impractical. In other circuits TUNG-SOL Miniatures are also more satisfactory. They are more rugged and more resistant to vibration. Because they are smaller, and lighter, TUNG-SOL

Miniatures make possible the production of smaller and lighter equipment. This is the trend of today.

TUNG-SOL Engineers will be glad to help you interpret your tube requirements in terms of Miniatures. TUNG-SOL is a tube manufacturer, not a set builder. The disclosures of your plans you make in consultation will be held in strictest confidence.



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The contributions of the Fansteel research and engineering staff in the field of electrical contacts and rectifiers, constitute a long record of cooperation and practical assistance to the nation's leading industries. Fansteel welcomes the opportunity to share its vast fund of experience and engineering information with interested manufacturers. If you have an electrical contact or rectifier problem, write, phone or wire for a Fansteel engineer.

Fansteel's selection of electrical contact materials consists of all recognized metals, plus a number of special alloys and sintered powder metal compositions. The materials most generally used are: Tungsten, Molybdenum, Silver (Fine, Sterling and Coin), Fasaloy* and Fastell*.



SOLID RIVET CONTACTS

are supplied in fine, sterling and coin silver, also all grades of Fasaloy in a wide variety of standard sizes.

COMPOSITE RIVET CONTACTS

are available in Fastell, Fasaloy and all other contact materials. Annealed steel is recommended and generally furnished for rivet backings.



PROJECTION WELD BUTTONS

(or disks) are obtainable in all Fansteel contact materials with steel projection backs for spot welding.

SCREW TYPE CONTACTS

may also be had in all Fansteel contact metals. Screw metals: Cold drawn steel is supplied unless otherwise specified.



Fansteel also designs and manufactures a wide variety of shapes and contact assemblies for special service.

"Fansteel Electrical Contacts - An Engineer's Handbook", is the most authentic book on today's electrical contact problems. Write for your copy.

*Trade-mark Registered U.S. Patent Office.

SELENIUM RECTIFIERS

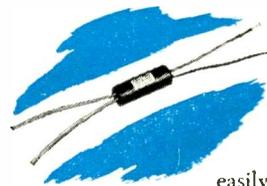
You can always depend on Fansteel Rectifiers. Fansteel has designed and produced millions of rectifiers for battery charging and d-c power for industrial, utility, fire alarm, railway signal and communications service, since 1924.

FANSTEEL SELENIUM RECTIFIER STACKS

are available in numerous standard types and sizes to meet the varied requirements of those who incorporate rectifier stacks into their electrical products. Bulletins RDP-107 and 107B.



FANSTEEL LOW CURRENT SELENIUM RECTIFIERS



are obtainable in half-wave and full-wave bridge circuits, for power or meter applications. Their small size saves valuable space, and they are easily incorporated into any device. Bulletin RDP-110.

COMPLETE POWER UNITS

are available for operating chucks, magnetic devices, solenoids, relays, d-c motors and other direct current appliances. Bulletin RDP-105.

FANSTEEL BATTERY CHARGERS

are convenient, flexible and dependable for charging storage batteries. Standard models are available for charging 6 to 60 cells (13.5 to 135 volts) 0.6 to 12.0 amps. Other models are built to specifications. Bulletin RDP-105.

For more complete information write for any of the RDP Bulletins mentioned above. They are yours for the asking.

FANSTEEL METALLURGICAL CORPORATION

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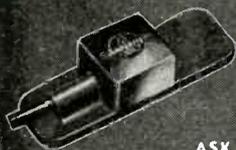
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"Black Seal"
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. . . at no increase in price!

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Elastron, which originated in our laboratories, is an ornamental and functional, light weight, flexible plastic. It is excellent for trim, binding and straps on portable units, bumpers for household appliances, refrigerator stripping, water and air hose. It is available in an infinite variety of colors and finishes; it is mildew, perspiration and weather proof, is inert to alcohol or oil splashes, has high abrasion resistance and is washable.



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EC-10A	Strobotron	1D21
IEC-12	Gas Discharge Tube	SS501
EC-13A	Thermocouple Tube	R1100
EC-14A	Pirani Tube	R1111
EC-15A	Glow Modulator Tube	R1130B (1B59) and R1131
EB-6	Crystal Diodes	1N21B, 1N23B, 1N25, 1N26, 1N31, 1N32, 1N34
ES-20	Gas Switching Tube (Anti-TR)	1B35, 1B37
ES-13	Hydrogen Thyatron	4C35, 5C22
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Electronic Instruments	Recording Dilatometer—for measuring thermal expansion of wide variety of materials.	

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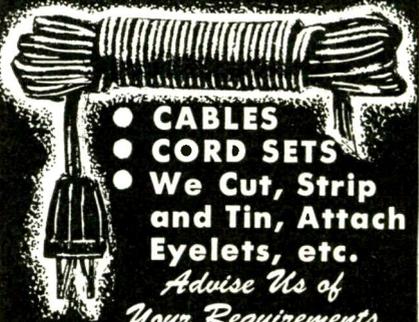
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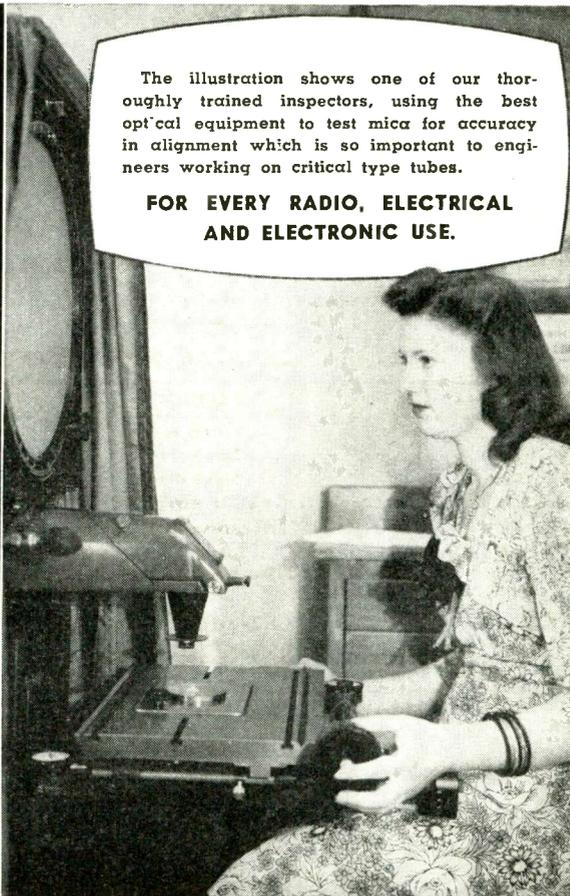


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BODY SIZE: 1 1/8" Lg. by 3/8" Dia.
MOUNTING: By Axial Leads
TERMINALS: No. 18 Tinned Copper Leads, 2 Inches Long
TOLERANCES: Standard 3% (1% at Slight Extra Cost)

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Same as Type ALA except coated with high temperature cement.

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MOUNTING: By Axial Leads
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(To 1/10% at Slight Extra Cost)

TYPE CX — 1 WATT

NON-INDUCTIVE



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BODY SIZE: 3/4" Lg. by 9/16" Dia.
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Individual TOUCH



- Every magnet individually tested in loud speaker structure before shipping...
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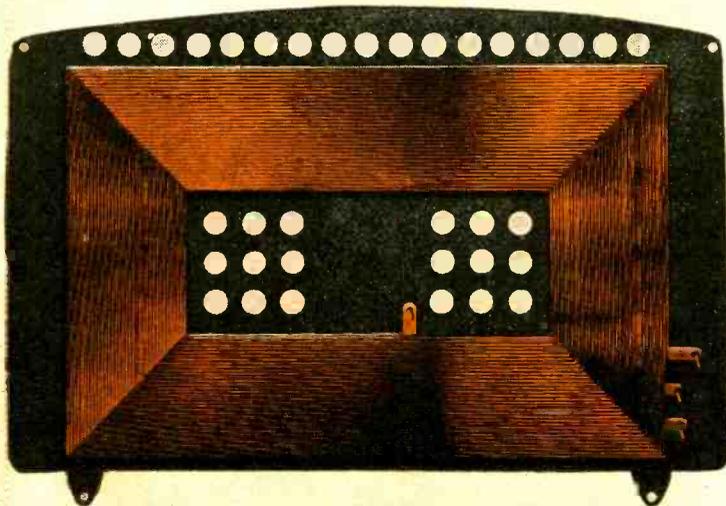
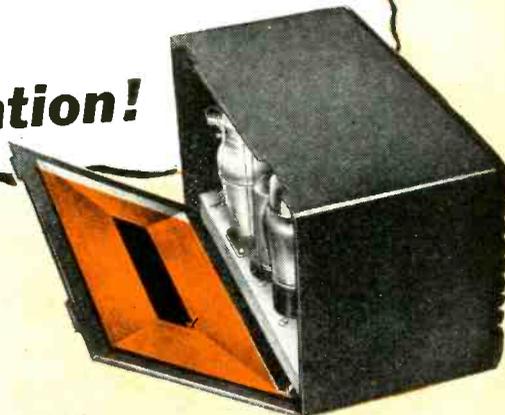
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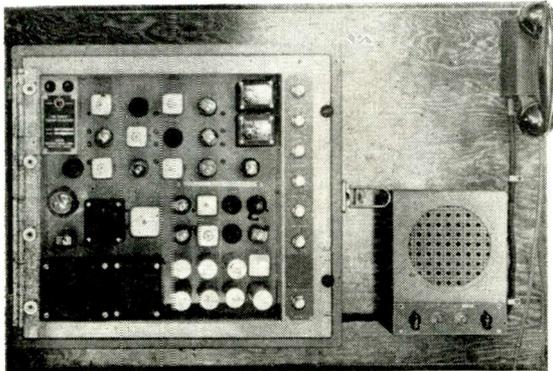
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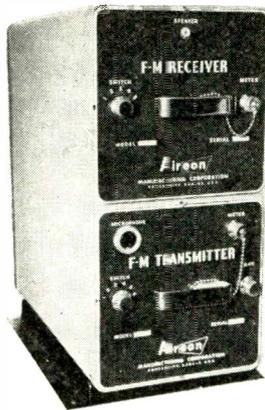
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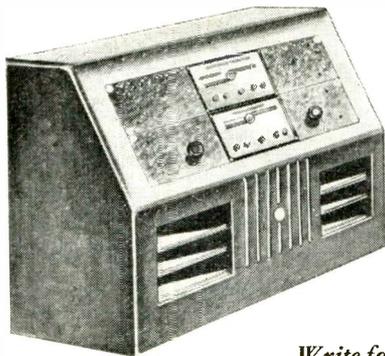
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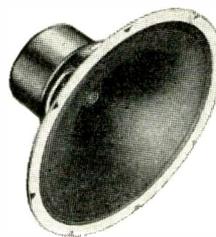
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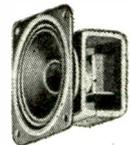
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AT-130C	3	25	6.3	3.0	25
AT-140	4	35	6.3	3.0	65
AT-530	3	200	10	4.5	30
AT-530A	3	250	11	4.0	23
AT-330	3	125	5.0	7.5	29
AT-340	4	150	5.0	7.5	
AT-257	5	75	5.0	7.5	
129	3	5000	18	58	26
833-A	3	300	10	10	35



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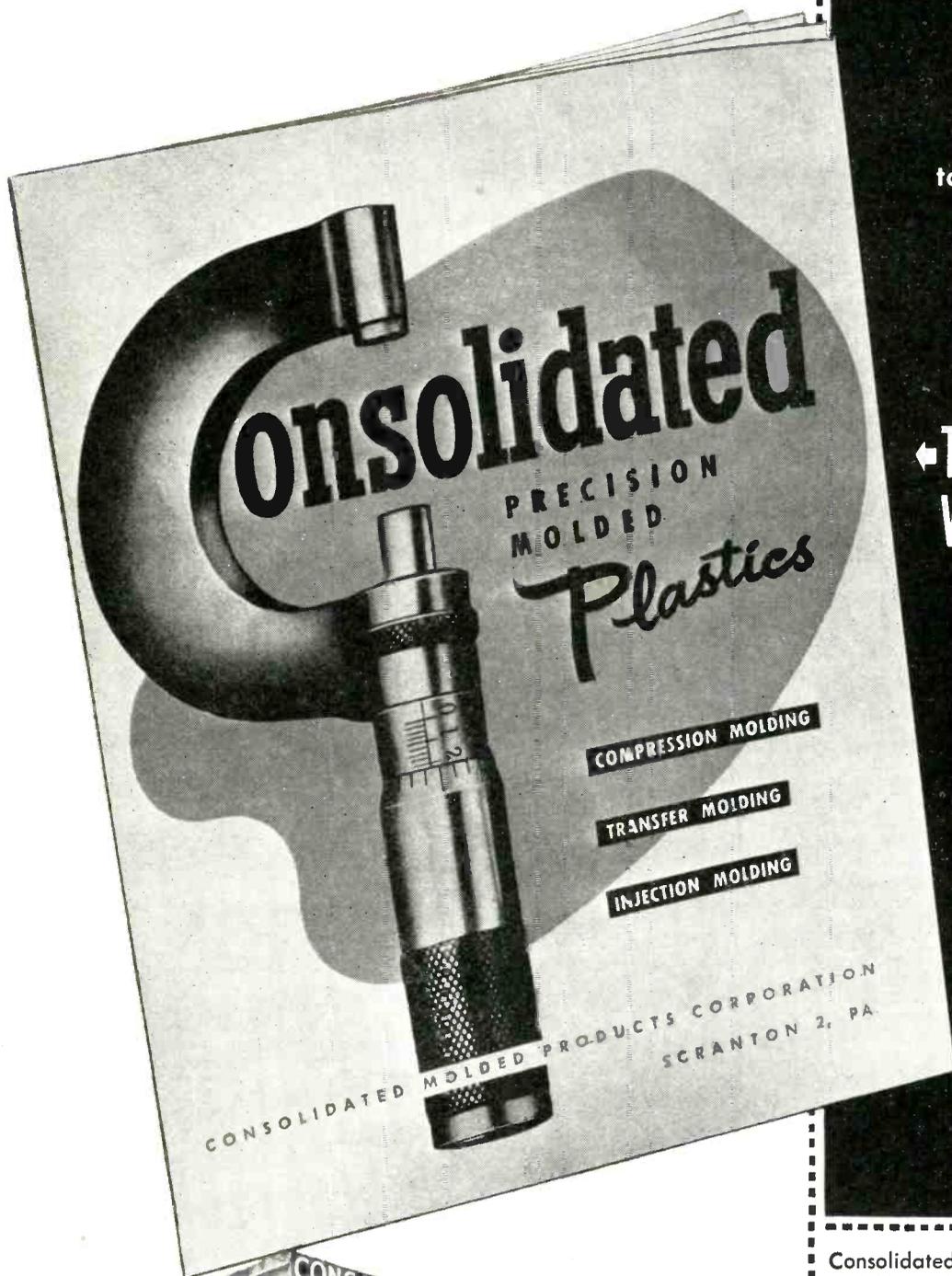
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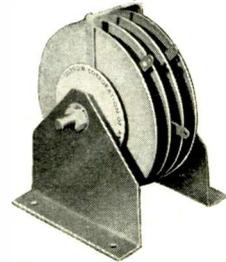
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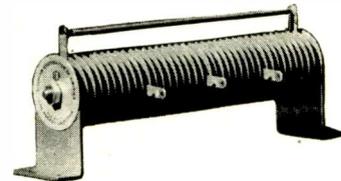
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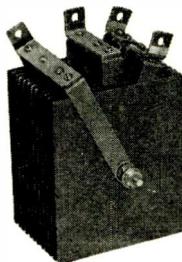
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S-213

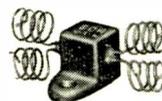


Half wave hermetically sealed rectifier 4000 volts RMS input. DC output 1400 volts. .005 amperes maximum. Measures 4-25/32 x 9/16.



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Input 25 volts AC. Full wave bridge. Continuous DC .010 amperes. Unbreakable plastic case with mounting extensions.

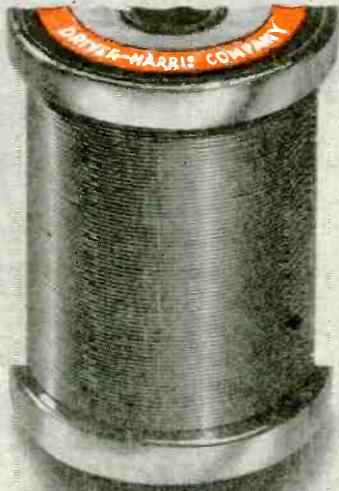
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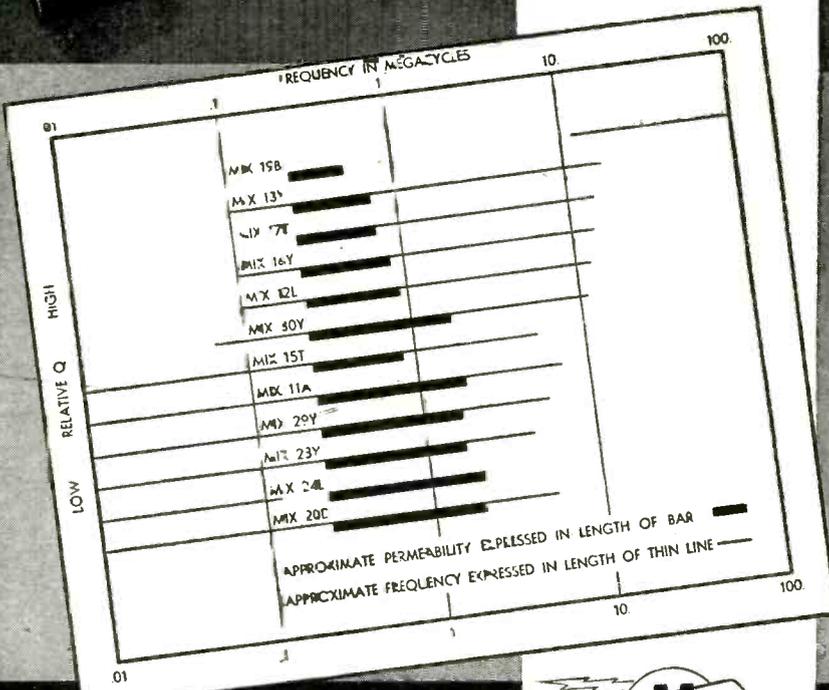
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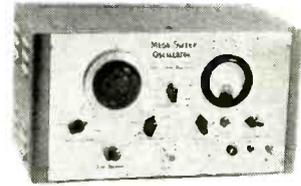
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- CONTINUOUSLY VARIABLE
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The MEGA-SWEEP OSCILLATOR is a newly developed sweeping oscillator with the widest ranges of operation of any commercial equipment. The fundamental frequency output of the MEGA-SWEEP OSCILLATOR can be varied from 50 kilocycles to 500 megacycles! Within this spectrum it will sweep a total excursion of 30 megacycles, which is great enough to cover the widest band i.f. amplifiers. The MEGA-SWEEP OSCILLATOR shows at a glance the pass-band characteristics and eliminates the tedious point-by-point analysis. The MEGA-SWEEP OSCILLATOR is a valuable tool for radar and television-research, design, and production testing. \$350.00

PULSE GENERATOR



THE MICRO-PULSER

- PULSE DELAY 10 TO 1000 μ S
 - PULSE WIDTH $\frac{1}{2}$ TO 5 μ S
 - PULSE AMPLITUDE 0 TO \pm 50 VOLTS
 - PULSE RATE 20 TO 20,000 CPS
- \$150.00

ELECTRONIC TIMER

MODEL 1
3 SEC. to
5 MINUTES
\$25.00



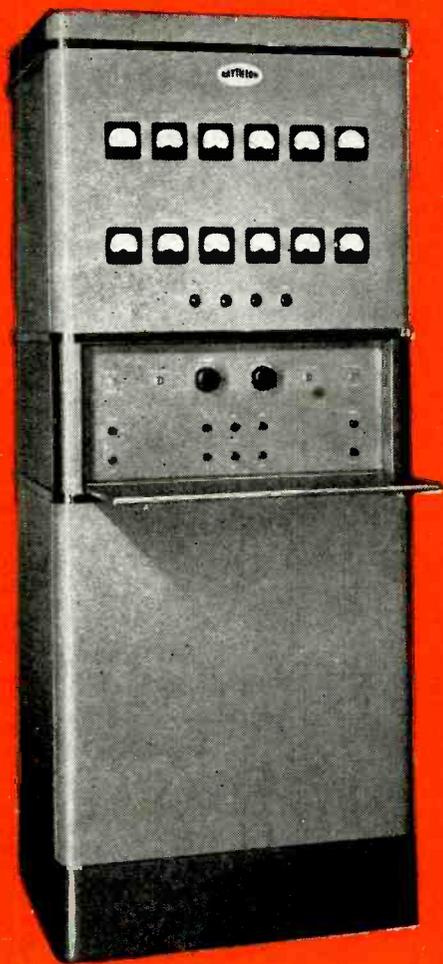
MODEL 2
3 SEC. to
30 MINUTES
\$39.00

THE TOUCH-TIMER

Here is a new wide-range electronic timer with a unique circuit to multiply the time constant. Heavy duty 10 amp relay handles power equipment.

KAY ELECTRIC CO.

47 North Grove St.
EAST ORANGE, N. J.



HERE IS WHAT YOU WANT in your 250 Watt AM Transmitter

Study these RAYTHEON features before you choose any transmitter, for replacement or new installation.

1. **Simple, Speedy, Accurate Tuning.** Uses only two tuned stages—RF drive amplifier and power amplifier—tuned by low-speed, clutch-equipped motor, giving micrometer control and eliminating back-lash.
2. **No Buffer Stage Tuning.** Use of Video type amplifier in buffer stage eliminates this complicated tuning.
3. **Lower Distortion Level**—*inherently lower*—due to use of Triode type tubes.
4. **Greater Dependability.** Use of Triode type tubes means that feed-back failure will not put you off the air. (Feed-back is included to improve quality of signal, but is not necessary to the circuit.)
5. **No Forced Ventilation,** therefore no excessive dust to cause arcs. Fresh, cool air circulates freely upward by convection, thanks to vertical chassis, properly vented.
6. **Silent Operation.** No fan noise. Especially important if transmitter is located in studio.
7. **Exceptional Signal Quality.** Full tonal beauty and really exceptional clarity has been obtained by careful engineering throughout.
8. **Highest Quality Components** used throughout; each part exhaustively tested before inclusion in the design.
9. **Easy Servicing.** Two full-height back doors give instant access to all wiring and components. The simpler circuits reduce servicing to a minimum.
10. **Meets all FCC Requirements.** Frequency response from 30 to 10,000 cycles ± 1 DB greatly under FCC minimum. Transmitter operates *well under* the maximum noise level requirement.

NEW BEAUTY...Through Striking Modern Design NEW DEPENDABILITY...Through Simpler Circuits

in RAYTHEON'S 250 WATT AM TRANSMITTER!

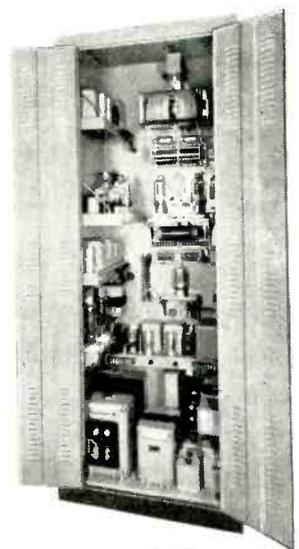
HERE IS AN UNSURPASSED transmitter design for the 250 Watt station . . . unsurpassed in modern styling—unsurpassed in engineering excellence. Its very presence in your station will add distinction and a "showplace" air. And the signal it puts on the air—clear, full, dependable—will do credit to the programs you present!

Every factor that can influence transmitter performance was carefully taken into account by Raytheon engineers in perfecting this new design. It is believed that this Raytheon 250 Watt

equipment contains inherent superiorities that have never been available until now.

Before you select any transmitter, whether for replacement or new installation, you will be wise to get all the facts. Write or wire for our specification bulletin, fully illustrated, with complete technical data. Deliveries now being made.

COMING! A complete line of Raytheon high-powered AM Transmitters, FM Transmitters and speech input equipment. Watch for announcements!



RAYTHEON

Excellence in Electronics

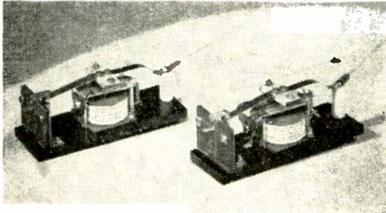
RAYTHEON MANUFACTURING COMPANY

Broadcast Equipment Division, 7517 No. Clark Street • Chicago, Illinois

DEVOTED TO RESEARCH AND MANUFACTURE FOR THE BROADCASTING INDUSTRY

BETTER CONTROLS THROUGH BETTER RELAYS

High Frequency



Illustrated above, the newest high frequency relay made by Leach is the No. 1623 (DC) or No. 1723 (AC). Extreme flexibility is possible, since each moveable SPDT contact is separately mounted. Combination of the required number of relays to fit circuit demands is possible by connecting the required number of relays in parallel on series. Many other types of high frequency relays are part of the standard Leach line. Consult catalogue for details.

Time Delay

Thermo element types for use on vacuum tube transmitters or other time delay uses are manufactured with variable delay elements of from 5 to 20 seconds and 20 to 60 seconds. Quick to cool, enabling fast recycling, and manufactured with either AC or DC coils, these standard relays are available now.

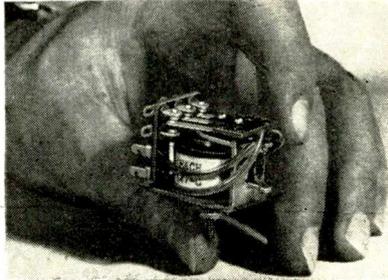


NEW CATALOGUE

For A
Complete
Listing
Send For
This

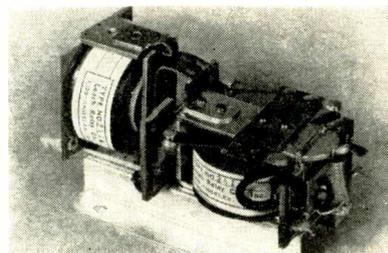
Control relays, for a host of purposes, manufactured in a wide variety of coil sizes and contact arrangements, are now AVAILABLE FOR PROMPT DELIVERY. WRITE FOR DETAILS.

Midgets



Light weight, and versatile in application, these little relays are available in sizes to handle 2 to 8 Amps., contact load, with either AC or DC coils, and with a variety of contact arrangements.

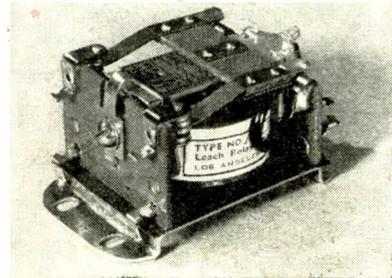
Latch Type



Mechanically or electrically reset, these relays are available with many coil and contact combinations. Useful on numerous devices today, this type is supplied in either AC or DC.



Circuit Control



Typical of a wide variety of control relays, manufactured as standard, or to fit customer specifications, the illustrated No. 1127 metal base relay is an exceptionally fast-acting type, and can be used for keying low power radio transmitters. Made for either AC or DC, with contact arrangements up to 4 PDT; they are durable, and can withstand long cycling operations. Coil consumption is 1.5 watts DC or 6 V/A 50-60 cycles, AC.

Sensitive

Widely used in closed circuit alarm systems, or in the plate circuit of electron tubes, or as secondary relays for micro-ampere relays, these low resistance DC relays are inexpensive, sturdy, and can be supplied now.

EXPORT OFFICE

Companies desiring to make export purchases may contact our agent:

WESTEX COMPANY, INC.

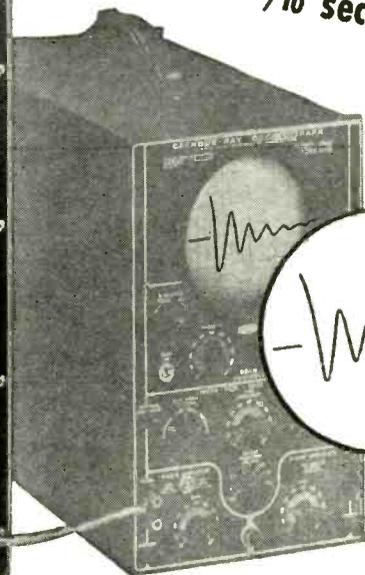
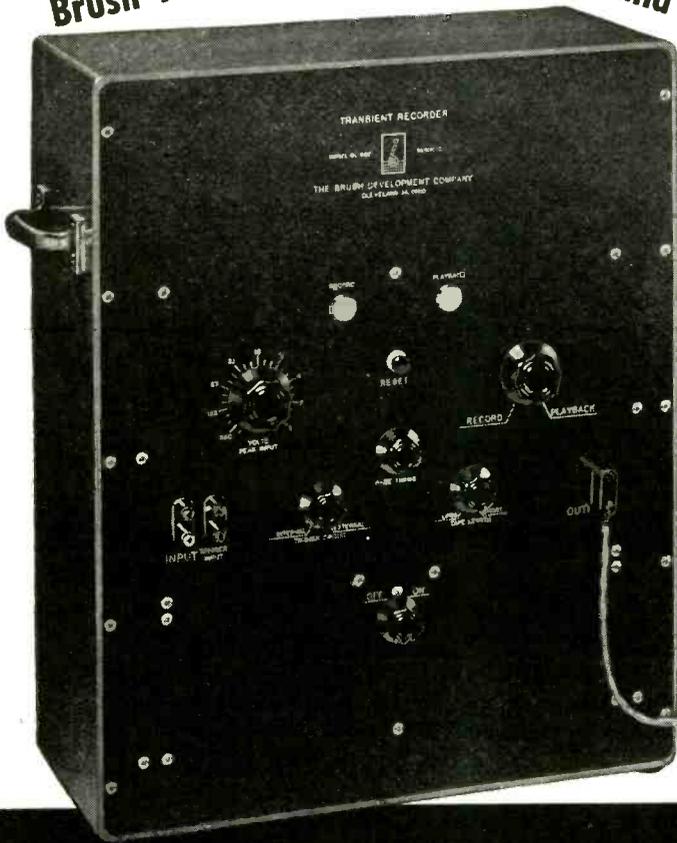
15 East 26th Street
New York 10, New York
Cable Address: WESPEXIN

LEACH RELAY CO.

5915 AVALON BOULEVARD, ★ LOS ANGELES 3, CALIF.

NOW. Simplified Instantaneous Recording of Transient Phenomena!

Brush Transient Recorder captures and graphically represents Transient Phenomena of $\frac{2}{10}$ second or less



Brush Transient Recorder with oscilloscope. (Any good quality oscilloscope with low-frequency sweep may be used.)

This photo shows a typical transient produced by a condenser discharging into an inductance, as recorded by the Brush Transient Recorder.

Here is the instrument engineers have been waiting for! Electrical transients or any other transient phenomena capable of being converted into electrical impulses may be recorded and reproduced automatically. Such transients as vibrations, explosion waves, light flashes, welding cycles, etc. are but a few that can be recorded. Reproduction repeats continuously for visual analysis by a cathode ray oscilloscope. Signals may be

photographed in entirety or expanded on the oscilloscope screen to show detail.

These results are accomplished by magnetically recording on a rapidly moving steel tape a frequency modulated high-frequency carrier. Reset button clears tape and prepares it for a new record.

One of the many and varied uses of the Brush Transient Recorder will undoubtedly meet your needs for accurate representation of transient phenomena. For complete details write today for technical bulletins.

THE BRUSH DEVELOPMENT CO.

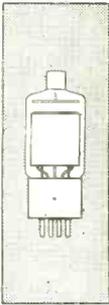
3405 PERKINS AVE.
CLEVELAND 14, OHIO

Canadian Representatives:
A. C. Wickman, (Canada) Ltd., P. O. Box 9 Station N, Toronto 14

GRID CONTROL RECTIFIERS

RECTIFIERS

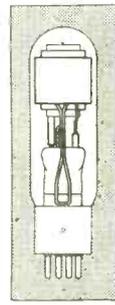
ELECTRONS
INC.
NEWARK, N. J.



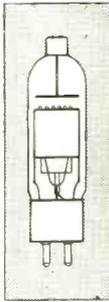
**GRID CONTROL RECTIFIER
EL C1B**

Filament Volts 2.5
 Filament Amperes 6.3
 D.C. Output (Amps.) 1.0
 Peak Anode Current 8.0
 Peak Forward Volts 450
 Peak Inverse Volts 700
 Overall Length 4 1/2"

**FULL WAVE RECTIFIER
EL 1C**



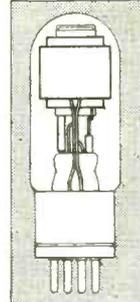
Filament Volts 2.5
 Filament Amperes 6.0
 D.C. Output (Amps.) 1.0
 Peak Anode Current 4.0
 Peak Inverse Volts 725
 Overall Length 5 1/2"



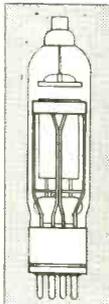
**GRID CONTROL RECTIFIER
EL C3J**

Filament Volts 2.5
 Filament Amperes 9.0
 D.C. Output (Amps.) 2.5
 Peak Anode Current 30.0
 Peak Forward Volts 750
 Peak Inverse Volts 1250
 Overall Length 6 1/8"

**FULL WAVE RECTIFIER
EL 3C**



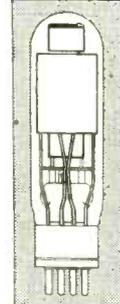
Filament Volts 2.5
 Filament Amperes 11.5
 D.C. Output (Amps.) 2.5
 Peak Anode Current 10.0
 Peak Inverse Volts 725
 Overall Length 7"



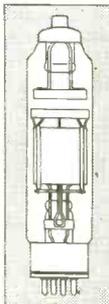
**GRID CONTROL RECTIFIER
EL C6J**

Filament Volts 2.5
 Filament Amperes 21.0
 D.C. Output (Amps.) 6.4
 Peak Anode Current 77.0
 Peak Forward Volts 750
 Peak Inverse Volts 1250
 Overall Length 9"

**FULL WAVE RECTIFIER
EL 6C**



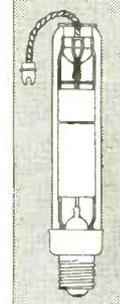
Filament Volts 2.5
 Filament Amperes 17.0
 D.C. Output (Amps.) 6.4
 Peak Anode Current 25.6
 Peak Inverse Volts 725
 Overall Length 7 1/2"



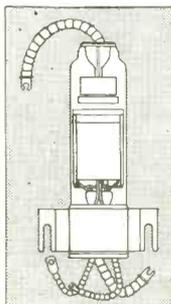
**GRID CONTROL RECTIFIER
EL C6C**

Filament Volts 2.5
 Filament Amperes 24.0
 D.C. Output (Amps.) 6.4
 Peak Anode Current 77.0
 Peak Forward Volts 2000
 Peak Inverse Volts 4000
 Overall Length 11"

**HALF WAVE RECTIFIER
EL 16B**



Filament Volts 2.5
 Filament Amperes 36
 D.C. Output (Amps.) 16.0
 Peak Anode Current 96.0
 Peak Inverse Volts 620
 Overall Length 11 3/4"

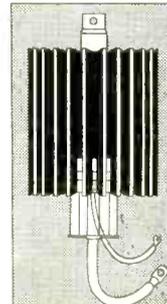


**GRID CONTROL RECTIFIER
EL C16J**

Filament Volts 2.5
 Filament Amperes 31.0
 D.C. Output (Amps.) 12.0
 Peak Anode Current 100.0
 Peak Forward Volts 1000
 Peak Inverse Volts 1250
 Overall Length 10"

**HALF WAVE RECTIFIER
EL 60B**

Filament Volts (Heater
 type) 115
 Heater Amperes 1.3
 D.C. Output (Amps.) 50
 Peak Anode Current 300
 Peak Inverse Volts 1250
 Overall Length 10"
 Metal Envelope, Convection
 Air Cooled



PERFORMANCE AND CHARACTERISTICS ARE INDEPENDENT OF AMBIENT TEMPERATURES

ELECTRONS, Inc., 127 SUSSEX AVE., NEWARK 4, N. J.



Millions of Springs of Experience...

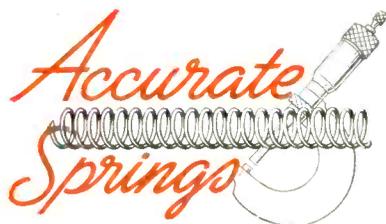
...at YOUR Service

● Here at Accurate, we've crowded many years' experience into the last few. We've produced millions of springs of various kinds, sizes, shapes and materials. In doing this . . . we've had to use our fullest ingenuity . . . searching for newer, faster ways of doing everyday jobs . . . developing special machines and unique methods of turning out unusual springs and wireforms . . . often helping our customers with ideas that have meant a lot to them . . . in time . . . in money.

In your planning for better products . . . remember that Accurate's wealth of spring experience is . . . at your service.

Send for your copy of the new Accurate Spring Hand' book. It's full of data and formulae which you will find useful. No obligation, of course.

SPRINGS
WIREFORMS
STAMPINGS



ACCURATE SPRING MANUFACTURING CO., 3830 W. Lake St., Chicago 24, Illinois

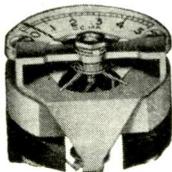
MB MINIATURE INSTRUMENTS



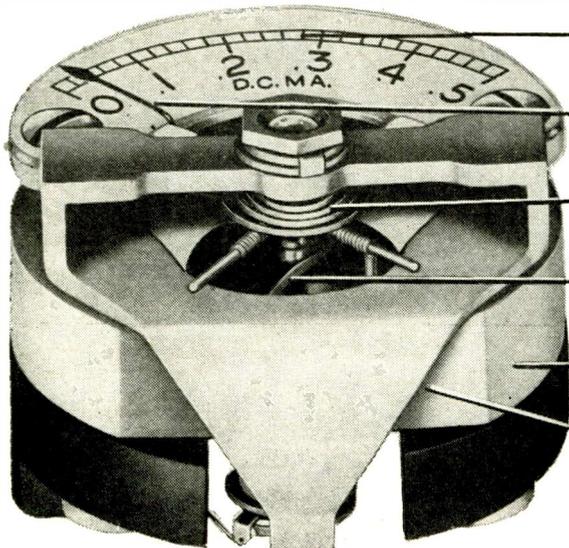
THE HIGH PRECISION MOVEMENT

...which is the basis for the accuracy, fast response and dependable operation of all MB Meters. It is expertly designed, with many outstanding features which contribute to the high standard of its performance. Because of the extremely light weight and inherently rugged construction, MB Meters are able to withstand the effects of vibration or shock far better than conventional sized instruments.

This sensitive movement is also available uncased where the user desires to incorporate it directly with his own equipment.



Actual Size



ALL METAL SCALE PLATE... meticulously ruled and lettered on a lacquered background, in numerous combinations.

ONE PIECE POINTER... available in Spade (standard), and Lance, Bar, Knife-edge, and many other types to specification.

SELECTED SAPPHIRE JEWELS & STEEL PIVOTS... supporting an extremely light moving system, insuring high resistance to shock and wear.

EXTREMELY LIGHT MOVING COIL SYSTEM... precision wound on specially constructed equipment.

ALNICO NO. 5 PERMANENT MAGNET... fabricated from the most efficient magnetic material available to industry.

SOFT IRON POLE PIECES... permanently fastened to the Alnico magnet and accurately machined for uniform scale distribution.



Model 100

MODEL 100 is the last word in miniature meters... it's the smallest, lightest made. Wherever the problem is one of space limitations,

or saving weight, this model is an important solution. The basic MB movement is housed in a precision-machined, hermetically sealed case, which bars moisture and dust.

CASE... Hermetically sealed, machined, anodized aluminum.

MOUNTING... Threaded mounting ring and gasket seal model 100 to panel through 1 inch diameter opening.

WEIGHT... 1 ounce.

SCALE LENGTH... 13/16 inches.

ACCURACY... 2% of full scale deflection at any point.

SCALES... Lithographed on metal, 20-25-30-40 line rulings.

COIL RESISTANCE... Listed above.

POINTERS... Spade type standard. Lance, knife-edge and others to specifications.

RANGES... Same as basic movement listed above

SPECIFICATIONS OF BASIC MOVEMENT

RANGE	APPROX. RESISTANCE	SCALE DIVISIONS	
		1"	1 1/2"
0-100 microamperes	1010 ohms	25	50
0-200 microamperes	500 ohms	4	50
0-500 microamperes	106 ohms	25	50
0-1 milliamperes	22 ohms	20	50
0-5 milliamperes	2.5 ohms	25	50
0-10 milliamperes	2.0 ohms	25	50

The above are resistances of basic movements for all models. In the 1 1/2" series (Models 150, 151 and 152), all standard ranges are self-contained, including alternating current rectifier types. Models 100, 101 and 102 may be furnished for external accessories.

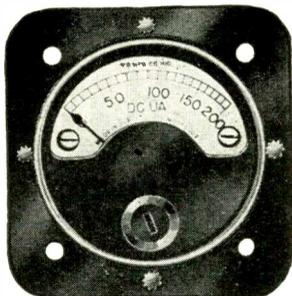
Instruments and leads for use with external shunts are available. When ordering, specify model, range, shunt drop and length or resistance of leads.

COMMUNICATIONS AND INDUSTRIAL APPLICATIONS

MB meters have appropriate qualifications for all types of testing equipment using electrical quantities as the basis for measurements. They have excellent damping characteristics and are easily readable. Used in electronic physical measurement gages, heating and control equipment, portable testing equipment, pyrometers, electrical tachometers, etc. They fit requirements for high quality radio and telephone equipment. Small size also recommends them for use as indicators in transmitter tuning circuits, voltage and current control circuits, panelboards for carrier and repeater circuits, facsimile and recording equipment.

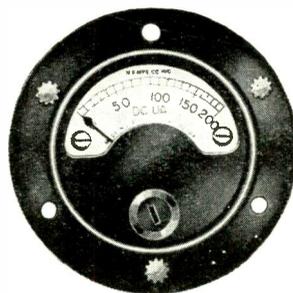
THE
MB MANUFACTURING COMPANY, INC.
331 East St., New Haven 11, Conn.





MODEL 101 . . . Smallest square meter ever made. Its strong, pressed aluminum case encloses accurate and durable MB precision movement. Where several meters are mounted together, its square front offers pleasing, symmetrical appearance. You can specify it with confidence—it matches the performance of meters many times its size.

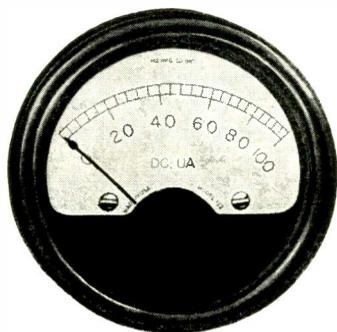
CASE . . . Sealed, pressed, anodized aluminum.
MOUNTING . . . Mounts in 1 inch diameter panel opening with four mounting screws.
WEIGHT . . . 1 ounce.
SCALE LENGTH . . . 13/16 inches.
ACCURACY . . . 2% of full scale deflection at any point.
SCALES . . . Lithographed on metal, 20-25-30-40 line rulings.
COIL RESISTANCE . . . Listed on previous page.
POINTERS . . . Spade type standard. Lance, knife-edge and others to specifications.
RANGES . . . Same as basic movement listed on previous page.



MODEL 102 . . . Developed to fill a need for an economically priced, accurate, sealed miniature meter. Use of a simplified, anodized aluminum case of sturdy and durable construction makes it possible to offer substantial

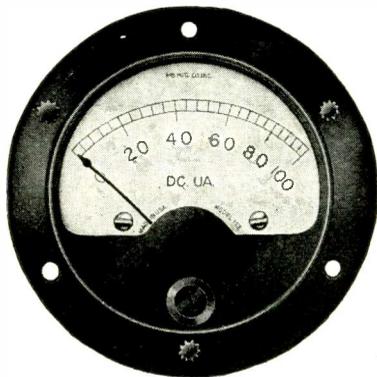
savings to users of this series. Instrument uses same basic precision movement as do Models 100 and 101, and same accuracy is maintained.

CASE . . . Sealed, pressed, anodized aluminum.
MOUNTING—Mounts in 1 in. diam. panel opening with 3 screws.
WEIGHT . . . 1 oz. **SCALE LENGTH** 13/16 in.
ACCURACY . . . 2% of full scale deflection at any point.
SCALES . . . Lithographed on metal, 20-25-30-40 line rulings.
COIL RESISTANCE . . . Listed on previous page.
POINTERS . . . Spade type standard. Lance, knife-edge and others to specifications.
RANGES . . . Same as basic movement listed.



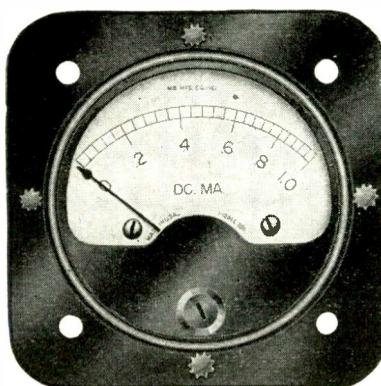
MODEL 150 . . . Offers all fine features of Model 100, in addition to an important feature of its own: its strong case is small enough to effect valuable saving of space, but has ample room to self-contain accessories required to adapt basic MB movement to all standard ranges.

CASE . . . Hermetically sealed, precision-machined, anodized aluminum.
MOUNTING . . . Threaded mounting ring and gasket seal model 150 to panel through 1½ inch diameter opening.
WEIGHT . . . 1½ ounces.
SCALE LENGTH . . . 1 23/64 inches.
ACCURACY . . . 2% of full scale deflection at any point.
SCALES . . . Lithographed on metal, 30-40-50 line rulings.
COIL RESISTANCE . . . Listed on previous page.
POINTERS . . . Spade type standard. Lance, knife-edge and others to specification.
RANGES . . . All standard ranges in Direct Current, Alternating Current Rectifier type, and Radio Frequency thermocouple-type instruments.
SPECIAL INSTRUMENTS . . . Numerous special applications may be had to your specifications. We solicit your inquiries.



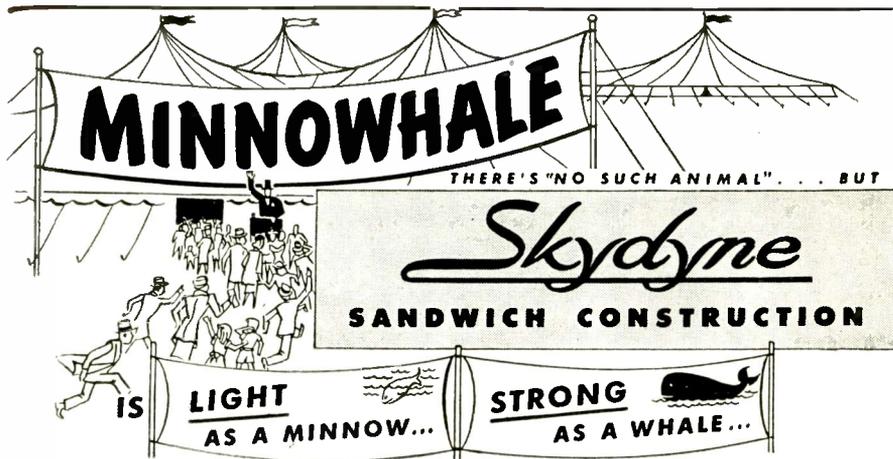
MODEL 152 . . . Incorporates precisely the same movement and features available in Model 150, housed in economical, anodized, pressed aluminum case. Overall dimensions, though larger than Model 150, save space. Contains all necessary shunts, multipliers and rectifiers, within its own case.

CASE . . . Sealed, pressed, anodized aluminum.
MOUNTING . . . Mounts in 1½ diameter panel opening with three mounting screws.
WEIGHT . . . 1½ ounces.
SCALE LENGTH . . . 1 23/64 inches.
ACCURACY . . . 2% of full scale deflection at any point.
SCALES . . . Lithographed on metal, 30-40-50 line rulings.
COIL RESISTANCE . . . Listed on previous page.
POINTERS . . . Spade type standard. Lance, knife-edge and others to specifications.
RANGES . . . All standard ranges in Direct Current, Alternating Current Rectifier type, and Radio Frequency thermocouple-type instruments.



MODEL 151 . . . Economical, pressed aluminum round barrel and square front, housing precision MB movement. Dependable, accurate, long-lasting instrument, designed to match general appearance of larger instruments found on panelboards or in portable equipment.

CASE . . . Sealed, pressed, anodized aluminum.
MOUNTING . . . Mounts in 1½ inch diameter panel opening with four mounting screws.
WEIGHT . . . 1½ ounces.
SCALE LENGTH . . . 1 23/64 inches.
ACCURACY . . . 2% of full scale deflection at any point.
SCALES . . . Lithographed on metal, 30-40-50 line rulings.
POINTERS . . . Spade type standard. Lance, knife-edge and others to specification.
COIL RESISTANCE . . . Listed on previous page.
RANGES . . . All standard ranges in Direct Current, Alternating Current Rectifier type, and Radio Frequency thermocouple-type instruments.
SPECIAL INSTRUMENTS . . . Numerous special applications may be had to your specifications. We solicit your inquiries.



... A long-sought combination correctly engineered into "SKYPLY"—the miracle material now available for your electronics cabinet needs.

Rigidly tested on fighting fronts throughout the world, where "SKYPLY" radar and radio cabinets proved their resistance to heat, cold, moisture, vibration and sound—this modern Skydyne Sandwich Construction is the perfect

answer to your product housing requirements. And results of the "Drop Test" show that "SKYPLY" is twice as strong with half the weight, thereby reducing dead weight and lowering shipping costs.

Adaptable to all types of designs because "SKYPLY" is form-moulded, this Skydyne Sandwich Construction offers a beautiful, smooth surface, with curvatures easily attained.

WRITE TODAY FOR OUR FREE BROCHURE

Skydyne Inc

PORT JERVIS, NEW YORK



The HERLEC CORPORATION

422 North Fifth St.
MILWAUKEE 3, Wis.
Phone Broadway 8020

CHICAGO SALES OFFICE
4753 Broadway
Phone Longbeach 2211

G. MILTON EHLERS
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THOMAS B. HUNTER

• Ceramic Fixed and Variable Capacitors

• Switches

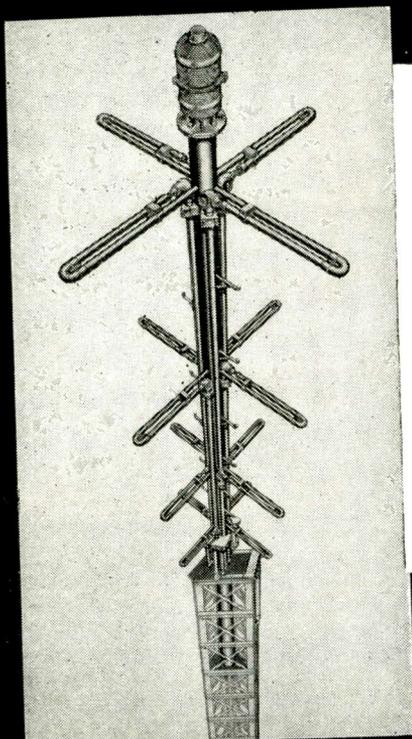
• Designing, Engineering and production of special parts and assemblies to your requirements

At Long Last!

A FOLDED DIPOLE TURNSTILE

F.M. ANTENNA

By **WINCHARGER**



1—VERY BROAD BAND — incorporates features of ordinary turnstile with vast improvement of FOLDED DIPOLE principle.

2—PROVED by 4 years actual service in leading 50 K.W. station.

3—FACTORY PRETUNED—no field adjustment.

4—LARGE SAFETY FACTOR

5—DESIGNED by high frequency and Radar antenna engineers of Zenith Radio Corporation.

6—COMPLETE "PACKAGE" — one company supplies everything — And No Extras to Buy.

Phone, Write or Wire

Antenna Tower Dept.
WINCHARGER CORPORATION
SIOUX CITY 6, IOWA

looking for a certain electronic component with special electrical characteristics?

you'll find it in the advertising pages of this

BUYERS' GUIDE

THE REFERENCE BOOK OF THE ELECTRONIC DESIGN ENGINEER



There Is An Audiodisc And An Audiopoint For Every Recording Need

AUDIODISCS have all of the features essential to high fidelity recording. A superior lacquer is applied by a unique process that gives a flawless surface. In cutting, the thread throws well and there is no static. In playback, whether at once or in the future, there is low surface noise. Their playback life is unequalled. There are five types of **AUDIODISCS**:

RED LABEL tops all accepted quality standards for professional use. Double-sided in 6½", 8", 10", 12" and 16" diameters.

SINGLE FACE RED LABEL brings new economy to applications requiring but one side. 12" and 16" diameters.

YELLOW LABEL double-sided discs are of high uniform quality and the popular choice for all general purpose recording. Sizes same as Red Label.

REFERENCE permits extreme economy in test-cuts, filing and reference recordings. Double-sided in 10", 12" and 16" diameters.

MASTERS give fine results with either the gold sputtering or silvering process. The outstanding choice where pressings are to be made. Double or single face in 12", 13¼" and 17¼" diameters.

BLUE LABEL are low cost double-sided discs with the same recording lacquer as professional Audiodiscs, but on thinner aluminum base, 6½", 8", 10".

ALL **AUDIODISCS** are manufactured on aluminum base.

AUDIODISCS are manufactured in the U. S. A. under exclusive license from La Societe des Vernis Pyrolac-France

AUDIO DEVICES, INC., 444 MADISON AVE., N. Y. C.



AUDIPOINTS made by skilled craftsmen, are available in three types of recording styli. Cutting and playback points are matched to give finest performance.

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SAPPHIRE No. 14, for professionals, designed to give proper thread throw. No finer made.

STELLITE No. 34, professional type. Cuts quiet, shiny grooves for several hours.

DIAMOND-LAPPED STEEL No. 50, cuts a fine, quiet groove. Each gives from 15 to 30 minutes actual recording time.

PLAYBACK POINTS

SAPPHIRE No. 113, finest obtainable. Complete fidelity and minimum disc wear.

BENT SHANK STEEL No. 154, for heavy pickups.

STRAIGHT SHANK STEEL No. 151, for light pickups.

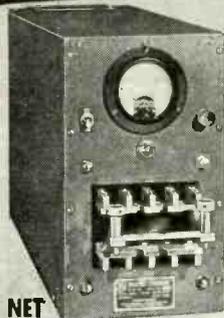
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they speak for themselves **audioidiscs**

THREE NEW PRODUCTS TELL HOW...

...TO CHARGE MAGNETS...
Quickly...Economically...Safely



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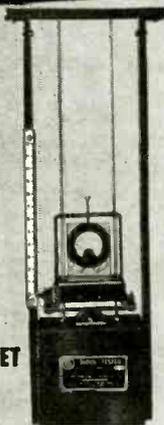
**MODEL 107
MAGNET CHARGER**

Designed As An American War
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This capacitor discharge type magnetizer produces 15,000 amperes peak current surge released by simple push button switch. Universal charging bar arranged for convenient association with magnets is adaptable to nearly all permanent magnets. Charger weighs 75 pounds; measures 7" x 12" x 17"; operates from 110/120 volt 50/60 cycle AC; consumes 25 watts.

Charges magnets for electrical indicating instruments, small motors, generators, loudspeakers, relays and controls, exposure meters, tools, compasses, toys, novelties. Write for Bulletin M5.

...TO SHOCK-TEST COMPONENTS



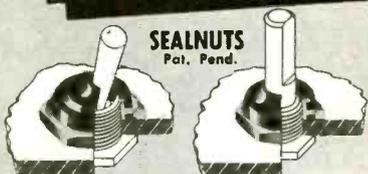
\$450 NET

**MODEL 22
SHOCK
TESTER**

Simulating the roughest operating conditions — right in your laboratory — the RFL Shock Tester makes it possible to PRE-TEST your instruments to find out how much impact or shock they can stand and still function satisfactorily. Adaptable to instruments or components not exceeding four pounds — electrical indicating instruments, radio components, small power relays, electric razors, watches, fountain pens, etc.

Unerringly "putting the finger" on the weakest links of structure and design, this device points the way to improved performance through necessary changes BEFORE the item goes into production. Send for details — Bulletin T5.

...TO SEAL CONTROL SHAFTS AND SWITCHES



Toggle Switch
H-1267

Control or Switch
(Rotary or Reciprocating
Shaft) H-1268

The SEALNUT is a new combination mounting-and-sealing unit that keeps dirt, water or gas from entering through panels of equipment operating submerged, at sea-level or high altitudes, while using standard switches and controls. An elastic cap tightly grips the protruding handle or shaft. Base of nut is sealed to panel by internal rubber washer which permits metal-to-metal contact between nut and panel. Can be readily substituted for the standard mounting nut on components of moisture-proof equipment now in service without further alterations. Impervious to abrasive dusts, acid fumes, humidity changes, etc., the

SEALNUT is adaptable to portable, mobile and pressurized equipment exposed to the elements or to indoor equipment used in chemical processing plants, abrasive manufacture, etc. Write for Bulletin 5N5.

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BOONTON, NEW JERSEY, U. S. A.

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CHATHAM engineers are specialists in rectifier design and production. Their concentration of effort in this field—the large scale production of rectifiers for industry and communication—has naturally culminated in exclusive design advancements and lowered costs. The CHATHAM rectifiers illustrated are but a few of the many types avail-

able. Although production is centered around standard types for complete interchangeability and to comply with industry wide standardization, each CHATHAM type incorporates proven advantages—mechanical and electrical—that improve performance and minimize replacements. Inquiries are invited; no obligation is incurred.



17 Grid Controlled Mercury Vapor Rectifier
Peak inverse voltage 5,000 volts
Peak plate current 2.0 amps
Average plate current .5 amps
Filament voltage 2.5 volts
Filament current 5.0 amps
Condensed mercury temperature 40° C to 80° C



3B28 Half Wave Xenon Rectifier
Peak inverse voltage 10,000 volts
Peak plate current 1.0 amps
Average plate current .250 amps
Filament voltage 2.5 volts
Filament current 5.0 amps
Ambient temperature range -75° C to +90° C



866A Half Wave Mercury Vapor Rectifier
Peak inverse voltage 10,000 volts
Peak plate current 1.0 amps
Average plate current .25 amps
Filament voltage 2.5 volts
Filament current 5.0 amps
Condensed mercury temperature 25° C to 60° C



394A Grid Controlled Argon-Mercury Vapor Rectifier
Peak inverse voltage 1,250 volts
Peak plate current 2.5 amps
Average plate current .64 amps
Filament voltage 2.5 volts
Filament current 3.2 amps
Condensed mercury temperature -40° C to +80° C



4B32 Half Wave Xenon Rectifier
Peak inverse voltage 10,000 volts
Peak plate current 5.0 amps
Average plate current 1.25 amps
Filament voltage 5.0 volts
Filament current 7.5 amps
Ambient temperature range -75° C to +90° C

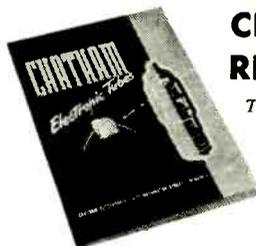


872A Half Wave Mercury Vapor Rectifier
Peak inverse voltage 10,000 volts
Peak plate current 5.0 amps
Average plate current 1.25 amps
Filament voltage 5.0 volts
Filament current 7.5 amps
Condensed mercury temperature 20° C to 60° C



884 Grid Controlled Argon Rectifier and Oscillator
Peak inverse and peak forward voltage 300 volts
Peak plate current 300 Ma
Average plate current 75 Ma
Average plate current (oscillator) 2 Ma
Filament voltage 6.3 volts

WRITE FOR CATALOG DESCRIBING



CHATHAM RECTIFIERS

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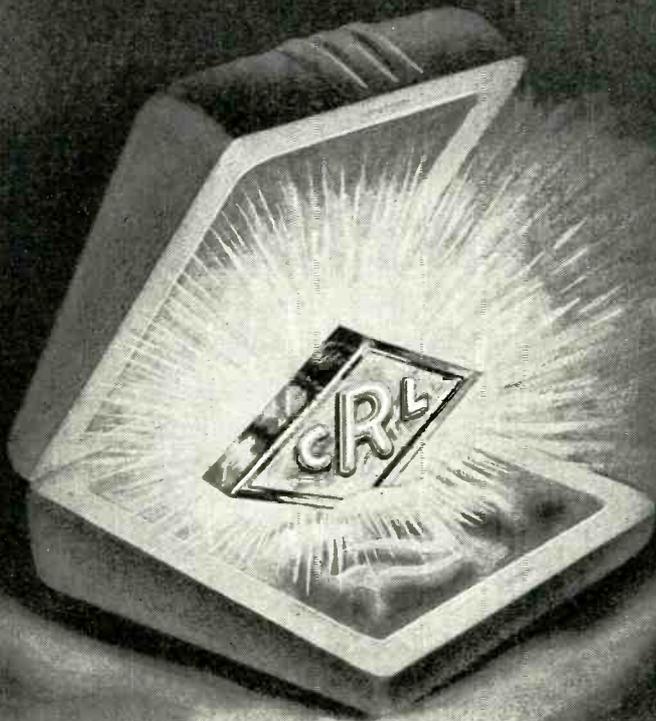
2050 Grid Controlled Xenon Rectifier
Peak inverse voltage 1,300 volts
Peak plate current 500 Ma
Average plate current 100 Ma
Filament voltage 6.3 volts
Filament current .6 amps



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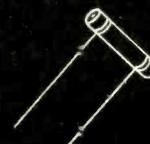
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Bulletin 685



Type TS2A Ceramicon Trimmer
 1.5-7 MMF 3-13 MMF 4-30 MMF
 3-12 MMF 5-20 MMF 7-45 MMF



Feed-Through Ceramicons
 3 MMF—1,000 MMF



Insulated Hi-K Ceramicons
 271 MMF—5,000 MMF
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 271 MMF—15,000 MMF



High Voltage Double Cup Ceramicons
 20 MMF—600 MMF

*A Directory of
 Electronic Components*
by ERIE RESISTOR

ERIE RESISTOR has developed and manufactured a complete line of Ceramic Condensers for receiver and transmitter applications; Silver-Mica and Foil-Mica Button Condensers; Carbon Resistors and Suppressors; Custom Injection Molded Plastic Knobs, Dials, Bezels, Nameplates and Coil Forms. Complete technical information will be sent on request.



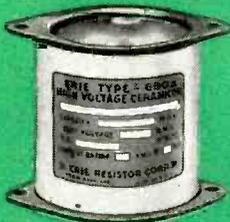
Type 554 Ceramicon Trimmer
 3-12 MMF 5-30 MMF
 5-25 MMF 8-50 MMF



Cinch-Erie Plexicon Tube Sockets with 1,000 MMF built in by-pass condensers



Stand-Off Ceramicons
 1 MMF—2,500 MMF



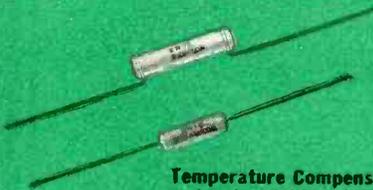
Type 680A High Voltage, High KVA Multiple Plate Transmitting Ceramicons
 120 MMF—1,800 MMF



Types 504B, 1/2 Watt—518B, 1 Watt Resistors
 10 ohms—22 megohms



Disc Ceramicons
 51 MMF—7,500 MMF



Temperature Compensating Insulated Ceramicons
 0.5 MMF—360 MMF
Temperature Compensating Non-Insulated Ceramicons
 0.5 MMF—1,100 MMF



Button Mica Condensers
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Barker & Williamson	Millen
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Birnbach	National
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Boonton	Onan
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Eitel-McCullough	Tobe
Electro-Voice	Triplett
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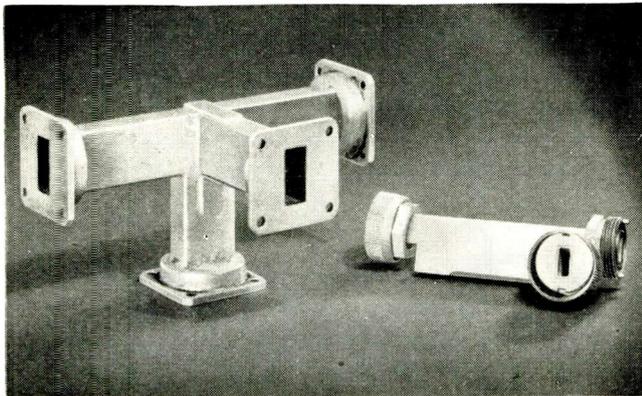
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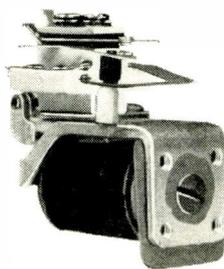
Since 1928 the Aircraft Radio Corporation has devoted its engineering and production facilities to the design and manufacture of high-quality radio equipment for aircraft use. The components listed here proved their worth in the A.R.C. receivers and transmitters used in nearly all military aircraft during the war years.

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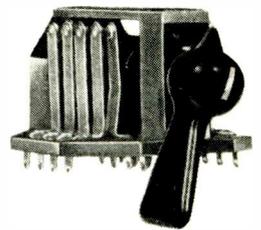
ARC "Magic Tee" and Microwave Coupler

RELAYS AND SWITCHES — Compact, lightweight relays designed by A.R.C. have had years of use under the extreme conditions of vibration, humidity and temperature encountered in military aircraft operation. Available in several types and sizes, they meet rigid requirements for reliability and specified performance.



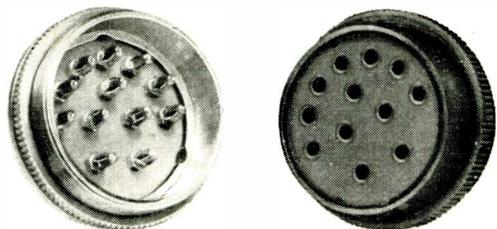
Miniaturized D.C. Relay by ARC

A.R.C. Precision-built switches are made in Drum-Type, "Music-Box" Type, and special Toggle and Push-Types, and are available in various contact combinations. All are designed to stand up under the hardest usage and are manufactured to the highest standards of the aviation industry.



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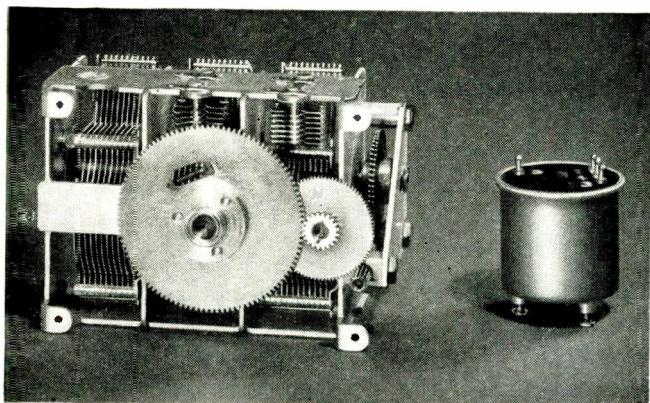
ARC Multi-contact Connector with Ceramic Inserts

CONDENSERS, VARIABLE, ADJUSTABLE AND SEALED — A.R.C. Variable and Adjustable Air Condensers are designed for use in receivers and transmitters. Avail-

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Precision Built to Aircraft Standards

able in single and multiple sections, both types are temperature compensated, and include the use of forked springs to provide positive grounding of rotor shafts, a special glass-ball method of stator support which keeps dielectric losses to a minimum and cadmium plating of rotor and stator assemblies.



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For complete Parts Catalog, or specific information, write

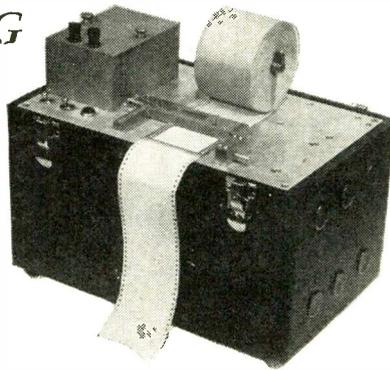
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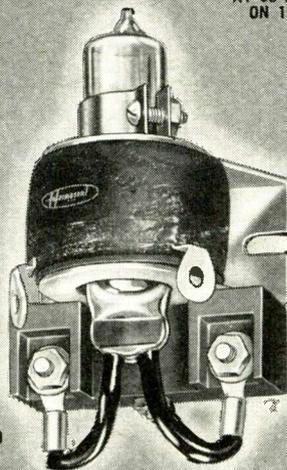
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AT 35 AMPS. OR 1½ H. P.
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BULLETIN PS-10

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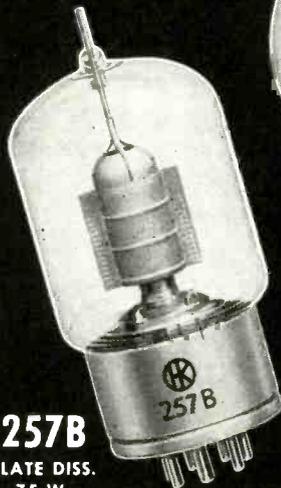
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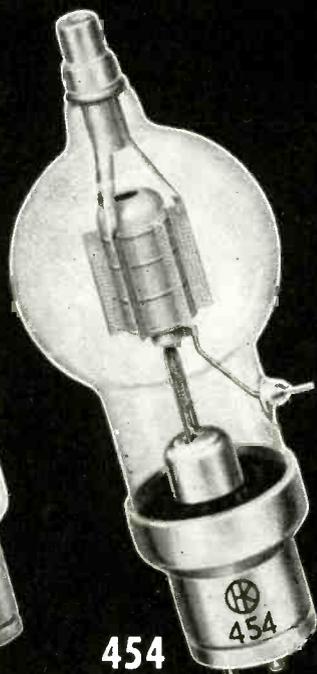
GAMMATRON TUBES



24G
PLATE DISS.
25 W.



257B
PLATE DISS.
75 W.



454
PLATE DISS.
250 W.



This complete line, covering a power range of 50 to 5,000 watts, embodies 18 years of pioneering and experience in the design and manufacture of tantalum tubes.

Special plate, grid, and filament design, and new metal-to-glass seals, give Gammatrons remarkable VHF performance. Other features: ability to withstand high plate voltages, complete protection against tube failure due to overloading, and long, efficient operating life.

The Gammatron engineers responsible for these developments will be glad to help you with your special problems.



TYPE NO.	24	24G	54	254	257B*	354C	354E	454L	454H	654	854L	854H	1054L	1554	3054
MAX. POWER OUTPUT: Class 'C' R. F.	90	90	250	400	300	600	600	900	900	1400	1800	1800	3000	3600	5300
PLATE DISSIPATION: Watts	25	25	50	100	75	150	150	250	250	300	450	450	750	1000	1500
AVER. AMPLIFICATION FACTOR	25	25	27	25	—	14	35	13.5	27	22	16	30	13.5	12.5	19
MAXIMUM RATINGS: Plate Volts..... Plate M. A..... Grid M. A.....	2000 75 25	2000 75 25	3000 150 30	4000 225 40	4000 150 25	4000 300 60	4000 300 85	5000 375 60	5000 375 85	4000 600 100	6000 600 80	6000 600 110	6000 1000 150	5000 1000 250	5000 2000 500
MAX. FREQUENCY, Mc.: Power Amplifier	250	300	200	175	150	50	50	150	150	50	100	100	75	30	30
INTERELECTRODE CAP. Cg-p u.u.f..... Cg-f u.u.f..... Cp-f u.u.f.....	1.3 2.1 0.2	1.6 1.8 0.2	1.8 2.0 0.2	2.7 2.5 0.4	0.08 10.5 in 4.7 out	3.3 4.4 0.7	3.3 4.6 0.5	3.2 3.9 0.7	3.5 4.1 0.6	5.4 6.6 0.8	5.2 6.7 0.9	4.7 8.8 0.7	5.3 7.9 1.2	11.5 15.2 1.2	13.1 23.0 2.0
FILAMENT: Volts..... Amperes.....	6.3 3.0	6.3 3.0	5.0 5.0	5.0 7.5	5.0 7.5	5.0 10.0	5.0 10.0	5.0 10.0	5.0 10.0	7.5 15.0	7.5 12.0	7.5 12.0	7.5 20.0	11.0 22.5	14.0 45.0
PHYSICAL: Max. Height, Inches..... Max. Diameter, Inches..... Weight, Oz..... Base.....	4 ³ / ₈ 1 ¹ / ₈ 1 ¹ / ₄ Small UX	4 ³ / ₈ 1 ¹ / ₈ 1 ¹ / ₄ Small UX	5 ⁵ / ₈ 2 ¹ / ₈ 2 ¹ / ₂ Std. UX	7 ¹ / ₄ 2 ¹ / ₈ 5 Std. 50 Watt	6 ³ / ₈ 2 ¹ / ₈ 5 ¹ / ₂ Giant 7 Pin	9 ¹ / ₈ 3 ¹ / ₈ 8 ¹ / ₂ Std. 50 Watt	9 ³ / ₈ 3 ⁷ / ₈ 8 ¹ / ₂ Std. 50 Watt	10 ¹ / ₈ 3 ¹ / ₈ 8 Std. 50 Watt	10 ¹ / ₈ 3 ¹ / ₈ 8 Std. 50 Watt	10 ¹ / ₈ 3 ¹ / ₈ 12 Std. 50 Watt	12 ⁵ / ₈ 5 ¹ / ₈ 15 Std. 50 Watt	12 ⁵ / ₈ 5 ¹ / ₈ 15 Std. 50 Watt	17 7 ¹ / ₈ 36 John-son #214	19 6 ¹ / ₈ 54 HK 255	30 ¹ / ₂ 9 ¹ / ₈ 200 HK 255

*Beam Pentode

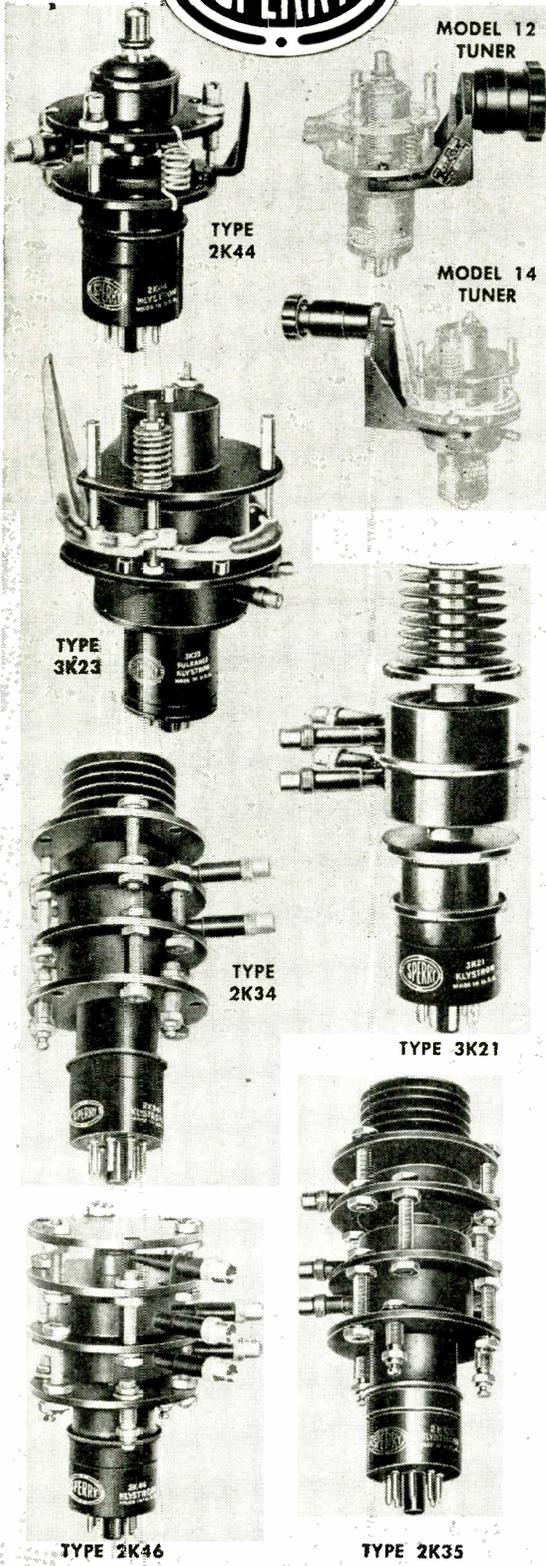
WRITE FOR FULL DATA ON ALL

GAMMATRONS



SPERRY KLYSTRONS

This page includes illustrations, catalog numbers and ready reference charts covering the various families of Sperry klystrons now available. New Klystrons which operate in sections of the frequency spectrum other than those covered herein are continually being introduced for new applications. You are cordially invited to consult our Special Electronics Department.



REFLEX OSCILLATORS—Group 1.

Type	2K41	2K42	2K43	2K44	2K39
Frequency Range mc.	2660 to 3310	3300 to 4200	4200 to 5700	5700 to 7500	7500 to 10,300
Catalog Number.....	50-0141	50-0142	50-0143	50-0144	50-0139

Model 12 Tuner Catalog No. 50-0112 Required except on 2K41

SPECIFICATIONS for this group are as follows: *Heater:* 6.3 v; 1.3 amp. *Beam:* 1250 v max.; 60 ma max.; 75 watts max. *Regulation* ± 0.2 v; ripple 0.2 v peak to peak. *Control Electrode:* -200 to +50 v max. range. *Reflector:* 0 to -750 v max. range. *Regulation* ± 0.5 v; ripple 0.2 v peak to peak. *R-F power output at max. ratings:* 0.250 min. to 0.750 max. watts.

REFLEX OSCILLATORS—Group 2.

Type	3K27	3K23
Frequency Range mc. ...	750 to 960	950 to 1150
Catalog Number.....	50-0127	50-0123

SPECIFICATIONS for this group are as follows: *Heater:* 6.3 v; 1.6 amps. *Beam:* 1000 v max.; 90 ma max.; 80 watts max. *Regulation* ± 0.2 v; ripple 0.2 v peak to peak. *Control Electrode:* -200 to +30 v max. range. *Reflector:* 0 to -1500 v max. range. *Regulation* ± 0.5 v; ripple 0.2 v peak to peak. *R-F power output at max. ratings:* 1.0 min. to 3.0 max. watts. *Model 14 Tuner Required, Catalog No. 50-0114*

OSCILLATOR—AMPLIFIERS

Type	3K21	3K22	3K30 (410R)
Frequency Range mc.	2300 to 2725	3320 to 4000	2700 to 3330
Catalog Number.....	50-0121	50-0122	50-0130

SPECIFICATIONS: *Heater:* 6.3 v; 1.6 amps. *Beam:* 3000 v max.; 250 ma max.; 150 watts max. *Control Electrode:* -200 to 0. max. range. *R-F power output at max. ratings:* 20.0 min. to 40.0 max. watts.

FREQUENCY MULTIPLIERS Type 2K46

Catalog No. 50-0146. **FREQUENCY RANGE:** 2730-3330 megacycles IN; 8190-10000 megacycles OUT. No Tuner Required. **Type 2K47 Catalog No. 50-147. FREQUENCY RANGE:** 250-280 megacycles IN; 2250-3360 megacycles OUT. No Tuner Required.

OSCILLATOR—BUFFERS

TYPE 2K34
Catalog No. 50-0134
FREQUENCY RANGE: 2730-3330 megacycles.
No Tuner Required.

CASCADE AMPLIFIERS

TYPE 2K35
Catalog No. 50-0135
FREQUENCY RANGE: 2730-3330 megacycles.
No Tuner Required.

KLYSTRON ACCESSORIES



STRAIGHT PLUG Equivalent to JAN UG-275/U. Use with Cat. No. 50-1203 coaxial cable or RG-21/U attenuating coaxial cable. Plug is solderless type. Tapered concentric braid-lock. Heat treated beryllium copper center sleeve with formed

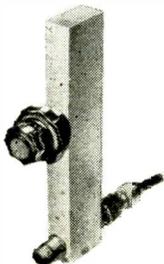
tip giving a high pressure grip. Durable, easy to assemble. Length, 1 1/4"; Diameter, 1/2"; Weight 5/8 oz. Cat. No. 50-1200.

RIGHT ANGLE PLUG Equivalent to JAN UG-276/U. Similar to STRAIGHT PLUG Cat. No. 50-1200. Connecting end length, 3/4". Cable end length, 1 1/8". Excellent for klystron feedback coupling loops. Cat. No. 50-1201.



SOLID DIELECTRIC COAXIAL CABLE Equivalent to JAN RG-5/U. For use with Sperry SKL, Type N, and other coaxial fittings. Nominal surge impedance: 50 ohms. Cat. No. 50-1203.

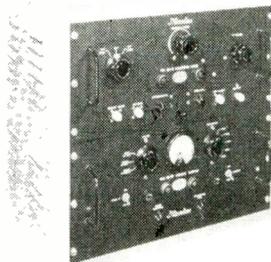
IMPEDANCE TRANSFORMER



Model 137 A double-stub matching transformer, with front panel controls for matching to loads over entire frequency range of 2660 to 10,300 mc. Also recommended for use in feedback coupling lines of multi-cavity klystrons, such as Types 3K21, 3K22, and 3K30 (410-R), for maintaining optimum feedback adjustment at all tube frequencies.



• Virtually every type of instrument essential to precision microwave measurements is represented in this group of the Sperry Microline Instruments, now available to the general market. Other new designs and developments exist which are basic to quick and reliable measurement techniques in every microwave frequency band. For information regarding application of these instruments and your individual problems and particular requirements, you are cordially invited to consult our Special Electronics Department. Price and delivery information on request.

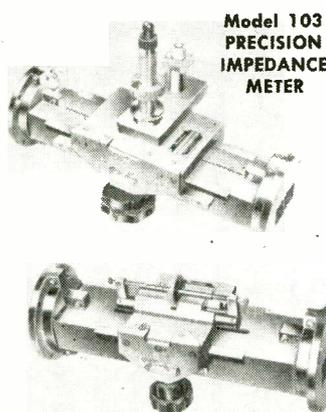


KLYSTRON SIGNAL SOURCE

The Mk SX-12 Klystron Signal Source provides a convenient, stable source of either modulated or unmodulated microwave signals for a wide variety of applications. The unit employs a reflex klystron oscillator and supplies low power signals of any frequency between 2,700 and 10,300 mc. Any one of five different klystron tubes (type 2K41, 2K42, 2K43, 2K44, or 2K39) can be used as required by the desired frequency band to provide at least 200 milliwatts of microwave power over their entire range, and up to 750 milliwatts at certain frequencies specified in the tube characteristics. Contains a square-wave modulator which can provide 0 to 100 volts peak at any rate between 350 and 3500 cycles. . . . Rate of rise and fall less than 1.0 micro-second. Catalog No. 50-0201.

APPLICATIONS: standing wave ratios in microwave transmission lines • impedance in microwave transmission lines • microwave receiver sensitivity • microwave frequency response and bandpass characteristics. Also used for • experimental microwave communications systems • aligning and testing of microwave receivers • frequency modulated signal source for spectrum analysers • test local oscillator.

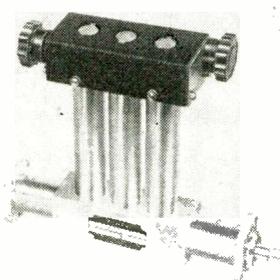
* Trade Mark



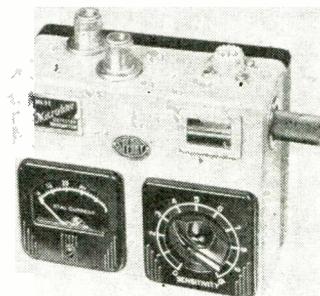
**Model 103
PRECISION
IMPEDANCE
METER**



**Model 28
CAVITY
FREQUENCY METER**



**Model 34A
TRIPLE STUB
TRANSFORMER**



**MARK 522
DETECTOR-WAVE METER**

**Model 109
DOUBLE SLUG
TRANSFORMER**

FREQUENCY METERS

Model	Description	Frequency Range mc	Absolute Accuracy	Loaded Q (approx)	Fittings		Catalog Number
					Input	Output	
S-22	Detector Wavemeter Kit	2400 to 3400	±0.1%	1500	UG-18/U (Type N)	UHF	50-0307
27	Coaxial	3500 to 6500	±0.1%	800	UG-18/U (Type N)	UHF	50-0301
28	Cavity	4500 to 5600	±0.01%	12,000	UG-148/U Choke (2" x 1")	UHF	50-0302
124	Broadband Coaxial	650 to 3260	±0.1%	500 at 10 cm to 600 at 40 cm	UG-18/U (Type N)	UHF	50-0303
126	Coaxial	8500 to 9600	±0.12%	2000	UG-39/U Flange (1" x 1/2")	UG-39/U Flange (1" x 1/2")	50-0304
291	Cavity	2575 to 3780	±0.005%	10,000 to 16,000	UG-18/U (Type N)	UHF	50-0305

IMPEDANCE METERS

Model	Description	Frequency Range mc	Reading Accuracy	Absolute Accuracy	Insertion Loss	Fittings		Catalog Number
						Input	Output	
103	2" x 1" Waveguide	4000-6000	±0.1 mm	±2%	0.03 db	UG-149/U Flange	UG-149/U Flange	50-0601
116	3/8" Coaxial	4000-6000	±0.1 mm	±2%	0.03 db	UG-141/U Female	UG-141/U Female	50-0602
361	3/8" Coaxial	600-3500	±0.1 mm	±3%	0.003 db	UG-46/U Female	UG-45/U Male	50-0603

IMPEDANCE TRANSFORMERS

Model	Description	Frequency Range mc	Max. VSWR	Power Capacity	Fittings		Catalog Number
					Input	Output	
34-A	Triple-Stub 3/8" Coaxial	1700-3750	50 to 100	500 w	UG-46/U Female	UG-45/U Male	50-0711
109	Double-Slug 2" x 1" Waveguide	4000-6000	8 to 15	10 w	UG-149/U Flange	UG-149/U Flange	50-0701
117	Susceptance 2" x 1" Waveguide	4000-6000	Any, not purely reactive	500 w	UG-148/U Choke	UG-148/U Choke	50-0721
363	Double-Slug 3/8" Coaxial	650-3500	6 to 12	700 w	UG-46/U Female	UG-45/U Male	50-0702

...Test and Measurement at Microwave Frequencies

POWER MEASURING EQUIPMENT

WATTMETER BRIDGES



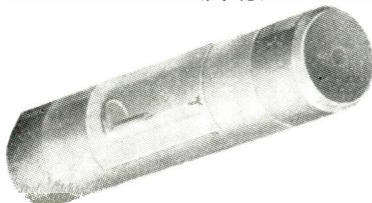
Model 123

Model 123 measures average power directly with Sperry barretters and barretter mounts. Automatically self-balancing making any adjustments except zero standardization unnecessary. Power read directly, without calculation, from 10 mw down to a few microwatts on 3 ranges of 10, 1.0, and 0.1 mw. Ranges selected by means of 3-position switch. Range of the bridge can be extended to 100 watts by use of directional couplers or attenuators. The frequency bands over which power can be measured depend only upon the barretter mounts used with this bridge. Catalog No. 50-0402.

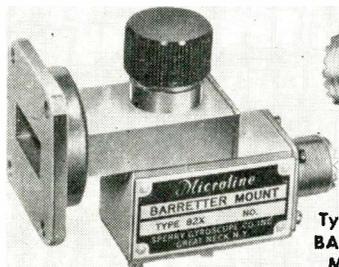


Model 84A

TYPE 821 BARRETTTER



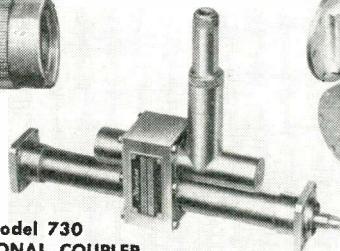
Detecting element used in barretter mounts for measuring low-level microwave power. Physical features are such that it can be properly incorporated in the design of broad-band coaxial or waveguide mounts. Sufficiently small to be used in such mounts at frequencies as high as 15,000 mc. Max. average microwave power handling capacity is approx. 30 mw. When used with the proper circuits, the minimum power level of 10 microwatts can be measured with an accuracy of $\pm 5\%$ under ordinary laboratory conditions. The d-c and r-f characteristics are carefully controlled at factory. Catalog No. 50-0501.



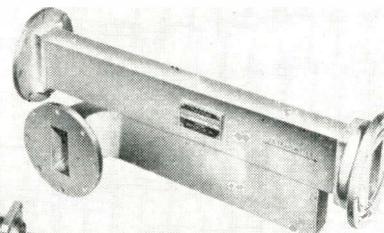
Type 82X
BARRETTTER
MOUNT



Model 85
BARRETTTER
MOUNT



Model 730
DIRECTIONAL COUPLER



Model 141
DIRECTIONAL COUPLER

BARRETTTER MOUNTS

Model	Description	Frequency Range mc	Max. VSWR	Fittings		Catalog Number
				Input	Output	
82x	1" x 1/2" Waveguide	8500 to 9600	1.26	UG-39 U Flange	UHF	50 0414
83	2" x 1" Waveguide	4600 to 5650	1.26	UG-148 U Choke	AN-3102-10SL-3P	50 0411
85	Coaxial	2700 to 2900	1.50	UG-18 /U (Type N)	AN-3102-10SL-3P	50-0412
128	1" x 1/2" Waveguide	8500 to 9600	1.26	UG-40 U Choke	AN-3102-10SL-3P	50-0413
139	Coaxial	470 to 780	1.33	UG-46 U Female	AN-3102-10SL-3P	50-0415
148	3/8" Coaxial (tunable)	500 to 2500	2.00	UG-46 /U Female	AN-3102-10SL-3P	50-0425
163	Coaxial	2500 to 2700	1.50	UG-18 /U (Type N)	AN-3102-10SL-3P	50-0424
164	Coaxial	2900 to 3100	1.50	UG-18 /U (Type N)	AN-3102-10SL-3P	50-0423

DIRECTIONAL COUPLERS

Model	Description	Frequency Range mc	Coupling Attenuation	Power Capacity	Fittings			Catalog
					Line In	Line Out	Auxiliary	
136	1" x 1/2" Waveguide	8500-9600	20	1	UG-39/U Flange	UG-39/U Flange	UG-20/U (Type N)	50-1025
140	1" x 1/2" Waveguide	8500-9600	40	100	UG-39/U Flange	UG-39/U Flange	UG-39/U Flange	50-1026
141	2" x 1" Waveguide	4500-5740	23	2	UG-148/U Choke	UG-149/U Flange	UG-149/U Flange	50-1021
142	2" x 1" Waveguide	4500-5740	30	10	UG-148/U Choke	UG-149/U Flange	UG-149/U Flange	50-1022
143	2" x 1" Waveguide	4500-5740	40	100	UG-148/U Choke	UG-149/U Flange	UG-149/U Flange	50-1023
172	1" x 1/2" Waveguide	8500-9600	20	1	UG-39/U Flange	UG-39/U Flange	UG-39/U Flange	50 1053
179	3/8" Coaxial	1540-1960	30	10	UG-46/U Female	UG-45/U Male	UG-45/U Male	50 1054
711	3/8" Coaxial	950-1150	40	100	UG-46/U Female	UG-45/U Male	UG-45/U Male	50-1027
712	3/8" Coaxial	1080-1300	40	100	UG-46/U Female	UG-45/U Male	UG-45/U Male	50-1028
714	3/8" Coaxial	1260-1540	40	100	UG-46/U Female	UG-45/U Male	UG-45/U Male	50-1029
730	3/8" Coaxial	2470-3130	25	3.16	UG-46/U Female	UG-45/U Male	UG-20/U (Type N)	50-1024
775	3/8" Coaxial	660-840	40	100	UG-46/U Female	UG-45/U Male	UG-45/U Male	50-1051
794	3/8" Coaxial	830-1050	40	100	UG-46/U Female	UG-45/U Male	UG-45/U Male	50-1052

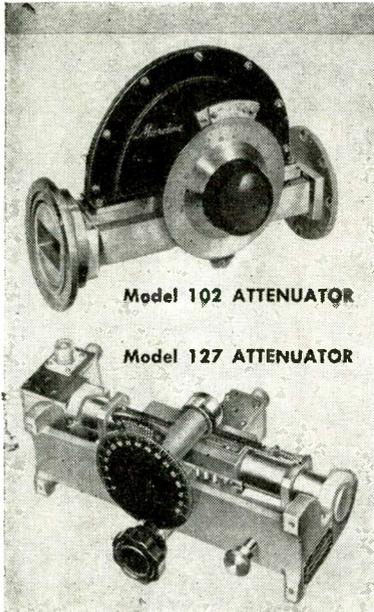
Microline* INSTRUMENTS



POWER MEASURING EQUIPMENT

ATTENUATORS

Model	Description	Frequency Range mc	Attenuation Range	Accuracy	Power Capacity (watts)	Fittings		Catalog Number
						Input	Output	
102	Calibrated Variable	3590-6000	0-20 db	±1.5%	1	UG-148/U Choke (2" x 1")	UG-149/U Flange (2" x 1")	50-0501
110	Variable	4000-6000	0-20 db	Uncalibrated	1	UG-148/U Choke (2" x 1")	UG-149/U Flange (2" x 1")	50-0502
127	Precision Variable	29-32	15-95 db	±0.1 db	1	UG-19/U (Type N)	UG-19/U (Type N)	50-0505
152	Variable	8500-9600	1-15 db	Uncalibrated	1	UG-39/U Flange (1" x 1/2")	UG-39/U Flange (1" x 1/2")	50-0507



Model 102 ATTENUATOR

Model 127 ATTENUATOR

Microline ACCESSORIES

LOW POWER TERMINATIONS Models 105 and 637

Serve as matched loads to dissipate virtually all power applied to them. Behave as an infinite length of line and so are useful as dummy loads in impedance measurements and other applications where low power levels in the 4000 to 6000 mc band (105) 600 to 3500 (637) must be dissipated. Catalog Nos., 50-1031 (Model 105) and 50-1033 (Model 637).

HIGH POWER TERMINATION Model 113

Serves as a matched dummy load in the 4000-6000 mc band to dissipate large amounts of power without producing undesirable reflections. Behaves as an infinite line and absorbs virtually all power applied to it. Catalog No. 50-1032.

ADJUSTABLE SHORTS MODELS Models 114 and 636

Waveguide short (114) produces a short circuit of variable position in the end of a waveguide in the 4000-6000 mc band. As a short in the end of a line it is useful in providing a reference point for impedance measurements. With a waveguide tee, it can be used as a stub tuner whose phase and amplitude do not have to be varied independently. Catalog No. 50-1041. Coaxial short (636) 750-4000 mc similar. Catalog No. 50-1042.

Microline FITTINGS

COAX-TO-WAVEGUIDE ADAPTER Model 100

For coupling between 5/8" rigid coaxial line and 2" x 1" waveguide in all applications where uniform coupling with known characteristics is required. Catalog No. 50-1211.

COAXIAL ADAPTERS Models 101 and 352A

101 (Catalog No. 50-1212) used for connecting 5/8" rigid coaxial line to flexible coaxial cables and instruments which have type N connectors similar to AN type UG-18/U. 352A (Catalog No. 50-1213) connects 46-ohm, 7/8" rigid coaxial lines to flexible coaxial cables and instruments.

WAVEGUIDE TEES Models 106 and 107

T-junctions of 2" x 1" waveguide designed for coupling transmission lines and measuring devices together. Each behaves as a six-terminal network and can be used to divide power; as well as for coupling purposes. Catalog Nos. (106) 50-1221 and (107) 50-1222.

INSTRUMENT STAND Model 640

Supports several types of transmission lines and microwave instruments. Clamps onto transmission line and forms a rigid support. Height adjustable over a range of about 2 in. Catalog No. 50-1232.

SPERRY AIRCRAFT INSTRUMENTS

DETONATION INDICATOR • AUTOMATIC DIRECTION FINDER
STROBODYNE • KNOCKOMETER



DETONATION INDICATOR

An engine instrument which immediately detects and evaluates detonation and gives positive warning of improper combustion. Assures knock-free engine performance and safely permits economy of leaner mixtures or lower grade

fuels by enabling the pilot to match the fuel-air ratio to the engine under the continuously changing conditions encountered in flight. Also aids in discovery of engine difficulties such as improper valve clearance and spring tension, worn or cracked wrist pins, pistons, and piston rings. Adaptable to all types of aircraft engines. Pick-ups externally mounted on engine cylinders. Refer to Publication 23-82.

*KNOCKOMETER

A standard means for measuring detonation, evaluating anti-knock characteristics of fuels determining engine octane requirements. Establishes the dividing line between detonating and non-detonating fuel mixtures

within a small percentage of error. Oscilloscope connection permits checking initial installation, trouble shooting the engine, detecting and eliminating costly errors due to worn or malfunctioning engine parts. Can be used in flight or on test stand: KM-1 for single cylinder aviation fuel engines, KM-2 for multicylinder engines, KM-3 automotive Fuel Test, KM-4 Automotive Road Test. Refer to Publication 23-82.

* Trade Mark

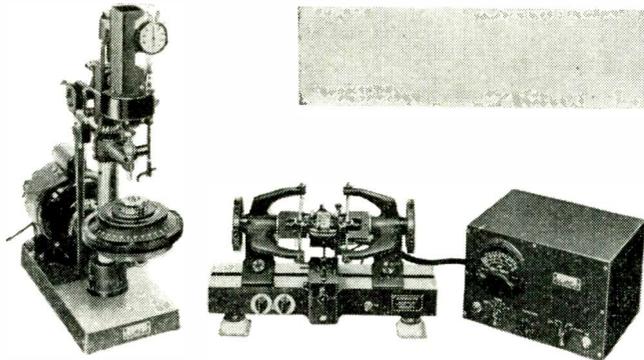
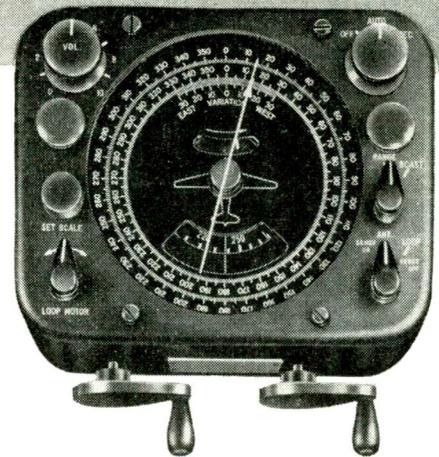


AUTOMATIC RADIO DIRECTION FINDER

Gives the pilot automatic and continuous bearings regardless of the heading of his plane. Once tuned to the desired broadcast or range station, this Direction Finder unaided, fixes on the station heading so the pilot can set his course and fly the pointer home. In the teeth of hard rain, dust, snow, or other severe conditions, static-free reception is maintained by the use of shielded crossed loops. The non-hunting

quick-response pointer indicates the correct bearing continuously regardless of rapid plane movements and enables the pilot to correct for the slightest change in course.

Bearings are non-ambiguous. Simultaneous headphone reception is provided. Available in single or dual installation types, and with remote bearing indicators, if desired.



A new dynamic balancing instrument which detects and permits correction of unbalance vibrations that cause displacements as minute as 0.000,000,2 (two ten-millionths) inch. Without any parts to wear, the Strobodine balances high-speed rotating

SPERRY STROBODYNE*

parts under actual operating conditions—in their own bearings and without errors caused by bearing vibrations. Distinguishes readily between small vibration due to unbalance and vibration caused by bearings and pivots.

A meter gives operator accurate and direct indication of amount of material to be removed from rotor in terms of drill depth. Balancing can also be accomplished by adding material. Dials on the balancing machine give the exact location of unbalance. The balancing machine is adaptable for all types of rotors and high-speed armatures up to 5" diam. and 9" length. Operating range, 4200 rpm to over 100,000 rpm. Less than 2 min. required to change machine setup from one type of rotor to another. * Trade-Mark



AUTOMATIC DETONATION CONTROL

Automatic Detonation Control provides maximum saving in test work by reducing operator and test stand time and by lessening wear on test engines. Used for controlling spark advance, fuel mixture, anti-detonant injection and manifold pressure. Can also be used to maintain a constant detonation intensity for endurance testing of engine and components.

GYROSYN* COMPASSES

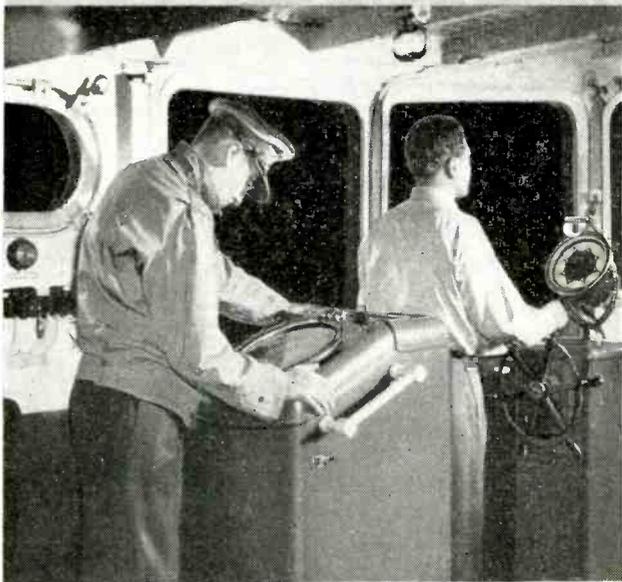
The Gyrosyn Compass combines the functions of both a Directional Gyro and a magnetic compass. By means of a Flux Valve, the gyro is synchronized to the magnetic meridian, making the instrument, in effect, a gyro-stabilized compass. It provides stable directional indication under all conditions of air turbulence, does not drift so requires no resetting, and though North-seeking, does not oscillate, swing or have northerly turning error.

Model C-1 Total Weight: Approx. 10 lbs. (with one repeater) • **Repeaters:** One to three repeater stations can be operated • **Indication:** Master Indicator and Repeaters available with either Rotating Dial or Pointer type indication • **Power Supply:** 115v-3phase-400 cycles; 28v dc (Can be operated from 115v-1phase-400 cycles; 28v dc by using Phase Adapter.)

Model C-4 When a non-tumbling Gyrosyn Compass is desired to pair up with the non-tumbling Attitude Gyro, this Compass which is the Gyrosyn unit of the A-12 Gyropilot can be used separately. A completely automatic and self-synchronizing instrument, it requires no setting or caging.

Total Weight: Approx. 16 lbs. (with one repeater) • **Repeaters:** One to three repeater stations can be operated. Available with either Rotating Dial or Pointer type indication • **Power Supply:** 115v-3phase-400 cycles; 28 dc (Can be operated from 115v-1phase-400 cycles; 28v dc by using Phase Adapter.)

*Trade Mark



SPERRY MARINE RADAR

Sperry radar is designed especially for commercial vessels which require extremely accurate indications at all ranges, high performance even under the most unfavorable weather conditions, and clearly defined images free from blurring. It enables ships to operate on schedule regardless of visibility . . . through thick fog, rain, dense smoke, darkness. As an aid to navigation it detects channel markers and buoys, icebergs, floating derelicts, and other hazards projecting above the surface.

• FEATURES:

- Conforms to U. S. Coast Guard specifications for Class A radar
- Minimum range 100 yards—maximum 40 miles, 12-inch viewing scope
- Images presented in either true or relative bearing relationship at option of operator
- Gives accurate ranges read from numerical indicator instead of estimated from scope
- Backed by world-wide service.

SPERRY LORAN

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165	Series waveguide tee	8100-12400
166	Shunt waveguide tee	8100-12400
170	E-plane waveguide bend	8100-11000
171	H-plane waveguide bend	8100-11000
175	Pick-up horn	8500-9600
181	Low power termination	8100-11000

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A TEN YEAR INDEX OF THE EDITORIAL CONTENTS OF ELECTRONICS

Ten years in the life of an industry as young and alive and fast changing as electronics is a long time. During the past 10-year period many fine articles of lasting value have been published as evidenced by the continuous requests for reprints and photostats of them. In the following pages will be found a list of the articles most often requested. It is not an index of all the articles published since 1936 but only of those which have proved their merit by the demands for them.

JANUARY, 1936

THE ELECTRON TELESCOPE	10
A new photoelectric device makes use of electron optics to create and magnify optical images of large area, using infra-red, visible, or ultra-violet light	
A TUBE-CONTROLLED MOTOR , by Paul B. King, Jr.	14
GRAPHICAL HARMONIC ANALYSIS , by J. A. Hutcheson	16
A NEW SOLAR RADIO DISTURBANCE , by J. H. Dellinger	25
R-F TRANSITION LOSSES , by Harold A. Wheeler	26
R-F IMPEDANCE-MATCHING NETWORKS , by Ralph P. Glover	29
OUTPUT TRANSFORMER RESPONSE , by F. E. Terman and R. E. Ingebretsen	30
Methods of computing the frequency characteristic of audio output transformers in terms of leakage inductions, turns-ratio, and primary and secondary resistances	

FEBRUARY, 1936

INDUSTRIAL X-RAY PRACTICE , by Robert C. Woods	7
CLASS B AND AB AUDIO AMPLIFIERS , by Glenn Koehler	14
LOUD SPEAKER DESIGN , by Frank Massa	20
R-F POWER MEASUREMENTS , by G. F. Lampkin	30
ANTENNAS FOR AIR NAVIGATION , by Donald G. Fink	34
SELF-OPENING DOORS , by H. H. Raymond	36

MARCH, 1936

DEFLECTION CONTROL TUBES , by Alan Hazeltine	14
Deflection of electron beams may be put to work in tubes other than cathode ray oscilloscopes	
COLOR ANALYZER	17
A device that plots its own curve as the measurement on reflected or transmitted light progresses	
PLATE CIRCUIT THEOREM , by Walther Richter	19
PHOTOTUBES SAVE TIME , by Philip C. Bennett	22
LOW-LEVEL WATTMETER , by Arthur L. Albert and Howard P. Bekendorf	28

APRIL, 1936

THE "TURNSTILE" ANTENNA , by George H. Brown	14
THE BEAM POWER TUBE , by John F. Dreyer, Jr.	18
DIRECTIONAL ANTENNA DESIGN , by E. A. Laport	22
PORTABLE SOUND MEASUREMENTS , by C. Albin Anderson	26
DIRECTIONAL RADIATION PATTERNS , by A. James Ebel	29
TUBE-CONTROL OF A-C MOTORS , by J. D. Ryder	31

MAY, 1936

BROADCAST COVERAGE , by Raymond F. Guy	16
Technical features of broadcasting's commercial problem; effects of frequency and soil on the available audience	
AN A-C OPERATED BEAT OSCILLATOR , by S. J. Haefner and E. W. Hamlin	20
HIGH POWER FREQUENCY MODULATION	25
E. H. Armstrong plans 40-kw transmitter	
ELECTRONIC WELDING TIMERS , by Paul G. Weiller	26
BEACON MARKER TRANSMITTER , by Lester H. Nafzger	29
NEW PERMANENT MAGNET ALLOYS	30
A "MASS-LESS" PICK-UP , by W. N. Weeden	39

JUNE, 1936

PROGRESS IN SOUND PICTURES , by Carl Dreher	6
ULTRA-VIOLET RECORDER , by L. J. Wolf	12
VOLUME COMPRESSION , by L. B. Hallman, Jr.	15
An automatic volume compressor designed for broadcast station use	
TUBES HELP MAKE AUTOMOBILES , by R. A. Powers	22
ELECTRONIC ENGINEERING , by E. F. W. Alexanderson	25

JULY, 1936

PHOTOMETERING RAW SILK , by Robert Finlay	12
BROADCAST TRANSMITTER ADJUSTMENTS , by J. G. Sperling	15
LOUD SPEAKER TESTING , by Frank Massa	18
RADIATION COUNTING , by Bernard H. Porter	28
FEEDBACK AMPLIFIERS	30
BAND-PASS CHARACTERISTICS , by H. W. Jaderholm	33

AUGUST, 1936

THEORY OF ELECTRON OSCILLATORS , by J. E. Anderson	9
CATHODE RAY AIRCRAFT COMPASS , by Samuel Ostrolenk	12
UHF SIGNAL GENERATOR , by C. J. Franks	16
REMOTE TUNING AT KDYL , by John M. Baldwin	19
CANADIAN FIELD STRENGTH MEASUREMENTS , by H. M. Smith	20
MODULATION MEASUREMENTS , by C. G. Seright	23
RESISTANCE-COUPLED DATA , by Glenn Koehler	25
DELAY-RELAY CIRCUITS , by D. E. Noble	28

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SEPTEMBER, 1936

CATHODE RAYS FOR THE UHF, by Lester L. Libbey	15
Correction factors permit use of cathode-ray tubes up to 300 mc	
REACTORS IN D-C SERVICE, by Reuben Lee	18
THE SOMMERFELD FORMULA, by William A. Fitch	23
AN END-OF-LIFE METER, by H. W. Lord and O. W. Livingston	26
AUTOMATIC FREQUENCY CONTROL CIRCUITS, by S. Young White	28
BEAM TUBE AMPLIFIERS, by Leon Oxman	30

OCTOBER, 1936

A NOISE-REDUCING CIRCUIT, by M. G. Nicholson	14
DEPTH-SOUNDING BY RADIO	20
WINDING THE UNIVERSAL COIL, by A. W. Simon	22
A NEW 6ES CIRCUIT, by M. L. Levy	28
A DOUBLE-IMAGE CATHODE RAY TUBE, by Manfred von Ardenne	31

NOVEMBER, 1936

ELECTRON TUBES IN DIATHERMY	16
IMPROVEMENTS IN AFC CIRCUITS, by R. L. Freeman	20
SOUND WAVE STROBOSCOPE, by B. F. McNamee	24
A NEW WELDER TUBE, by D. D. Knowles, E. F. Lowry and R. K. Gessford	27
MIXER CIRCUIT DESIGN, by R. Fred Smeltzer	32

DECEMBER, 1936

CONCENTRIC LINE TERMINATIONS, by Carl G. Dietsch	16
THREE-PHASE RECTIFIER CIRCUITS, by A. J. Maslin	28
AUTOMATIC SELECTIVITY CONTROL, by H. F. Mayer	32
R-F IMPEDANCE OF PARALLEL LINES, by Alfred E. Teachman	35

JANUARY, 1937

RCA DESCRIBES TELEVISION SYSTEM FEEDBACK AMPLIFIERS	8
MODULATION METER, by P. M. Honnell	12
A vacuum tube voltmeter with a-c and d-c meters in plate circuit to indicate percentage of sinusoidal modulation	18
INDUCTANCE CALCULATION NOMOGRAM, by Carl P. Nachod	27
THE BAND-SPREAD PROBLEM, by R. C. Woodhead	29

FEBRUARY, 1937

THE STROBOTRON, by K. J. Germeshausen and H. E. Edgerton	12
CURVES FOR TUNED TRANSFORMERS, by J. E. Maynard	15
A graphical solution for transformer selectivity and phase shift	
A WIDE-BAND TUNER, by W. N. Weeden	19
TIME DELAY IN RESISTANCE-CAPACITY CIRCUITS, by E. W. Kellogg and W. D. Phelps	22
RESISTANCE-COUPLED AMPLIFIER DATA	29
Gain and output of typical combinations compiled for reference	
A NEW PICKUP, by Ralph Glover	31
I-F TRANSFORMER ALIGNMENT, by R. Nathan	33

MARCH, 1937

60-MC TELETYPEWRITER, by Rex Martin	10
A PRODUCTION CONDENSER TESTER, by J. L. Roemisch	12
THE MOVABLE ANODE TUBE, by E. D. MacArthur	16
THE STROBOTRON—II, by E. B. White, W. B. Nottingham, H. E. Edgerton, K. J. Germeshausen	18
D-C AMPLIFIER FOR LOGARITHMIC RECORDING, by J. P. Taylor	24
A NEW COLOR SEPARATOR, by W. Richter	28
Two phototubes measure the relative percentage of two colors in a sample	
MEASUREMENT OF REVERBERATION, by Hale Sabine	30
RESISTANCE VALUES FOR MULTIPLE-PADS, by Frederick Wheeler	33

APRIL, 1937

DF FOR SMALL SHIPS	9
TEMPERATURE CONTROL, by Ralph A. Powers	12
Phototubes applied to the precise control of temperature as used by automobile parts manufacturers	
FEEDBACK AMPLIFIERS, by J. R. Day and J. B. Russell	16
Three practical reverse-feedback circuits, their measured characteristics and design factors	
AUTOMATIC SOS ALARMS	20
THE LABYRINTH LOUDSPEAKER, by B. J. Olney	24
HORN TYPE LOUD SPEAKERS, by Frank Massa	30
PHOTO-EMF CELLS, by R. M. Holmes	33

MAY, 1937

NOISE IN FREQUENCY MODULATION, by Hans Roder	22
Analytical discussion of frequency modulation and its advantages in reducing noise in radio reception	
INTEROFFICE COMMUNICATING SYSTEMS, by Jacob Rosenbaum	26
ETCHED FOIL ELECTROLYTICS, by Nathan Schnell	30
FIDELITY CONTROL, by Arthur G. Manke	34
Switch for changing characteristics of high fidelity receivers to give better overall response	
THE PADDING CONDENSER, by Louis B. Sklar	42
Another solution is presented of the problem of getting the oscillator in superhets to track properly	

JUNE, 1937

TELEVISION TERMINOLOGY	14
CLASS A PUSH-PULL CALCULATIONS, by E. W. Houghton	18
THYRATRON D-C MOTOR CONTROL, by G. W. Garman	20
FOR PHOTOGRAPHERS ONLY, by Donald G. Fink	22
Electronic timing control applied to photography	
AN AMPLIFIER WITHOUT PHASE DISTORTION	26
UNIVERSAL AMPLIFIER CHARTS, by F. E. Terman	33
Gain, frequency response of resistance or transformer coupled amplifiers	

JULY, 1937

SUPERSONICS—A SURVEY, by Walter Mayberry	7
VOLTAGE REGULATORS USING MAGNETIC SATURATION, by Kenneth Way	14
AMPLIFIER MEASURING TECHNIQUE, by E. F. Kiernan	18
An outline of direct methods of measuring characteristics of a-f transformers	
PHOTOTUBE CONTROLS PUNCH PRESS, by Ralph Powers	21
PUBLIC ADDRESS AVC, by Harry Paro	24
POWER TUBE CHARACTERISTICS, by E. L. Chaffee	30
MUTUAL INDUCTANCE CALCULATIONS, by Dale Pollack	31

AUGUST, 1937

DIRECTIONAL ARRAYS, by A. R. Rumble	16
Calculations of broadcast array radiation systems	
CANDY-WRAPPING CONTROL, by Foster A. Hall	18
The success story of a phototube with a sweet tooth	
RELAYS IN TUBE-OUTPUT CIRCUITS, by E. E. George	19
Methods of determining conditions for optimum relay action by superimposing a relay chart on tube curves	
VIDEO AMPLIFIER DESIGN, by R. L. Freeman and J. D. Schantz	22
TUBE NOISE, by H. G. Hamilton	26
Sources and measuring methods in production and in use	
NUCLEAR PHYSICS CHART, by Charles M. Lack	33
TELEVISION TERMS, by Frank J. Somers	34

SEPTEMBER, 1937

SHIP-TO-SHORE RADIOTELEPHONE, by R. H. Riddle	9
TELEVISION ABROAD, by M. P. Wilder	13
PUSH-BUTTON TUNING SYSTEMS, by B. V. K. French	16
CONDENSER DISCHARGE CHART, by J. B. Hoag	20
TUBE-CONTROLLED OUTDOOR SIGNS	21
SIMPLIFYING THE BROADCAST MAN'S JOB, by George Ing	24
Simplified control panel substituting rotary switches for the usual patch cords	
WELDING BY KATHETONS, by Palmer H. Craig	26

OCTOBER, 1937

SCANNING IN TELEVISION RECEIVERS, by Frank J. Somers	18
QUALITY IN DISC REPRODUCTION, by C. J. LeBel	25
REACTANCE AMPLIFIERS	28
TELEVISION IN GREAT BRITAIN, by H. M. Lewis and A. V. Loughren	32
BASS COMPENSATION CHARTS, by P. A. D'Orio and R. De Cola	37

NOVEMBER, 1937

PHONOGRAPH TRACKING ERROR, by Benjamin Olney	19
THERMAL DRIFT OF SUPERHETERODYNE OSCILLATORS	24
Temperature coefficients of inductors and capacitors and their effect on frequency drift in receivers	
TELEVISION TUBES, by I. G. Maloff and D. W. Epstein	31
SAW-TOOTH WAVES, by Manfred von Ardenne	36
AN ELECTRONIC pH METER, by Robert Finlay	39
CLASS B R-F AMPLIFIER CHART	41

DECEMBER, 1937

SOFT X-RAYS, by H. F. Sherwood	8
RECORDING WELDER CURRENTS, by H. W. Lord	16
A BROADCAST STATION VOLUME LIMITER, by C. F. Sheaffer	20
INDUCTANCE TUNING	22
W2XE—A MODERN SHORTWAVE BROADCAST STATION, by John P. Taylor	23
RADIO IN THE SKY	28
OPERA BROADCASTING AT NBC	30

JANUARY, 1938

BATTERY RADIO DESIGN, by Paul Marsal	12
REVERBERATION CONTROL, by John K. Hilliard	15
WIDE-BAND TELEVISION AMPLIFIERS, by F. A. Everest	16
NEW INDUSTRIAL X-RAY TUBES, by Herbert R. Isenberger	20
A CATHODE-RAY PHASEMETER, by S. Bagno and A. Barnett	24
THE TRIOGRAPH, by H. E. Hollman	28
A three-phase cathode-ray tube for indicating the distribution of heart potentials, in medical diagnosis	
A RADIAL GROUND SYSTEM CHART, by George H. Brown	33
Effect of length and number of ground wires on signal strength	
ULTRASONICS AND SUPERSONICS, by Harry Schector	34

FEBRUARY, 1938

THYRATRONS AND THEIR USES, by E. F. W. Alexanderson	8
A TURNABLE WOBBLE INDICATOR, by William F. Wichart	13
APPLYING ELECTRONIC DOOR OPENERS, by W. I. Bendz	14
UHF DISTORTION IN CATHODE-RAY TUBES, by R. M. Bowie	18
RC FILTER DESIGN, by E. W. Kellogg and W. D. Phelps	26
A SINGLE-UNIT VIDEO CONVERTER, by G. Robert Mezger	31

MARCH, 1938

DEPARTURE IN PICK-UP DESIGN, by F. V. Hunt and J. A. Pierce	9
VERSATILE LEVEL METER, by Fred Schumann	13
MEASUREMENT OF L AND C CHANGES, by S. C. Leonard	18
DIRECT DISC RECORDING, by C. J. Le Bel	22
RADIO DISTORTION LIMITER, by M. L. Levy	26
THE MODULATOR BRIDGE, by Reinhard K. Hellmann	28
A bridge circuit using dry rectifiers and having unusual modulation characteristics	
DISTRIBUTED CAPACITANCE CHART, by P. H. Massaut	31

APRIL, 1938

FIREBOAT COMMUNICATIONS, by Frank Borsody	10
How New York's Fire Department applies radio for alarms and directions	
CATHODE-RAY TUBE APPLICATIONS, by H. F. Mayer	14
A PRACTICAL METAL DETECTOR, by W. C. Broekhuysen	17
MEASUREMENT OF TRANSMISSION LINE CONSTANTS	26
TELEVISION RECEIVERS, by E. W. Engstrom and R. S. Holmes	28
PHOTOGRAPHING CATHODE-RAY SCREEN TRACES	37
SOLVING A RECTIFIER PROBLEM, by Reuben Lee	39
Improving regulation by the use of tuned filter chokes	

MAY, 1938

PERMEABILITY PUSH-BUTTON TUNING, by John P. Tucker	12
A NEW GAS-FILLED TRIODE, by W. E. Bahls and C. H. Thomas	14
The OA4-G, a relay tube of wide potential usage	
WIDE-BAND TELEVISION AMPLIFIERS—II, by F. Alton Everest	24
A REVERBERATION CHAMBER, by H. A. Chinn	28
PARALLEL IMPEDANCE CHART, by D. G. Fink	31

JUNE, 1938

TELEVISION RECEIVERS—II, by E. W. Engstrom and R. S. Holmes	20
RECTIFIER FILTER DESIGN, by Herbert J. Scott	28
TABLE OF LC PRODUCTS AND THEIR LOGARITHMS	31
POWER TUBE CHARACTERISTICS, by E. L. Chaffee	34
Cathode-ray tube used to trace out characteristics of power tubes	
AN INPUT SWITCHING CONSOLE, by J. B. Epperson	38

JULY, 1938

A LABORATORY TELEVISION RECEIVER, by Donald G. Fink	16
ELECTRONIC DEVICE FOR MEASURING MAGNETIC FIELDS, by Albert Rose	21
VOLUME INDICATOR-ATTENUATOR, by S. T. Carter	22

A NEW TELEVISION FILM PROJECTOR, by Harry S. Bamford	25
A projector enabling 30 television frames per second to be transmitted from standard motion picture film operating at 24 frames per second	
IMPROVING REGULATOR PERFORMANCE, by A. G. Bousquet	26
COMPUTING ANTENNA HEIGHT, by Carlisle C. Jinks	30
Graphical method for determining quickly the height and mode of operation of broadcast antennas	
FOUR-TERMINAL NETWORK MEASUREMENTS, by J. L. Clarke	31

AUGUST, 1938

AN ELECTRONIC CARDIOTACHOMETER, by J. W. Horton	14
TELEVISION VIDEO AMPLIFIERS, by E. W. Engstrom and R. S. Holmes	18
FREQUENCY CHARACTERISTICS OF QUARTZ OSCILLATORS, by J. E. Anderson	22
PRACTICAL REMOTE AMPLIFIERS, by Robert W. Carlson	25
A LABORATORY TELEVISION RECEIVER, PART II, by Donald G. Fink	26

SEPTEMBER, 1938

A CONSULTANT ON ELECTRONICS, by Rex D. McDill	11
SOUND EFFECTS PRE-AMPLIFIER, by C. F. Sheaffer	14
D-C VOLTMETER WITH FEEDBACK, by J. M. Brumbaugh and A. W. Vance	16
COLOR MATCHING IN PAPER INDUSTRY, by E. C. Deeter	18
COMBINATION TONES IN NON-LINEAR SYSTEMS, by Frank Massa	20
A LABORATORY TELEVISION RECEIVER, III, by Donald G. Fink	22
SINGLE-ENDED R-F PENTODES, by R. L. Kelly and J. F. Miller	26
WHAT ABOUT MAGNETIC RECORDING? by S. J. Begun	30
ELECTRONIC VOLTMETER USING FEEDBACK, by Stuart Ballantine	33

OCTOBER, 1938

LAMINATED PLASTICS FOR RADIO, by T. J. McDonough	8
HALF-WAVE RECTIFIER CIRCUITS, by C. M. Wallis	12
A LABORATORY TELEVISION RECEIVER, IV, by Donald G. Fink	16
LOOP FOR BROADCAST RECEPTION, by Stanford Goldman	20
A NEW SOUND TRACK FOR MOTION PICTURES, by John K. Hilliard	23
The squeeze or "matted" track reduces background noise in motion picture recording	
PARASITIC OSCILLATION CIRCUITS, by Philip A. Ekstrand	26
ELECTRIC TIMING DEVICE, by Robert W. Carlson	28

NOVEMBER, 1938

RADIO PROGRAM PRESELECTOR, by D. R. DeTar	16
TELEVISION RECEIVER, by E. W. Engstrom and R. S. Holmes	18
Synchronizing methods and circuits for modern television receivers	
AUTOMATIC REMOTE AMPLIFIER, by G. Harold Brewer	21
SELECTING LOUD SPEAKERS FOR SPECIAL PURPOSES, by L. B. Hallman, Jr.	22
A LABORATORY TELEVISION RECEIVER, PART V, by Donald G. Fink	26
ELECTRON MICROSCOPES	30
Outline of operation of electron microscopes, with some examples of current practice; a new branch of electronics	
ADVANCED DISC RECORDING, by C. J. Le Bel	34
TRANSMITTING TUBE CHART, by Beverly Dudley	37

DECEMBER, 1938

REMOTE TUNING OF COMMUNICATIONS RECEIVERS, by Haas Otto Storm	14
A LABORATORY TELEVISION RECEIVER, PART VI, by Donald G. Fink	16
TUBE CONTROL OF D-C MOTORS, by J. D. Ryder	20
THERMIONIC EMISSION, by Charles P. Marsden	22
ULTRA-HIGH-FREQUENCY OSCILLATOR, by H. E. Hollman	26
Practical adaptation of the Kolster axially symmetrical tank circuits to generation of ultra-high frequencies	
TROUBLES WITH RELAY CONTACTS, by A. W. Clement	29
PHOSPHORS FOR CATHODE-RAY TUBES	

JANUARY, 1939

INITIAL DRIFT IN PHOTOCELLS, by E. D. Wilson	15
CONCENTRIC FOLDED HORN DESIGN, by A. J. Sanial	16

DEFLECTION CIRCUITS IN TELEVISION RECEIVERS, by E. W. Engstrom and R. S. Holmes

PORTABLE FREQUENCY MONITORING UNIT, by George W. Curran

Equipment useful for monitoring the frequency of relay-broadcast stations operating in the 1600-3000 kc spectrum

THE ELECTONE, AN ELECTRONIC PIANO, by Gordon S. Taylor
A TRANSMISSION LINE CALCULATOR, by P. H. Smith
INDUCTANCE CHART FOR MULTILAYER COILS, by J. E. Maynard

FEBRUARY, 1939

FOREST RADIO SERVICE, by W. W. Waltz

Importance of radio communication in fighting forest fires, with description of some of the equipment in use by the Forest Service

TUBE AIDS PHOTOGRAPHIC ANALYSIS

Use of intermittent gas discharge tubes in photography, and analysis of information contained in the cover illustration

NUNAN YARN TESTER, by Thomas J. Nunan
HIGH-GAIN, WIDE-BAND AMPLIFIER, by F. Alton Everest

TUBE EQUIPMENT IN INDUSTRY

Tabular survey of non-communication electronic equipment. List of manufacturers and their products

NEW STANDARD VOLUME INDICATOR AND REFERENCE LEVEL, by H. A. Affel, H. A. Chinn, and R. M. Morris

UHF POWER AMPLIFIER OF NOVEL DESIGN, by A. V. Haeff

Tube, utilizing new principle of operation (velocity modulation) opens up new regions of the spectrum

DESIGN FOR EXPONENTIAL HORNS, by George H. Logan
NOISE AND NOISE MEASUREMENT, by Daniel Silverman

MARCH, 1939

RADIOPHONE SERVICE FOR SMALL SHIPS, by Beverly Dudley

FREQUENCY MODULATION ADVANCES

Electronics' editors report on demonstration of Major Armstrong's frequency modulation system

CIRCUIT DESIGN RELATED TO TUBE PERFORMANCE, by L. C. Hollands

NEW COAXIAL CONDUCTOR AT WTAM, by W. S. Duttera
A TELEVISION FORMULARY, by Donald G. Fink

APRIL, 1939

CATHODE-RAY AMPLIFIER TUBES

The klystron and velocity-modulated tubes operating on the beam group principle

RECENT TUBE APPLICATION IN AUTOMOBILE MAKING, by Ralph Powers

PRESSURE CAPACITORS

A STABILIZED SWEEP CIRCUIT OSCILLATOR, by Winston E. Kock

POWER FOR TELEVISION RECEIVERS, by E. W. Engstrom and R. S. Holmes

THE PERMATRON AND ITS APPLICATION IN INDUSTRY, by William P. Overbeck

WSOC'S PACK TYPE TRANSMITTER, by S. T. Carter

PROPERTIES OF CERAMIC MATERIALS

MAY, 1939

FREQUENCY COMPENSATION, by M. L. Levy

Heating applied to silver-plated ceramic capacitor to minimize drift in super-heterodyne receivers

CIRCLE DIAGRAMS IN TUBE CIRCUITS, by A. A. Nims
MODERN FASTENERS IN THE RADIO INDUSTRY, by Craig Walsh

PRACTICAL DESIGN FOR AN ELECTRONIC PIANO, by Frederick D. Merrill, Jr.

VU-DB RELATIONSHIPS, by Frank B. Hales

JUNE, 1939

PLASTIC CABINET DESIGN NOTES, by Herbert Chase

A discussion of some of the pitfalls to be avoided in the design of plastic cabinets

A RECEIVER FOR FREQUENCY MODULATION, by J. R. Day

Constructional data on a practical seven-tube receiver using standard components and capable of doing justice to f-m broadcasts

A LOW DISTORTION LIMITING AMPLIFIER, by E. G. Cook

A remote cutoff pentode amplifier is used to obtain limiting action with a decrease in distortion

ELECTRONIC CONTROL FOR SHIP STEERING, by Britton Chance

A light beam, phototubes and prisms mounted on a magnetic compass are used to keep a ship on a straight course

JULY, 1939

THE ORTHICON

Improved form of the iconoscope makes use of low-velocity scanning electrons, obtains greater efficiency, freedom from spurious signals, and linear output

APPLICATION OF COPPER-OXIDE RECTIFIERS, by Leo L. Beranek

PHOTOGRAPHING C-R TUBE SCREEN TRACES, by T. A. Rogers and B. L. Robertson
A HIGH-QUALITY RADIO BROADCAST RECEIVER

Details of the r-f, i-f, detector, and audio sections of a receiver designed by Lincoln Walsh, of high frequency-response and low distortion performance

A PROGRAM FAILURE ALARM, by H. A. Chinn and R. B. Moe

A COMPACT REMOTE AMPLIFIER, by R. S. Duncan

INSTALLATION OF COAXIAL TRANSMISSION LINES, PART I, by J. B. Epperson

ANTENNA RADIATION CHART, by L. J. Giacoletto

AUGUST, 1939

TRIGGER CIRCUITS, by H. J. Reich

The use of negative resistance in tube circuits to obtain rapid and stable changes of current or voltage, especially useful in counting and control applications

ELECTRONIC CHIMES, by Frank Dostal

APPLYING FEEDBACK TO BROADCAST TRANSMITTERS, by L. G. Young

APPLICATIONS OF ELECTRONICS TO GEOPHYSICS, by F. S. McCullough

INSTALLING COAXIAL LINES—II, by J. B. Epperson

CONDENSER-LEAD RESONANCE CHART, by R. L. Haskins

SEPTEMBER, 1939

A TELEVISION RECEIVER FOR THE HOME, by Donald G. Fink

THE TIME TELESCOPE, by Beverly Dudley

The rate of growth of plants, and other very slow motions, are apparently speeded up by the use of a motion picture camera and an electronic timing control unit so as to be observable in a reasonable length of time

WAVE FORMS FOR HALF-WAVE RECTIFIERS, by M. B. Stout

A Fourier's series representation of the wave forms of the output voltage and current of half-wave rectifiers under varying conditions of load

COMPENSATED AMPLIFIER CHART, by Y. J. Liu and J. D. Trimmer

A graphical means of obtaining the relative values of gain and phase shift of one stage of a resistance coupled compensated amplifier

OCTOBER, 1939

ELECTROENCEPHALOGRAPHY, by Walter E. Rahm, Jr.

A RELIABLE PORTABLE TRANSMITTER FOR BC SERVICE, by D. F. Langham

INPUT CONDUCTANCE NEUTRALIZATION, by R. L. Freeman

THE IMAGE-DISSECTOR, by C. C. Larson and B. C. Gardner

MICROPHONE POLARITY AND OVER-MODULATION, by J. L. Hathaway

A NETWORK SELECTING CHART, by Paul J. Selgin

APPLICATIONS OF GLASS INSULATION TO RADIO, by Reuben Lee

NOVEMBER, 1939

THE NOVACORD, by Frederick D. Merrill, Jr.

A DIRECT READING VACUUM TUBE MILLIVOLTMETER, by Walter Lyons and Richard E. Heller

HIGH FREQUENCY PRE-EMPHASIS, by J. L. Hathaway

A CENTRAL ANTENNA SYSTEM, by D. J. Fruin

TRANSIENT AMPLIFIER ANALYSIS, by Eric A. Walker

DECEMBER, 1939

NEW FIRING CIRCUIT FOR IGNITRON RECTIFIERS, by Hans Klemperer

ADVANCED RECORDING PRACTICE, by C. J. LeBel

BRITISH TELEVISION, by W. J. Brown

MEASUREMENT STABILIZATION, by Henry Kalmus

R-F POWER AMPLIFIER CHART, by E. H. Schultz

JANUARY, 1940

FREQUENCY MODULATION—A REVOLUTION IN BROADCASTING?

A review of the facts and conjectures concerning the most-talked-of topic in radio engineering at present

TUNING FORK STABILIZATION, by Ernest Norrman

A DIFFERENTIAL MODULATOR METER, by Verne V. Gunsolley

19

22

26

29

33

9

11

12

16

20

28

30

33

34

11

14

18

30

33

9

12

16

20

22

25

29

33

15

23

27

30

36

16

32

38

41

11

15

19

20

24

28

30

35

14

18

20

28

31

35

16

24

32

35

11

19

22

24

28

30

33

16

25

29

37

39

12

17

26

30

33

10

15

18

R-F POWER MEASUREMENTS, by P. M. Honnell	21
KLYSTRONS	25
MULTI-WIRE ANTENNAS, by John D. Kraus	26
AMPLIFIER FOR A D-C GALVANOMETER, by Arthur W. Sear	28
AN ELECTRONIC FLOW METER, by Joseph M. Weinberger	30
SHUNT-PEAKING COMPENSATION, by William H. Freeman	35

FEBRUARY, 1940

A CATHODE-RAY F-M GENERATOR, by Robert E. Shelby	14
CONTROLLED FEEDBACK COMPRESSION AMPLIFIER, by H. H. Stewart and H. S. Pollock	19
CONTROL OF PHOTOMETRIC MEASUREMENTS, by Britton Chance	24
FREQUENCY MODULATION IN TELEVISION—A SYMPOSIUM	26
I—F-M Applied to Television, by C. W. Carnahan	
II—F-M and A-M in a Television Signal, by A. V. Loughren	
GAIN OF DIRECTIONAL ANTENNAS, by William S. Duttera	33

MARCH, 1940

ECONOMICS OF TELEVISION, by Noran E. Kersta	10
NARROW-BAND TELEPHONE TRANSMISSION, by John A. Csepely	14
FULL-WAVE RECTIFIER ANALYSIS, by C. M. Wallis	19
WATER LEVEL INDICATOR, by L. A. Ware	23
BRITISH TELEVISION RECEIVERS—II, by W. J. Brown	26
ACOUSTIC LINE LOUDSPEAKERS, by William D. Phelps	30
SHORT WAVE INDUCTANCE CHART, by F. C. Everett	33
VENTED SPEAKER ENCLOSURE, by C. E. Hoekstra	34

APRIL, 1940

F-M HAS ITS DAY IN COURT	14
A DECADE OF ELECTRONICS, by Keith Henney	17
A VIDEO SIGNAL GENERATOR—I, by M. P. Wilder and J. A. Brustman	25
COAXIAL LOUDSPEAKERS, by Benjamin Olney	32
A PRACTICAL STROBOSCOPE CIRCUIT, by C. C. Street	36
VISUAL ALIGNMENT GENERATOR, by H. F. Mayer	39
A SIMPLE ELECTRONIC REED ORGAN, by Frederick Merrill, Jr.	42
A FEEDBACK WELDING TIMER, by J. Kurtz	47
FORTY COMMONLY USED PADS, by Aaron Shelton	53

MAY, 1940

SWITCH FOR STARTING FLUORESCENT LAMPS, by R. E. Williams	14
ENGRAVED-TAPE SOUND RECORDING	16
DIPOLE AND REFLECTOR CHARACTERISTICS, by Stanford Goldman	20
A MULTI-FREQUENCY AUDIO GENERATOR, by Jack Quinn	23
A PICTURE SIGNAL GENERATOR—II, by M. P. Wilder and J. A. Brustman	26
ENHANCED STEREOPHONIC RECORDING	30
Bell Laboratories three-channel binaural sound reproduction from film, utilizing nearly 120 db of volume range for enhancing musical effects	
FEEDBACK APPLIED TO OSCILLATOR CONTROL, by Samuel Sabaroff	32
SQUARE-WAVE HARMONICS, by Donald L. Herr	34
Compilation of the amplitudes of the first 30 harmonics in square waves of unit amplitude and variable pulse width	

JUNE, 1940

PANORAMIC RECEPTION	14
A 20-INCH TELEVISION RECEIVER, by Thomas T. Goldsmith, Jr.	16
A NON-LINEAR BRIDGE FOR VOLTAGE CONTROL, by Walther Richter	20
DESIGN OF A 27-INCH LOUDSPEAKER, by R. T. Bozak	22
WIDEBAND vs. NARROWBAND IN F-M RECEPTION, by M. L. Levy	26
A PICTURE SIGNAL GENERATOR—III, by J. A. Brustman and M. P. Wilder	30
AN ARTIFICIAL EAR FOR TELEPHONE TESTING, by Stuart Ballantine	34
COOLING TUBES WITH FORCED-AIR DRAFT, by E. M. Ostlund	36
A CAPACITOR DISCHARGE CHART, by Louis Hanopol	41

JULY, 1940

FACTS ABOUT ATOMIC POWER	12
A factual review of the history and future possibilities of the newly isolated uranium isotope, U-235	
THE INVERTED AMPLIFIER, by C. E. Strong	14
DISTORTION IN COMPENSATED AMPLIFIERS, by J. D. Trimmer and Y. J. Liu	22
A general solution of the shunt-peaked amplifier showing how design tolerances may be met from a theoretical approach	
EMBOSSED CONSTANT-SPEED RECORDINGS, by E. E. Griffin	26

A PICTURE SIGNAL GENERATOR—IV, by J. A. Brustman and M. P. Wilder	28
A V-T VOLTMETER FOR COAXIAL LINES, by G. L. Usselman	32
IMPROVED LOW-FREQUENCY MOBILE RADIATOR, by Millet G. Morgan	33

AUGUST, 1940

RELAYS FOR ELECTRONIC CIRCUITS	13
A review of relays which are available for use in electronic circuits; classified according to the service in which they are used	
EXPANSION WITH A TRIODE, by C. G. McProud	17
REMOTE CONTROL OF A MODEL BOAT, by William P. West	19
F-M RECEIVERS—DESIGN AND PERFORMANCE, by Marvin Hobbs	22
A NEW PHOTOELECTRIC SURFACE, by A. M. Glover and R. B. Janes	26
A PICTURE SIGNAL GENERATOR—V, by M. P. Wilder and J. A. Brustman	30
FILTER DESIGN CHARTS—I, by John Borst	35

SEPTEMBER, 1940

F-M 105 HOURS PER WEEK	17
The new transmitter at W2XOR, employing a unique method of synchronizing, operates on the most extensive schedule of any f-m station at present	
WEAF—PORT WASHINGTON	20
NEW STUDIOS FOR CBS	23
TESTING CERAMIC CAPACITORS, by E. T. Sherwood	26
MODULATION LIMITS IN F-M, by L. J. Black and H. J. Scott	30
RECENT IMPROVEMENTS IN RECORDING, by C. J. LeBel	33
PERFORMANCE OF A SELF-EXCITED INVERTER, by F. N. Tompkins	36
SIMPLE PULSE-GENERATING CIRCUITS, by S. P. Sashoff and W. K. Roberts	40

OCTOBER, 1940

TUBES IN THE BRISTOL-MYERS PLANT, by Craig Walsh	16
VERTICAL vs. HORIZONTAL POLARIZATION, by G. H. Brown	20
DESIGN AND APPLICATION OF X-RAY TUBES, by Z. J. Athlee	26
COLOR TELEVISION DEMONSTRATED BY CBS ENGINEERS	32
Rotating filter discs produce 343-line images on standard television channel	
ELECTRONIC METHOD OF MEASURING DISTRIBUTION, by L. A. Ware	36
A combination of a rotating commutator and thyratron counter to indicate numerical distribution	
HIGH-VOLTAGE SUPPLY ALARM INDICATOR, by R. L. Hildebrand	38
FILTER DESIGN CHARTS, II, by John Borst	39

NOVEMBER, 1940

CONNECTICUT F-M POLICE SYSTEM, Part I, by Daniel E. Noble	18
A PRESELECTOR CIRCUIT FOR TELEVISION, by B. F. Tyson	23
Presents constant gain and bandwidth over the television spectrum to 108 mc without loss of performance	
THE CHRONOSCOPE, by C. I. Bradford	28
Application of electron tubes to the measurement of very short time intervals such as those used in determining the velocity of bullets	
HIGH SENSITIVITY PHOTOTUBE CIRCUIT, by H. S. Bull and J. M. Lafferty	31
WIDEBAND FM vs. AM FOR AIRCRAFT, by I. R. Weir	34
AN IMPROVED CATHODE RAY OSCILLOSCOPE DESIGN, by William A. Geohagan	36
FILTER DESIGN CHARTS—III, by John Borst	41

DECEMBER, 1940

MINIATURE RADIOS	17
An investigation of the electrical and mechanical design problems underlying the "personal" radio sets	
ELECTRICALLY FOCUSED MULTIPLIER PHOTOTUBE, by J. A. Rajchman and R. L. Snyder	20
A secondary emission device that displays an overall current gain up to a million times and a maximum luminous sensitivity of 10 amperes per lumen	
CONNECTICUT POLICE F-M NETWORK, Part II, by Daniel E. Noble	28
AN AUDIO FREQUENCY V-T VOLTMETER, by Harry C. Likel	32
A circuit to extend the a-c voltage ranges of a typical analyzer test set to 15,000 cps, with high input impedance	
NEW FIELDS FOR MAGNETIC RELAYS, by Anthony B. Lamb	35
DIATHERMY MEASUREMENT TECHNIQUE, J. D. Kraus and R. W. Teed	39
SIGNAL RANGE OF HIGH FREQUENCY BROADCAST STATIONS	41
Theoretical range based on antenna height and effective power, for the range from 42 to 50 mc, particularly adaptable to f-m transmissions, compiled by the FCC Engineering Department	

JANUARY, 1941

- SOUND IN MOTION PICTURES**, by Nathan Levinson 16
A review of the progress in recording methods and equipment in the movies from 1927 to the present
- A DEMONSTRATION SYSTEM FOR FREQUENCY MODULATION**, by Marvin Hobbs 20
A complete low power f-m broadcast station for use in demonstrating f-m receivers when high quality programs are not available from local stations
- LOUDSPEAKER DIVIDING NETWORKS**, by J. K. Hilliard 26
- NEW INDUSTRIAL TUBE CONTROL CIRCUITS**, by Gilbert Smiley 29
Unusual tube circuits, applicable to industrial control problems
- SINE WAVES IN RC OSCILLATORS**, by Paul S. DeLaup 34
FIRE PROTECTION IN BROADCASTING, by Harry Grant 38
A PHOTOTUBE VAPOR ANALYZER, by V. F. Hanson 40
R-F MATCHING SECTIONS, by A. C. Omberg 43

FEBRUARY, 1941

- NTSC PROPOSES TELEVISION STANDARDS** 17
IMPULSE NOISE IN F-M RECEPTION, by V. D. Landon 26
MAGNETIC CONTACT RELAYS, by Anthony H. Lamb 31
- BINAURAL TRANSMISSION ON A SINGLE CHANNEL**, by Austin V. Eastman and John R. Woodyard 34
Two sets of sidebands, out of phase with each other by 90 degrees, are transmitted on a single channel. The two signals are separated in the receiver and fed to separate audio channels
- SOUND IN MOTION PICTURES—II**, by Nathan Levinson 37
BROADCASTING "ON LOCATION", by Donald F. Langham 40
- RECEIVER INTERFERENCE CHART**, by J. J. Adams 43
A reference sheet plotted for easy determination of the types of beat-frequency interference likely to occur in a two-gang receiver tuned to any frequency in the broadcast band

MARCH, 1941

- FANTASOUND** 18
New tricks in the sound reproduction field applied to Walt Disney's "Fantasia"
- MUSCULAR PARALYSIS INDUCED BY ELECTRIC CURRENTS**, by C. F. Dalziel and J. B. Logen 22
Amount of current, from dc to 10,000 cps, required to induce loss of control of the wrist muscles
- ELECTRONICS APPLIED TO PACKAGING MACHINERY**, by E. F. Cornock 24
- RADIOS FOR THE TROPICS**, by W. A. Stewart 28
THE SOLOVOX, by F. D. Merrill, Jr. 30
A COUNTING AND INTEGRATING CIRCUIT, by G. W. Kenrick 33
- TRACING TUBE CHARACTERISTICS BY OSCILLOGRAPH**, by Jacob Millman and Sidney Moskowitz 36
Simple amplifier system for applying tube characteristic data to a fluorescent screen, permitting dynamic testing
- RADIO FOR EMERGENCY USE IN PUBLIC UTILITIES**, by G. G. Langdon 40
Supplementing the carrier telephone system of a large powerline system in Ohio and Indiana
- INSERTION LOSS IN FILTERS**, by J. Kritz and E. L. Gruenberg 45

APRIL, 1941

- CBS CAMERA FOR COLOR TELEVISION** Cover
GROUNDWORK LAID FOR COMMERCIAL TELEVISION 18
Report of the FCC hearing at which the NTSC standards received industry support
- VACUUM TUBES IN PETROLEUM RESEARCH—I**, by C. J. Penher and D. J. Pompeo 20
WATER-COOLED RESISTORS FOR UHF, by G. H. Brown and J. W. Conklin 24
- A NEW USE FOR X-RAYS IN INDUSTRY**, by R. C. Woods and L. P. Kenna 29
Measuring the ionization caused by x-rays passing through objects undergoing inspection is the basis of an automatic control system
- INDUCTIVE TUNING FOR UHF**, by B. V. K. French 32
Advantages in higher Q, longer tuning range, and noise-free operation are shown for the rotating-coil tuner
- AN F-M SIGNAL GENERATOR**, by A. W. Barber, C. J. Franks and A. G. Richardson 36
- A SIMPLE TELEVISION PREAMPLIFIER**, by Ricardo Muniz and Andrew Tait 39
A three stage r-f amplifier with a gain of about 20 provides better signal-to-noise ratio in regions of low signal strength
- GRAPHICAL METHOD OF SOLVING RECTIFIER CIRCUITS**, by W. K. H. Panofsky and C. F. Robinson 42
- FACSIMILE DESIGN CHART**, by Raymond R. Haugh 45
An alignment chart for use in scanning equipment design

MAY, 1941

- F-M TRANSMITTER MEASUREMENTS—I**, by H. P. Thomas 23
VOLTAGE MULTIPLIER RECTIFIER CIRCUITS, by D. L. Waidelich 28
PUSH-BUTTON SWITCHING FOR LOW LEVEL CIRCUITS, by H. H. Wood 32
EXPERIMENTAL DUO-PENTODE, by Maxwell K. Goldstein 34
30- TO 340-MC WAVEMETER, by E. L. Hall 37
- AUDIO AND VIDEO SIGNALS ON A SINGLE CARRIER**, by Heinz E. Kallmann 39
Audio and video signals are each transmitted part of the time, the audio during the timing pulses of television signal. Theoretically the audio range goes up to 7875 cps for a 525-line, 30-frame picture
- ELECTRON TUBES IN PETROLEUM RESEARCH—II**, by C. J. Penher and D. J. Pompeo 43
- A RECORD PATTERN-WIDTH RULER**, by Don R. King 47
A ruler on which the diffraction pattern of a record is read directly in decibels above or below a standard level

JUNE, 1941

REFERENCE AND DIRECTORY ISSUE

JULY, 1941

- FIVE YEARS OF INDUSTRIAL ELECTRONICS**, by Ralph A. Powers 17
VARIABLE EQUALIZER AMPLIFIER, by Henry A. Rahmel 26
INTERNATIONAL SHORT WAVE FACILITIES OF CBS, by A. B. Chamberlain 30
HYPEX HORNS, by Vincent Salmon 34
F-M MEASUREMENTS—II, by H. P. Thomas 36
- BANDWIDTH FACTORS FOR CASCADE TUNED CIRCUITS**, by C. E. Dean 41
Rapid graphical and tabular method of determining the bandwidth for single and paired cascade tuned circuits

AUGUST, 1941

- 5-KW TRANSMITTER, KCMO, USING DIRECTIONAL ANTENNA**, by L. C. Sigmon 18
FREQUENCY RESPONSE CURVE TRACER, by S. F. Carlisle and A. B. Mundel 22
PHOTOGRAPHIC ANALYSIS OF TELEVISION IMAGES, by Donald G. Fink 24
Overall dynamic tone reproduction characteristics of television receiver can be analyzed by photographic methods using miniature camera
- SYNCHRONIZED VOLTAGES FOR BIOELECTRIC RESEARCH**, by Harold Goldberg 30
An electric stimulus is applied to muscle tissue and a synchronized sweep voltage is fed to a cathode-ray oscilloscope to record potential impulses of short duration
- FIVE YEARS OF INDUSTRIAL ELECTRONICS, II**, by Ralph A. Powers 33
NOISE AND INTERFERENCE IN FREQUENCY MODULATION, by Stanford Goldman 37
Mathematical and graphical analysis of interference and noise encountered in f-m systems
- FREQUENCY RESPONSE OF PARALLEL L-C CIRCUIT**, by Myrll B. Reed 43
Analysis shows the resonance and phase conditions of wave trap for different relative values of L, C, and R

SEPTEMBER, 1941

- INTERCOMMUNICATION USING ELECTRONIC INTERLOCKING**, by Harold J. McCreary 30
GAS CONTROL TUBES, by W. E. Bahls and C. H. Thomas 33
Hot cathode gas tetrodes of high stability and sensitivity, capable of handling powers up to 65 watts
- ELECTRONICS IN AUDITORY RESEARCH**, by David M. Speaker 38
ANTENNAS FOR F-M RECEPTION, by Julius G. Aceves 42
REGULATED SELENIUM RECTIFIERS, by J. E. Yarmack 46
PRESELECTION IN INEXPENSIVE RECEIVERS, by E. B. Passow 50
DESIGN OF ELECTRONIC HEAT GENERATORS, by Eugene Mittelman 51

OCTOBER, 1941

- DEVELOPMENT OF GLASS BASE RECORDING DISC**, by C. J. LeBel 27
CHARACTERISTICS OF FLUORESCENT MATERIALS, by L. H. Stauffer 32
- INTERPOLATION OSCILLATOR**, by D. R. Tibbetts 35
A quartz crystal oscillator as a secondary frequency standard and a direct reading interpolation oscillator with linear calibration
- POWER FACTOR METER**, by Alexander B. Bereskin 38
A gas tetrode, operated as a phase controlled rectifier

EQUIPMENT FAILURE ALARM , by E. G. Cook and A. H. Peterson	44
A program failure alarm unit for broadcast stations	
STORAGE PRINCIPLE IN TELEVISION , by A. H. Rosenthal	46
TECHNIQUE OF OBTAINING TUBE DATA , by C. C. Street	50
Simplification of oscilloscope methods	
FREQUENCY DEVIATION MEASUREMENTS , by L. N. Holland and L. J. Giacolleto	51
A graphical method for determining frequency deviation of f-m transmitters	

NOVEMBER, 1941

A-C OPERATED D-C AMPLIFIER , by Stewart E. Miller	27
POWER AMPLIFIER PLATE TANK CIRCUITS , by Arvid B. Newhouse	32
An analysis of tank circuits of amplifiers designed for broadcast service	
MILLION-VOLT INDUSTRIAL RADIOGRAPHIC UNIT	36
A multisection, hot cathode tube, forming an integral part of a million-volt resonance transformer, is used to provide industry with new and better methods of making radiographic analyses	
MERCURY TUBES WITH DIELECTRIC IGNITERS , by Hans Klemperer	38
PHASE SHIFTING UP TO 360 DEGREES , by F. Alton Everest	46
PYROMETER CONTROL CIRCUIT , by Fred B. MacLaren	50
Replacing magnetically operated contactors with electron tube control equipment	
ATTENUATOR DESIGN , by Dawkins Espy	51
PHOTOELECTRIC COOLING CONTROL , by Philip Ewald	55
A photoelectric relay is used to control the flow of cooling water in accordance with the temperature of ore as it passes along a conveyor	

DECEMBER, 1941

THE GEIGER MUELLER TUBE , by Paul Weisz	18
A VERSATILE OSCILLOSCOPE , by W. E. Gilson	22
WABC'S NEW TRANSMITTER	25
PANORAMIC RADIO ADAPTER	36
A new instrument for attachment to a conventional superheterodyne receiver provides information about signals on either side of the frequency to which the receiver is tuned	
SWEEP CIRCUIT AND DEFLECTION AMPLIFIER , by William A. Geohagan	38
VECTOR COMPUTATIONS , by Paul Klipsch	41
Easy and rapid transformation of complex quantities from Cartesian coordinates to polar form and vice versa	

JANUARY, 1942

30-40 MC MOBILE RECEIVER , by H. K. Lawson and L. M. Belleville	22
An a-m receiver developed for use by the U. S. Forest Service under conditions of heavy ignition interference	
BALLAST TUBE VOLTAGE REGULATORS , by S. Gordon Taylor	26
SUPER-CARDIOID DIRECTIONAL MICROPHONE , by B. B. Bauer	31
PHOTOFASH SYNCHRONIZER TESTER , by P. A. Marsal	34
RECTILINEAR RECTIFICATION APPLIED TO VOLTAGE INTEGRATION , by S. S. Stevens	40
Non-linear rectifiers combined to produce rectilinear rectification and used in conjunction with a capacitor charging circuit to provide a voltage integrator with linear response	
COMMON MISAPPLICATIONS OF GASEOUS TUBES , by W. W. Watrous and D. E. Marshall	42
TRANSMISSION LINE GRAPHS , by Bernard Salzberg	47

FEBRUARY, 1942

THE RHEOTRON—A NEW ELECTRONIC DEVICE	22
A new, doughnut-shaped whirling speeds up electrons in the newest approach to atom smashing	
RECORD CHANGER DESIGN	24
TRACKING PROBLEM IN SUPERHETERODYNES , by Rinaldo De Cola	29
USES OF POWDERED IRON CORES IN RADIO COMMUNICATION	35
ELECTRON TUBES FOR PREVENTION OF INTRUSION	38
SKIN EFFECT FORMULAS , by J. R. Whinnery	44
IMPEDANCE CALCULATIONS FOR ECCENTRIC LINES , by George H. Brown	49
CHARACTERISTIC IMPEDANCE OF ECCENTRIC LINES , by William Barclay and Karl Spangenberg	50

MARCH, 1942

TELEVISION , by Noran E. Kersta	26
Summary of the first six months of commercial television, with special emphasis on the use of television in training civilian defense personnel	
EMBOSSER GROOVE RECORDING , by Lincoln Thompson	30
AUTOMATIC MONITOR CIRCUIT , by Frank Marx	39
A MODERN 10-KW F-M TRANSMITTER , by E. S. Winlund and C. S. Perry	40
THE ELECTROPLANE CAMERA	44
Lens system is oscillated electronically to permit alteration of focal length without change in image size	
L-TYPE IMPEDANCE TRANSFORMING CIRCUITS , by Phillip H. Smith	48

APRIL, 1942

NON-METAL SHIELDS , by Bernard H. Porter	33
Application of colloidal graphite as a metal substitute in certain problems in manufacturing or in research	
CHECKING AUTO BREAKER-POINTS BY ELECTRONICS , by G. V. Eltgroth	34
ULTRAHIGH FREQUENCY TECHNIQUE	37
A resume of uhf methods and techniques prepared especially for the man with a knowledge of radio, but who may be new to problems encountered at frequencies above approximately 100 mc	
I. RADIATING SYSTEMS AND WAVE PROPAGATION , by A. G. Kandoian	39
II. GENERATORS FOR UHF WAVES , by I. E. Mourontseff, R. E. Retherford and J. H. Findley	45
III. UHF RECEPTION AND RECEIVERS , by Beverly Dudley	51
IV. WIDE BAND AMPLIFIERS AND FREQUENCY MULTIPLICATION , by D. L. Jaffe	56
V. MEASUREMENTS IN THE UHF SPECTRUM , by R. F. Lewis	63

MAY, 1942

PENNSYLVANIA TURNPIKE COMMUNICATIONS	34
\$300,000 AM-FM radio installation provides two-way uhf communications over entire length of 161-mile long road through mountainous terrain	
THE FLUXGRAPH , by Paul G. Weiller	52
Automatic machine for plotting the magnetic fields of coils	
AUTOMATIC BLOOD PRESSURE RECORDER , by W. E. Gilson	54
F-M CARRIER CURRENT TELEPHONY , by Braulio Dueno	57
Simple 70 kc transmitter with narrow-band reactance tube modulation and a companion receiver for communication over power company high lines	
HIGH FREQUENCY SWEEP GENERATOR , by E. J. H. Bussard and T. J. Michel	58
Instrument of aid in alignment of f-m receivers using over-coupled, double-tuned circuits	
ELECTRONIC PHASE-ANGLE METER , by Edward L. Ginzton	60
INDUCTANCE OF SINGLE LAYER SOLENOIDS , by Thomas C. Blow	63

JUNE, 1942

REFERENCE AND DIRECTORY ISSUE	
SECTION I INDUSTRIAL TUBE CHARACTERISTICS	52
SECTION II TUBES AND THEIR FUNCTIONS	61
SECTION III TUBES AT WORK	70
ELECTRONICS DIRECTORY OF MANUFACTURERS	D-1 to D-37

JULY, 1942

PLASTICS AS DIELECTRICS , by John Sasso	26
HEARING AID DESIGN , by Ira Kamen	32
FLEXIBLE EQUALIZER AMPLIFIER , by E. G. Cooks	36
TRANSITRON OSCILLATOR AND AMPLIFIER , by Stanley R. Jordan	42
PERIODIC WAVE FORM ANALYSIS—PART I , by H. M. Lewis	44
GRAPHICAL ANALYSIS OF SAW TOOTH WAVE FORMS , by Ulrich Furst	49

AUGUST, 1942

ELECTRONIC WELDING CONTROL , by H. L. Palmer	36
UNSYMMETRICAL ATTENUATOR NETWORKS , by P. M. Honnell	41
ELECTRONIC SWITCHING IN POWER LINE CARRIER CIRCUITS , by J. D. Booth	44
PERIODIC WAVE FORM ANALYSIS, PART II , by H. M. Lewis	48
BAND PASS AND ELIMINATION FILTERS , by H. Holubow	54
PROPAGATION CONSTANT AND CHARACTERISTIC IMPEDANCE OF NON-LOSS LINES , by K. Spangenberg	57

SEPTEMBER, 1942

- ELECTRICAL CONCEPTS AT UHF**, by Simon Ramo 34
- OSCILLATOR FOR REMOTE CONTROL**, by Howard C. Lawrence 42
A single pentode acts as combined oscillator and reactance tube, permitting variation of generated frequency by voltages applied to the tube
- MODULATION RELATIONS**, by August Hund 48
A discussion of the physics underlying the three types of modulation, with means of determining the band width spectrums produced
- SEAM AND PULSATION WELDING CONTROLS**, by M. E. Bivens 55
CIRCUIT FOR C-R PHOTOGRAPHY, by Howard C. Roberts 59
SIMPLIFIED INDUCTANCE CHART, by E. L. Purington 61

OCTOBER, 1942

- RADIATION INSTRUMENTS SING GEIGER MUELLER TUBES**, by Paul Weisz 44
- APPLICATIONS OF CATHODE-RAY TUBES**, by Beverly Dudley 49
A survey of the more important applications of cathode-ray tubes with an outline of tube operation as related to scanning systems
- PHASE SHIFTING AND AMPLITUDE CONTROL NETWORKS**, by Wm. S. Duttera 53
- TEMPERATURE MEASUREMENT AND CONTROL BY ELECTRONICS**, by Craig Walsh 56
- SPECIAL WELDING CONTROLS**, by M. E. Bivens 62
- REACTANCE TUBES IN F-M APPLICATIONS**, by August Hund 68
- T TO PI TRANSFORMATION SIMPLIFIED**, by H. Stockman 72
- ELECTRONIC COUNTER FOR RAPID IMPULSES**, by Bertram Wellman and Kenneth Roeder 74
- SIMPLIFIED COPPER WIRE CALCULATIONS**, by Leonard Tulaskas 75

NOVEMBER, 1942

- RECORDING MACHINERY NOISE CHARACTERISTICS**, by H. D. Brailsford 46
- SYMMETRICAL ELECTRICAL SYSTEMS, PART I**, by E. S. Purington 54
A special method for determining the characteristics of four-terminal networks which are structurally and electrically symmetrical
- NAZI AIRCRAFT RADIO**, by John H. Jupe 58
- ELECTRICAL REMOTE CONTROL, PART I**, by C. J. Dorr and L. N. Galton 60
- TIMERS FOR WELDING CONTROL**, by S. A. Clark 65
- AN INSTRUMENT FOR MEASURING SURFACE ROUGHNESS**, by Charles K. Gravley 70
- SUPERHETERODYNE TRACKING DESIGN SIMPLIFIED**, by P. C. Gardiner 74
- IMPEDANCE CURVES FOR SOME COMMON NETWORKS**, by V. L. Eudis 76

DECEMBER, 1942

- ELECTRON TUBE TERMINOLOGY**, by W. C. White 42
- AIRCRAFT ANTENNA CHARACTERISTICS**, by Paul J. Holmes 46
Charts permitting reactance and radiation resistance of a fixed aircraft antenna to be estimated
- GRAPHICAL DETERMINATION OF POWER AMPLIFIER PERFORMANCE**, by R. I. Sarbacher 52
By means of a simple two-piece plastic calculator, used with static curves of power tubes, the complete performance of Class B and Class C amplifiers can be determined
- CIRCUIT ELEMENTS IN ELECTRICAL REMOTE CONTROL, PART II**, by C. J. Dorr and L. N. Galton 57
- SIMPLE HARMONIC WAVE ANALYZER**, by R. F. Thomson 61
Second and third harmonic distortion can be read directly in percentage of the fundamental frequency through use of simple amplifier-filter-rectifier device
- ENERGY STORAGE WELDING CONTROLS**, by G. L. Rogers 63
AN EXPERIMENTAL TELEVISION SYSTEM, by Robert Mautner and Frank Somers 68
A description of a 114-mc television video transmitter and associated receiving equipment, with particular emphasis upon the practical problems involved in design, construction and operation
- ELECTRONICS IN INDUSTRIAL TEMPERATURE INSTRUMENTATION**, by M. F. Behar 72
- IMPEDANCE OF SOME SIMPLE ELECTRICAL CIRCUITS**, by Beverly Dudley 75
Admittance and magnitude and phase of impedance of simple electrical circuits in graphical form

JANUARY, 1943

- TINPLATE PRODUCTION AIDED BY ELECTRONIC GENERATORS**, by H. C. Humphrey 56
Induction heating units producing hundreds of kilowatts of power are used to reflow electrolytically deposited tin. Process saves more than half of tin formerly used

- PLANT PROCEDURE FOR EXPEDITING WAR PRODUCTION** 60
War production speeded for Alden Products by adoption of new method of tracing orders, classifying raw materials and sub-assemblies according to priority and ultimate use
- ELECTRON MICROSCOPE IN CHEMISTRY**, by V. K. Zworykin 64
REACTANCE NETWORKS WITH RESISTANCE TERMINATIONS, by E. S. Purington 69
- WARTIME DEVELOPMENTS IN CARRIER CURRENT COMMUNICATION**, by G. Abraham 76
- CHECKING RESISTANCE WELDING CONTROLS**, by Barton L. Weller 78
- RADIO SOUNDING IN THE UNITED STATES**, by C. B. Pear, Jr. 82
- APPLICATIONS OF ELECTRONICS TO PHYSIOLOGY**, by W. E. Gilson 86
- REDUCTION OF RECORD NOISE BY PICKUP DESIGN**, by A. D. Burt 90
- IMPEDANCE MAGNITUDE AND PHASE CHARTS**, by T. C. Blow 94
- A THRESHOLD RESONANT CIRCUIT TRANSFORMER**, by Marion R. Winkler 96

FEBRUARY, 1943

- AN AUTOMATIC PRODUCTION TESTER**, by D. A. Griffin and N. B. Smalley 58
Motor operated rotary switch in conjunction with a-c and d-c bridge compares electronic equipment coming off assembly line with standard, handling 120 circuits in 4 minutes
- VARIABLE WAVEFORM UNIT FOR TESTING ALUMINUM**, by H. Klemperer and J. W. Dawson 62
Electronically controlled resistance welding supply unit for the purpose of investigating the effects of welding current waveform in aluminum alloy resistance welding
- ADJUSTING SENSITIVE RELAYS**, by R. T. Fisher 70
- THE FLUX NAVIGATOR**, by D. D. Jones 74
The inductive field of a three-phase power line feeding WABC's transmitter on Columbia Island is used during foggy weather to guide the vessel transporting operating personnel
- SIMPLIFIED ELECTRON MICROSCOPY**, by C. H. Bachman 78
- TEST GENERATORS AND CHAMBERS**, by W. W. MacDonald 82
- AN ELECTRONIC CURVE TRACER**, by Philip Padva 87
- DESIGN CHART FOR SOLENOID INDUCTANCES**, by T. C. Blow 91

MARCH, 1943

- FUNDAMENTAL BEHAVIOR OF WAVE GUIDES**, by H. H. Skilling 76
- WAR PRODUCTION THEME OF IRE-AIEE CONFERENCE** 157
- NEW WORLD OF ELECTRONICS** 81
- SCIENCE OF TODAY** 84
- CORNERSTONE OF COMMUNICATION** 88
- NEW FORCE IN INDUSTRY** 116
- AID TO RESEARCH** 140
- PROMISE OF TOMORROW** 152

APRIL, 1943

- RECORDING UNIT FOR STRAIN AND TIMING FUNCTIONS**, by J. H. Meier 79
Two strain and twelve timing functions can be permanently recorded to indicate the performance of heavy machinery under conditions actually encountered in the field
- ADJUSTMENT OF DIRECTIONAL ANTENNAS**, by W. S. Duttera 91
FULL-WAVE RECTIFIER WITH CHOKE INPUT, by L. C. Tillotson and C. M. Wallis 94
- PERFORMANCE OF SELF-BIASED MODULATED AMPLIFIERS**, by R. I. Sarbacher 99
- ELECTRONIC REGULATORS FOR A-C GENERATORS**, by A. Benson 104
Two simple electronic control circuits requiring only one thyratron each

MAY, 1943

- ELECTRONIC TUBES FOR ULTRAVIOLET RADIATION**, by J. H. Laub 80
- MEASURING COIL CHARACTERISTICS**, by H. D. Brailsford 86
- FILM-RECORDING SEISMOGRAPH** 89
- THE EMISSIVE POWER OF TYPICAL GRID AND PLATE SURFACES**, by R. Szymanowicz 93
- PRECISION TUNING PROBLEMS IN UHF BROADCASTING**, by S. Y. White 94
Suggestions for making use of the u-h-f region of 60 to 200 mc for broadcasting by scanning the region constantly by electronic means, and by identifying individual stations with a tone signal
- ELECTRONIC CONTROL OF D-C MOTORS—PART I**, by E. E. Moyer 98
- NOTES ON NARROW BAND-PASS FILTERS**, by H. Holubow 104

JUNE, 1943

- NEW LABORATORY TECHNIQUES EXPEDITE TRAINING IN ELECTRONICS** 90
Pictorial demonstration boards speed laboratory work in electronics training courses

ELECTRONIC APPARATUS FOR VIBRATION TESTING, by R. O. Fehr and C. Schabtlach	94
AUTOMATIC TRANSMITTER PROTECTION, by Frank Marx	98
VAPOR TUBE RECTIFIER CIRCUITS WITH OPPOSING DIRECT VOLTAGES, by J. M. Fluke	100
LOW AND HIGH-PASS FILTERS, by E. S. Purington	106
ROLLED STEEL CORES FOR RADIO TRANSFORMERS, by C. C. Horstman	110
THE SWINGING FILTER CHOKE, by R. M. Hansen	112
ELECTRONIC CONTROL OF D-C MOTORS—PART II, by E. E. Moyer	119
ELECTRONICS DIRECTORY OF MANUFACTURERS (between pages 159-192)	D-1 to D-34
RADAR STORIES RELEASED BY U. S. AND GREAT BRITAIN	274

JULY, 1943

BUOY RADIOBEACONS FOR INSHORE NAVIGATION	88
Automatic Coast Guard transmitters guide ships having radio direction-finders through difficult waters	
TRANSMISSION LINE CHARTS, by R. F. Baum	92
FLUORESCENT INSPECTION OF TUNGSTEN, by S. A. Kulin	95
V-H-F RECEIVER OSCILLATOR DESIGN, by S. Y. White	96
RECORDING AUDIO ANALYZER	100
DETECTING SMALL MECHANICAL MOVEMENTS, by J. C. Frommer	104
Electronic measuring instrument detects movements as small as a millionth of an inch	
CALIBRATION OF CAMERA SHUTTERS WITH THE CATHODE-RAY OSCILLOGRAPH, by T. H. Bullock	106
QUARTZ CRYSTAL CUTS, by L. A. Eibl	110
ELECTRONICS APPLIED TO HEAT TRANSFER TESTS, by R. V. Brown	113
ELECTRONIC LOAD REGULATOR FOR METER TESTING, by B. E. Lenehan	116
ELECTRONIC CONTROL OF D-C MOTORS—PART III, by E. E. Moyer	118
DESIGN FOR DISSYMMETRICAL T PADS, by E. Y. Webb	123

AUGUST, 1943

POST-WAR CIVILIAN AVIATION RADIO PROSPECTS , by R. E. Ricketts	86
Review of pre-war status, discussion of proposed allocations, probable equipment needs	
AN ELECTRONIC SEWING MACHINE , by C. N. Hoyler	90
POWER OUTPUT OF A-C OPERATED AMPLIFIERS , by W. A. Schwarzmann	94
Methods of calculating the power output of triode and pentode amplifiers operated from a-c source	
DESIGN DATA FOR GROUND PLANE ANTENNAS , by H. W. Hasenbeck	98
Basic formulas for ground plane antennas, with an example for 33.78 mc and a 78-ohm line	
TEMPERATURE COMPENSATION OF INSTRUMENTS , by J. R. Pattee	102
Use of negative-coefficient resistors as series neutralizers	
POSITIVE GRID OR RETARDING FIELD OSCILLATORS , by R. I. Sarbacher and W. A. Edson	108
The operation of positive grid oscillators capable of producing frequencies up to 5000 mc explained	
ELECTRONIC EXCITER FOR A-C GENERATORS , by Arnold Benson and Ralph Heidbrak	112
IRON-CORE COMPONENTS IN PULSE AMPLIFIERS , by Reuben Lee	115
Analysis of square-top waves in terms of front-edge, flat-top and trailing edge characteristics	
UNIVERSAL EQUALIZER PROVIDES A-F AMPLIFIER DESIGN DATA	120
ELEMENTARY PARTICLES OF PHYSICS , by J. D. Stranathan	122
A summary of existing knowledge on the fundamental building blocks of the universe	
CHART FOR DETERMINING SQUARE ROOT OF COMPLEX NUMBER , by R. G. Nisle	127

SEPTEMBER, 1943

PLANNING A VHF COMMUNICATIONS SYSTEM , by J. A. Doremus	96
R-F HEATING SPEEDS PLASTIC MOLDING , by John P. Taylor	102
MILITARY FACSIMILE	108
METHODS OF DEPOSITING METALLIC FILMS , by Samuel Wein	110
PHOTOELECTRIC CONTACT PRINTER CONTROL , by C. J. Pen-ther and C. Weiske	114
MICROWAVE PLUMBING—PART I , by D. D. King	116
PRECISION STROBOSCOPIC FREQUENCY METER , by Earle L. Kent	120
THREE YEARS OF TELEVISION RELAYING , by R. L. Smith	122
A record of experience with the New York-Schenectady uhf link	
BAND-PASS WAVE FILTER UNITS , by E. S. Purington	126

ELECTRONICS BUYERS' GUIDE—June 15, 1946

A VARIABLE-FREQUENCY ELECTRONIC GENERATOR , by Dana A. Griffin	130
Device delivers 1400 watts at any frequency between 300 and 3500 cps	
ELECTRONIC CONTROL OF D-C MOTORS—PART IV , by E. E. Moyer	133
Φ OF UNLOADED CONCENTRIC TRANSMISSION LINES , by Robert Miedke	139

OCTOBER, 1943

PHOTOTUBE CONTROL OF PACKAGING MACHINES , by W. D. Cockrell	94
MOVING A 50-KW TRANSMITTER WITHOUT LOSS OF AIR TIME	100
How engineering teamwork will move WJZ, radio old-timer, to make room for four OWI stations	
AN A-C VACUUM TUBE VOLTMETER , by James N. Thurston	102
QUARTZ CRYSTALS IN PRODUCTION	105
Latest production techniques for quartz crystal units used in radio communication	
SPEECH SCRAMBLING METHODS , by William W. Roberts	108
Frequency inverter circuit and band-splitting methods for securing radiophone privacy	
WORK COILS FOR HIGH-FREQUENCY HEATING	112
MICROWAVE PLUMBING—PART II , by D. D. King	118
DESIGN PROBLEMS INVOLVING SENSITIVE RELAYS , by R. T. Fisher	125
ELECTRONIC CONTROL OF D-C MOTORS—PART V , by E. E. Moyer	128
CRYSTAL HOLDER DESIGN , by L. A. Eibl	134
CHARACTERISTICS OF RESONANT TRANSMISSION LINES , by J. B. Epperson	139

NOVEMBER, 1943

POST WAR F-M & TELEVISION , by B. Dudley	94
AIRCRAFT RADIO DESIGN , by A. F. Trumbull	98
AUTOMATIC CONTROL FOR BROADCAST TRANSMITTERS , by W. R. Sloat	102
R-F GUN FOR SPOT GLUING WOOD , by John P. Taylor	106
CATHODE FOLLOWER CIRCUITS , by Walther Richter	112
MASS SPECTROMETER AIDS RESEARCH , by John A. Hipple	120
ELECTRONIC MEGAPHONES	125
B-H CURVE TRACER FOR LAMINATION SAMPLES , by Robert Adler	128
PHASE-SHIFT OSCILLATOR DESIGN CHARTS , by Walter W. Kunde	132
RADIOGRAPHY AND X-RAY TUBE DESIGN , by J. Lempert	134
VISUAL DIRECTION FINDERS, PART I , by Donald S. Bond	140
SUPERHETERODYNE CONVERTER TERMINOLOGY , by Harry Stockman	144
TEMPERATURE COEFFICIENT OF QUARTZ CRYSTALS , by Norman L. Chalfin	147

DECEMBER, 1943

SUPPRESSING RADIO NOISE IN THE JEEP , by Frank E. Butler	96
OBJECTIVES FOR POST-WAR TELEVISION , by Worthington Miner	100
STRAIN GAGES , by D. M. Nielsen	106
METAL LOCATORS , by W. H. Blankmeyer	112
ADJUSTING UNEQUAL-TOWER BROADCAST ARRAYS , by G. H. Brown & J. M. Baldwin	118
PHOTOTUBES REGISTER PERFORATIONS ON U. S. STAMPS , by A. W. Hall	124
PERMANENT MAGNET DESIGN, PART I , by Earl M. Underhill	126
WIDE-RANGE ELECTRONIC GENERATOR , by E. Mittelmann, F. S. Grodins and A. C. Ivy	132
VOLUME COMPRESSOR FOR RADIO STATIONS , by George Φ. Herrick	135
IMPULSE GENERATOR FOR MEASURING HIGH-POWER TUBES , by J. H. Owen Harries	136
VISUAL DIRECTION FINDERS, PART II , by Donald S. Bond	140
UNIVERSAL WAVE GUIDE CHART , by Arthur B. Bronwell	147

JANUARY, 1944

R-F HEATING SETS GLUE IN LAMINATED AIRCRAFT SPARS , by John P. Taylor	96
P-M COMMUNICATION SYSTEM FOR CHICAGO SURFACE LINES , by B. Dudley	102
ELECTRON BOMBARDMENT IN TELEVISION TUBES , by I. G. Maloff	108
ELECTRONICS IN THE STUDY OF HEAD INJURIES , by Charles Sheer & John G. Lynn	112
Description of a promising electronic instrument for determining extent of brain damage due to concussion	
DESIGNING STABILIZED PERMANENT MAGNETS , by Earl M. Underhill	118
QUARTZ CRYSTAL FINISHING , by L. A. Eibl	122

ELECTRON DIFFRACTION ANALYSIS OF SURFACE FILMS, by Earl A. Gulbransen	126
ELECTRONIC LOCATOR FOR SALVAGING TROLLEY RAILS, by J. G. Clarke & Charles F. Spitzer	129
AN IMPROVED TRANSMISSION LINE CALCULATOR, by Phillip H. Smith	130
THE MULTIVIBRATOR—APPLIED THEORY AND DESIGN, PART I, by E. R. Shenk	136
PRODUCTION TESTER FOR TRANSMITTING TUBES, by P. M. Thompson	142
VISUAL DIRECTION FINDERS, PART III, by Donald S. Bond	144

FEBRUARY, 1944

ELECTRONIC DEHYDRATION OF FOODS, by V. W. Sherman	94
THERMIONIC RECTIFIER CIRCUITS, by Richard C. Hitchcock	102
NOTES ON TRANSFORMER DESIGN, by E. B. Harrison	106
Power and audio types designed to minimize generation and pickup of stray fields	
SYNCHRONIZING INDICATOR FOR ELECTRIC POWER SYSTEMS, by Kenneth C. Cook	110
Two cathode-ray tubes show out-of-step operation of a 60,000 kva frequency changer	
HIGH-SPEED SOLDERING WITH RADIO-FREQUENCY POWER, by John P. Taylor	114
FREQUENCY STABILITY OF TUNED CIRCUITS, by G. V. Eltgroth	118
Data concerning performance of coils tuned by air-dielectric capacitors and operated at high altitudes	
WIDE-BAND OSCILLOSCOPE, by E. H. Bartelink	122
Compact, portable unit with 9-in. screen, handling signals up to 4 mc	
MECHANICAL PROBLEMS OF PERMANENT MAGNET DESIGN, by Earl M. Underhill	126
PHOTOGRAPHING PATTERNS ON CATHODE-RAY TUBES, by Rudolph Feldt	130
INDUCTANCE BRIDGE FOR COMMUNICATIONS CIRCUITS, by Eugene Mittelman	138
THE MULTIVIBRATOR—APPLIED THEORY AND DESIGN, PART II, by Eugene R. Shenk	140
SIMPLE RC EQUALIZER NETWORKS, by Charles J. Merchant	146

MARCH, 1944

D-C AMPLIFIER DESIGN TECHNIQUE, by Edward L. Ginzton	98
A 337-MC FM STUDIO-STATION LINK, by Paul Dillon	104
R-F HEATING FOR FABRICATING WOOD AIRCRAFT, by John P. Taylor	108
VHF BEHAVIOR OF RADIO COMPONENTS, by E. L. Hall	114
Variation of power factor and apparent capacitance of radio components over vhf range from 27.5 to 200 mc	
RESONANCE IN MICA CAPACITORS, by A. P. Green and C. T. McComb	119
Chart gives lead lengths and capacitance values for series resonance in ultra high frequency applications	
SUPERSONIC FUNDAMENTALS, by V. J. Young	122
RC OSCILLATOR PERFORMANCE, by John H. Newitt	126
GAMMA-RAY MEASUREMENTS IN OIL WELLS, by Lynn G. Howell	130
THE MULTIVIBRATOR—APPLIED THEORY AND DESIGN, PART III, by Eugene R. Shenk	138
HARMONIC ANALYSIS OF OVERBIASED AMPLIFIERS, by Ulrich R. Furst	143

APRIL, 1944

RADIO FOR RAILROADS, by W. S. Halstead	92
A number of factors have fortuitously combined to promote the growth of the field	
MEDICAL ELECTRONIC PRACTICE AND RESEARCH, by John D. Goodell	96
Electro-shock therapy, electrical anesthesia, brain-wave recording and electrical measurements on living tissues	
FABRICATING WOOD AIRCRAFT "SKINS", by John P. Taylor	102
ELECTRONIC TIMER FOR MICROSECOND INTERVALS, by Paul B. Weisz	108
PHOTOELECTRIC INDUSTRIAL CONTROLS, by Harold J. Hague	114
EQUALIZER DESIGN, by Michael J. Di Toro	118
TEMPERATURE COMPENSATION, by Herbert Sherman	125
Analysis of an error appearing in variable-frequency tank circuits using ceramic padders	
FEEDBACK AMPLIFIER FOR C-R OSCILLOSCOPES, by G. Robert Mezger	126
PERMANENT MAGNET MEASUREMENTS, by Earl M. Underhill	135
CONSERVING SMALL TUBES IN AUDIO SERVICE, by C. A. Rackey	140
ELECTRONIC HEATING DESIGN CHART, by C. V. Fields	143

MAY, 1944

POLICE SATELLITE SYSTEM, by E. Stewart Naschke	94
Design of 60-deg corner reflector antennas to avoid interference	
INDUCTION HEATING OF SHELLS	97

AUTOMATIC CALIBRATOR FOR FREQUENCY METERS, by David Sunstein and Joseph Tellier	98
Calibrates Army SCR-211 frequency meter and prints settings for 3252 frequencies in individual books	
TURBO REGULATOR FOR MULTI-ENGINE AIRPLANES, by Willis H. Gille and H. T. Sparrow	108
RODOMETRIC EXAMINATION OF QUARTZ CRYSTALS, by Gerald J. Holton	114
CAPACITOR-DISCHARGE WELDING SYSTEMS, by Hans Klemperer	118
SUPERSONIC INSPECTION METHODS, by Boley A. Andrews	122
INVESTIGATION OF MAGNETIC TAPE RECORDERS, by M. C. Selby	133
LOW-LOSS CERAMICS, by R. Russell, Jr. and L. J. Berberich	136
Properties of zircon porcelains, steatites, ultra-steatites, high-tension porcelain and transparent fused quartz	
POWER FACTOR CORRECTION CHARTS, by Harry Holubow	143

JUNE, 1944

FUNGUS-PROOFING PROCEDURE, by R. Proskauer	92
A discussion of fungicides and the organic vehicles which hold them in place	
FREQUENCY MODULATION AND ITS POST-WAR FUTURE, by J. E. Brown	94
Analysis of probable growth in the five-year period after the close of the war	
AN ELECTRONIC TACHOMETER, ACCELEROMETER AND VIBROMETER	100
Test unit rapidly and accurately measures rotational speed, acceleration and vibration of gyroscope rotors	
UHF REPEATER STATION, by Maurice E. Kennedy	106
Unattended 312-mc transmitter relays 2,726-kc communications from isolated mountain dams to flood-control headquarters	
A FOUR-TUBE COUNTER DECADE, by John T. Potter	110
ACCURATE SORTING OF COLORED OBJECTS, by Leland L. Antes	114
Tiles emerging from kilns on conveyor-belts are automatically shuffled into proper bins	
STUDYING THERMAL BEHAVIOR OF HOUSES, by John G. Linvill and John J. Hess, Jr.	117
PHASING NETWORKS FOR BROADCAST ARRAYS, by C. Russell Cox	120
GRID-CONTROL OF GAS TUBES, by W. D. Cockrell	124
TRANSMISSION LOSS CHARTS, by Jack G. Roof	130

JULY, 1944

MILWAUKEE'S RADIO CITY	94
Description of modern combined studio and office building for f-m, a-m and television broadcasting	
PORTABLE AUDIO-FREQUENCY STANDARD, by William Fayer	100
SURFACE HARDENING OF METALS, by H. C. Gillespie	102
Steels processed by induction at radio frequencies exhibit superior wear and fatigue characteristics	
A STABLE DIRECT-COUPLED AMPLIFIER, by G. Robert Mezger	106
MEASUREMENT OF HIGH VACUUMS, by H. H. Zielinski	112
PHOTOELECTRIC PLETHYSMOGRAPH, by W. E. Gilson	116
Records state of fullness of blood vessels by measuring ear capacity, using unique direct-coupled amplifier	
COMPUTING CIRCUIT RESPONSE TO PULSES, by John B. Trevor, Jr.	122
DETECTING FIRE AT SEA	125
Photocell monitors air drawn in sequence from various spaces in ship, detecting first traces of smoke	
ANTENNA POWER DIVIDER, by Earle Travis	131
Chart shows correct network values for any desired division of currents in a two-element broadcast array	
POWER EFFICIENCY IN NONLINEAR TRANSMISSION SYSTEMS, by Harry Stockman	134
ELECTRONIC THERMOMETER, by Paul G. Weiller and Irving H. Blatz	138
Uses glass bulb, filled with organic material having high temperature coefficient, in a-c bridge circuit	
EFFECTS OF ELECTRIC SHOCK, by H. A. Poehler	140
THERMAL NOISE IN A PARALLEL RC CIRCUIT, by C. J. Merchant	143

AUGUST, 1944

ARMY AIRWAYS COMMUNICATIONS SYSTEM	98
ELECTRONIC COMMUNICATION FOR TRAINS, by William S. Halstead	102
Discussion of radio, rail-carrier and induction systems	
SYNCHRONIZED OSCILLATORS AS F-M RECEIVER LIMITERS, by C. S. Carnahan and Henry Kalms	108
CARRIER COMMUNICATION TO CRANE CABS, by M. L. Sneider	112

28-VOLT OPERATION OF RECEIVING TUBES, by C. Hammond E. Kohler and W. Lattin	116
CRYSTAL TESTING TECHNIQUES, by L. A. Eibl	120
EFFICIENCY OF INDUCTION HEATING COILS, by George H. Brown	124
PI NETWORKS AS COUPLED TANK CIRCUITS, by Frederic D. Schottland	140

SEPTEMBER, 1944

BRITISH COLUMBIA'S BROADCAST RELAY SYSTEM, by N. R. Olding	92
Low-power transmitters feeding power into wire lines serve listeners in remote Canadian valleys	
AUTOMATIC CONTROL OF STILLS, by R. E. Schrader and E. J. Wood	98
An electronic relay supervises water level and boiling-flask heater current	
SECONDARY ELECTRON RADIATION, by J. H. Owen Harries	100
PHOTOTUBE CONTROL OF FLUID FLOW, by Robert C. McNickle	110
A GENERATOR OF DAMPED MICROWAVES, by Angelo Montani	114
Spark discharges between metallic spheres develop 1/2 watt of r-f power at 7,000 mc	
ELECTRONICS IN PETROLEUM PLANTS, by F. P. Hochgesang and C. H. Schlesman	116
INFLUENCE OF FEEDBACK ON SOURCE IMPEDANCE, by Richard W. Crane	122
GAS-FILLED AND VACUUM CAPACITORS, by Herbert Michaelson	124
BEAM-BLANKING CIRCUIT FOR OSCILLOSCOPES, by Walther Richter	128
REMOTE MONITOR FOR DIRECTIONAL BROADCASTING, by M. A. O'Bradovick	131
SINGLE-INDUCTOR COUPLING NETWORKS, by C. T. McComb and A. P. Green	132
Performance in wide-band tuned amplifiers is analyzed and design curves are given for television applications	
IMPEDANCE MEASUREMENT WITH SQUARE WAVES, by Frank Rockett	138
MICROSECOND PULSE GENERATOR, by E. F. Kiernan	141
FILTER DESIGN FOR GRID-CONTROLLED RECTIFIERS, by Harold A. Thomas	142
VOLTAGE / db CONVERSION DEVICE, by Edwin Dyke	146
A simple two-piece transparent-plastic time saver readily interprets linear polar-coordinate graphs	

OCTOBER, 1944

GREAT LAKES SHIP RADIO SYSTEM	92
Lorain County Radio Corporation provides dispatching, weather and emergency communications	
AIRCRAFT VIBRATION ANALYZER, by F. G. Marble	98
FADING EFFECTS AT HIGH FREQUENCIES, by John B. Moore	100
LABORATORY OVEN TEMPERATURE CONTROL, by W. B. Ritchie Agnew	108
Movement of mercury in a thermometer varies oscillator plate current and operates relays	
ELECTRONIC AUTOPILOT CIRCUITS, by Willis H. Gille and H. T. Sparrow	110
Seven-tube amplifier unit energizes servo motors in response to gyro-produced a-c bridge signals	
CIRCUIT-CONSTANT CHECKER, by G. Zaharis	118
An inexpensive, easily built instrument for rough measurements of f, L, C, and Q	
FREQUENCY ALLOCATION FOR MULTI-CHANNEL SYSTEMS, by S. W. Lichtman	120
Analysis with design curves facilitates assigning frequencies so as to minimize cross-talk	
OPEN-GRID TUBES IN LOW-LEVEL AMPLIFIERS, by Robert J. Meyer	126
Omission of the grid leak reduces noise due to shot effect and thermal agitation	
VISUAL ALIGNMENT OF WIDE BAND I-F AMPLIFIERS, by H. A. Cook and Harold Moss	130
ROUNDED-EDGE CAPACITOR PLATES, by Samuel Sabaroff	134
CATHODE FOLLOWER CALCULATIONS, by Humbert P. Pacini	137
CIRCUIT RESPONSE TO NON-SINUSOIDAL WAVE FORMS, by P. T. Chin	138
DOUBLE-TUNED-TRANSFORMER DESIGN, by Dawkins Espy	142
Universal response curves facilitate design	

NOVEMBER, 1944

AUTOMATIC MAP TRACER FOR LAND NAVIGATION, by D. J. Faustman	94
Army's land equivalent of blind-flying apparatus uses a precision magnetic compass with electronic follow-up	
KLYSTRON OSCILLATORS, by A. E. Harrison	100
Comparison of theoretical operation of velocity-modulation oscillators with performance of 410-R/2K30 Klystron	
DUAL TIME SIGNAL AT WQXR, by Russell D. Valentine	108

ELECTRONICS BUYERS' GUIDE—June 15, 1946

LOCATION OF LINE FAULTS, by M. A. Honnell	110
CAPACITOR-MATCHING OSCILLATOR, by Harold H. Tepper	114
ARMY RADIO D-F NETWORKS, by Giltner Twist	118
FREQUENCY-SHIFT RADIOTELEGRAPH AND TELETYPE SYSTEM, by Robert M. Sprague	126
Improved signal-to-noise ratio for services using pulse transmission	
DIFFERENTIATING AND INTEGRATING CIRCUITS, by James G. Clarke	138

DECEMBER, 1944

REFLECTIVE OPTICS IN PROJECTION TELEVISION, by I. G. Maloff and D. W. Epstein	98
Description of projection cathode-ray tube system for home receivers, using new plastic correcting lens	
F-M CARRIER TELEPHONY FOR 230-KV LINES	106
F-M system with one-to-one deviation ratio rides through corona noise on California power line	
OSCILLOSCOPE FOR PULSE STUDIES, by Horace P. Atwood, Jr. and Robert P. Owen	110
Wideband amplifiers and special sweep and beam-blanking circuits facilitate pulse wave-form study	
AUTOMATIC TUNING SYSTEM FOR PREHEATING PLASTICS, by R. W. Gilbert	115
A CONTINUOUS-CONTROL SERVO SYSTEM, by J. T. McNaney	118
TRANSPORT AIRCRAFT ANTENNA CHARACTERISTICS, by E. F. Kiernan	126
MOBILE INDUSTRIAL X-RAY UNIT, by E. E. Charlton and W. F. Westendorp	128
RELAYS IN INDUSTRIAL TUBE CIRCUITS—Part I, by Ulrich R. Furst	134
TRANSMISSION-LINE CONVERSION TRANSFORMERS, by N. Marchand	142
LOADED PHASE-SHIFTING NETWORKS, by P. T. Chin	146

JANUARY, 1945

THE K-8 COMPUTING GUNSIGHT, by H. Erwin Hale	94
PULSE-TIME MODULATION, by E. M. Deloraine and E. Labin	100
MEASUREMENT OF VHF BURSTS	105
Tests confirm theory that sudden rises in strength of f-m signals are due to meteors	
MULTIPLE X-Y RECORDER FOR TESTING QUARTZ CRYSTALS, by George Keinath	106
PRACTICAL STRAIN-GAGE APPLICATIONS, by R. O. Fehr	112
QUARTZ ETCHING TECHNIQUE, by L. A. Eibl	120
QUALITY CONTROL IN TUBE MANUFACTURE, by Eugene Goddess	122
AUDIBLE AUDIO DISTORTION, by H. H. Scott	126
Technical justification for unfavorable listener reaction to so-called high-fidelity receivers	
ELECTRONIC ENGINE-PRESSURE INDICATOR, by J. W. Head	132
RELAYS IN INDUSTRIAL TUBE CIRCUITS—PART II, by Ulrich R. Furst	136
AMPLIFIER THEORY APPLIED TO REGULATORS, by John M. Cage	140
COUPLING COEFFICIENT CHART, by L. E. Pepperberg	144

FEBRUARY, 1945

PLANNING AN F-M STATION, by P. B. Laeser	92
DISK-SEAL TUBES, by E. D. McArthur	98
MEASURING THE ELASTICITY OF SYNTHETIC YARNS, by S. Silverman and J. W. Ballou	103
Dynamic method utilizing 10-kc sonic waves reduces errors due to plastic deformation	
CIRCULAR WAVE GUIDE FIELDS, by George R. Cooper	106
LOAD REMATCHING IN ELECTRONIC HEATING, by Eugene Mittelmann	110
Special auxiliary rematching circuits offset variations in load characteristics during heating cycle	
THE CAA INSTRUMENT LANDING SYSTEM—Part I, by Peter Caporale	116
TUBELESS PROBE FOR VTVM, by Howard L. Daniels	125
Use of a cathode-follower circuit in the input of a vtvm eliminates the customary probe-mounted tube	
A PHOTOELECTRIC GALVANOMETER AMPLIFIER, by Gabrielle Asset	126
REMOTE WATER-STAGE INDICATORS, by Maurice E. Kennedy	130
RELAYS IN INDUSTRIAL TUBE CIRCUITS—PART III, by Ulrich R. Furst	133
UHF CONVERTER ANALYSIS, by Harry Stockman	140
HIGH- AND LOW-PASS FILTER DESIGN, by C. J. Merchant	144

MARCH, 1945

A SQUARE-LOOP F-M ANTENNA, by John P. Taylor	96
INDUCTION HARDENING, by Otto Weitman	101
Rotation of work during rapid heating produces uniform case-hardening without soft spots	

171

DIRECT-READING COLOR DENSITOMETER , by Monroe H. Sweet	102
Nine-stage multiplier phototube provides sufficient sensitivity to check color film at three wavelengths	
ENGINEERING ASPECTS OF TELEVISION PROGRAMMING , by Virginia Meyer Bradley	107
Many more cameras per studio are needed to provide frequent viewpoint changes	
TRACKING ANGLE IN PHONOGRAPH PICKUPS , by B. B. Bauer	110
EFFECTS OF HUMIDITY ON TERMINAL-STRIP DESIGN , by Louis L. George	116
FREQUENCY-RESPONSE CURVE TRACER , by H. B. Shaper	118
Unit combines artificial voice and driven pen to chart frequency characteristics of acoustical equipment	
IMPROVED ELECTRON GUN FOR C-R TUBES , by L. E. Swedlund	122
CATHODE-RAY NULL DETECTOR FOR WIEN BRIDGE , by Charles Markey	125
CONTOURS OF CAPACITOR PLATES , by L. J. McDonald	126
Method of calculating capacitor plate contour to give desired capacitance variation	
THE CAA INSTRUMENT LANDING SYSTEM—PART II , by Peter Caporale	128
ZERO PHASE SHIFT AMPLIFIER , by L. R. Malling	136
DISCRIMINATOR LINEARITY , by L. B. Arguimbau	142
BAND-PASS FILTER DESIGN , by C. J. Merchant	146
Band-pass filter design tables for use with reactance slide-rule	

APRIL, 1945

THE RADAR EQUATION	92
Radiated power and receiver sensitivity are related to the distance and size of the detected object	
PRACTICAL ELECTRONIC INDUSTRIAL CONTROLS , by Paul G. Weiller	96
A 50-KW F-M TRANSMITTER , by Phil B. Laeser	100
WMFM, and its phase-shift modulator	
ELECTRONIC IGNITION SYSTEMS by G. V. Eltgroth	106
TEST SET FOR QUARTZ CRYSTALS , W. E. McNatt	113
DIELECTRIC-CONSTANT METER , by Frank C. Alexander, Jr.	116
Magic-eye tube is used as indicator-oscillator in a simple, unique differential-capacitance meter	
AUTOMATIC LIQUID LEVEL CONTROLS , by Theodore A. Cohen	120
RECEIVER WITH 2-MC I-F , by Harvey Kees	129
Complete circuit of five-tube receiver for high-quality local reception	
GEIGER COUNTER SPECTROMETER FOR INDUSTRIAL RESEARCH , by H. Friedman	132
GASEOUS RECTIFIER CIRCUITS—PART I , by P. T. Chin	138
DESIGN OF L-C PHASE-SHIFT NETWORKS , by Robert W. Woods	144
HYPERBOLIC CHART , by Perry Ware	148
Speeds conversion of complex numbers from hyperbolic to rectangular form	

MAY, 1945

ROCK ISLAND RAILROAD RADIO TESTS , by Ernest A. Dahl	96
Signal-to-noise ratios are charted for 40, 118, 150 and 2000 to 3000-mc systems	
ORBITAL-BEAM UHF TUBES , by Rogers M. Smith	103
SHIELDING OF DIELECTRIC HEATING INSTALLATIONS , by G. W. Klingaman and G. H. Williams	106
F-M FIELD SURVEY TECHNIQUES , by Phil B. Laeser	110
AGC-NOISE CONSIDERATIONS IN RECEIVER DESIGN , by John B. Moore	116
FUNGUS AND MOISTURE PROTECTION , by R. Proskauer and H. E. Smith	119
COAXIAL CABLE DESIGN , by N. O. Kenney	124
VHF DUMMY ANTENNA , by Stanley Cutler	129
GASEOUS RECTIFIER CIRCUITS, PART II , by P. T. Chin	132
FREQUENCY MONITOR STROBOSCOPE , by W. L. Wiggins and S. G. Guenther	138
PI-NETWORK CALCULATOR , by Warren B. Bruene	140

JUNE, 1945

ELECTRONIC WELDING OF GLASS , by E. M. Guyer	92
UHF IMPEDANCE MEASUREMENTS , by N. Marchand and R. Chapman	97
A PRE-TUNED TURNSTILE ANTENNA , by George H. Brown and J. Epstein	102
MOVING-COIL PICKUP DESIGN , by Theodore Lindenberg, Jr.	108
Description of dynamic pickup whose resonance peaks are beyond the usual audio range	
PREDIMENSIONING QUARTZ CRYSTAL PLATES , by B. P. Haines, C. D. O'Neal and S. A. Robinson	112
AUDIO MIXER DESIGN , by Richard W. Crane	120
INDUSTRIAL RADIOGRAPHY , by Wayne T. Sproull	122

THE BETATRON , by Theodore J. Wang	128
Comprehensive survey of induction electron accelerators, with basic design equations	
ARTIFICIAL DELAY-LINE DESIGN , by J. B. Trevor, Jr.	135
AIR TERMINAL SOUND SYSTEM , by William W. Brockway and Don C. Brockway	138
MEASURING R-F POWER WITH THREE AMMETERS , by J. L. Hollis	142
Chart speeds conversion of r-f ammeter readings into r-f resistance, reactance and power of load	
COMPUTING MUTUAL INDUCTANCES , by Michael J. DiToro	144

JULY, 1945

BROADCAST BAND SATELLITE TRANSMITTERS , by Ross H. Beville	94
PHOTOTUBE-CONTROLLED FLAME CUTTER , by David S. Walker	100
Scanning of small master drums guides oxyacetylene cutting of large steel sheets with high accuracy	
GRID EMISSION IN VACUUM TUBES , by Harold E. Sorg and George A. Becker	104
DUAL-TRIODE TRIGGER CIRCUITS , by Byron E. Phelps	110
Non-mathematical step-by-step description of the operation of the Eccles-Jordan circuit	
MEASUREMENT OF STRESSES IN ROTATING SHAFTS , by W. F. Curtis	114
Resistance-wire strain gages facilitate vibration analysis and fatigue strength calculations	
MAGNETOSTRICTION COMPASS , by R. G. Rowe	123
Electronic compass employing crystal pickups and vibrating magnetostrictive rods	
SUPERSONIC BIAS FOR MAGNETIC RECORDING , by Lynn C. Holmes and Donald L. Clark	126
IMPROVED VACUUM-TUBE VOLTMETERS , by J. T. McCarthy	137
STABILIZED NEGATIVE IMPEDANCES, PART I , by E. L. Ginzton	140

AUGUST, 1945

MOTOR NOISE UNIT FOR AIRCRAFT TRAINER , by Byron E. Phelps	96
Noise resembling that of an airplane motor is produced by a multivibrator and sub-harmonic generators	
REMOTE TUNING WITH REACTANCE TUBES , by H. Bard	100
Receivers tuned over a limited band, by direct current transmitted over telephone lines	
ELECTRONIC CONTROL FOR MAGNETIC CLUTCHES , by Ralph L. Jaeschke	102
Preset motor speed is maintained within 0.1 percent for all load variations up to full load	
F-M ANTENNA COUPLER , by John P. Taylor	107
Feeding an f-m antenna without shorting an a-m tower on which it is mounted	
INDUCTION AND DIELECTRIC HEATING EQUIPMENT	110
Performance and cost data on commercially available induction and dielectric heating equipment	
SURVEY OF D-C AMPLIFIERS , by Maurice Artzt	112
Causes of drift, performance characteristics of 12 different circuits, and oscilloscope applications	
HIGH-Q IRON-CORED INDUCTOR CALCULATIONS , by Stephen L. Javna	119
HARMONIC SUPPRESSION FOR AIRCRAFT GENERATORS , by F. W. Jaksha	124
STUDIO AND CONTROL-ROOM DESIGN , by William Reagh Hutchins	126
QUARTZ CRYSTAL IMPROVEMENTS , by C. W. Franklin	130
SQUARE-WAVE DIFFERENTIATING CIRCUIT ANALYSIS , by G. P. Ohman	132
STABILIZED NEGATIVE IMPEDANCES, PART II , by E. L. Ginzton	138

SEPTEMBER, 1945

POSTWAR ELECTRON TUBE BUSINESS , by W. C. White	92
Potential demand for receiving, transmitting and industrial types is estimated	
WIRE SPLICE DETECTOR , by F. S. Hird	98
Magnetic poles created at steel-wire discontinuities trigger an electronic circuit	
THE SCR-268 RADAR	100
TRANSIENT PEAK VOLTMETER , by C. Ryerson and M. Aronson	110
CANADA'S INTERNATIONAL SHORT-WAVE PLANT , by H. M. Smith	112
TIME-BASE CALIBRATION , by Walter W. Ludman	117
Circuit provides triggering and calibrating signals for sweep-linearity measurements	
ELECTRONICS AIDS IN WATERWAY DEVELOPMENT , by Eugene H. Woodman	120

INTERFERENCE IN F-M RECEIVERS , by Robert N. Johnson	129
Review of pertinent interference-suppression equations, and procedure for experimental verification	
RESTORER-CIRCUIT OPERATION , by Emanuel Last	132
How constant brightness is maintained in television receivers	
VIBRATION CONTROL FOR ELECTRONIC PRODUCTS	134
STABILIZED NEGATIVE IMPEDANCES, PART III , by E. L. Ginzton	140
DETERMINING Q OF CAPACITORS , by L. E. Pepperberg	146

OCTOBER, 1945

RADAR WARFARE	92
The technical factors behind the uses of the electronic device contributing most to victory	
FINGERTIP CONTROL FOR FORMATION FLYING , by D. G. Taylor and G. Volkenant	98
Newest accessory for C-1 electronic autopilot permits effortless maneuvering of largest bombers	
VHF MULTIPLE-RELAY PHILCO TELEVISION NETWORK , by F. J. Bingley	102
THE TECHNICAL BASIS OF ATOMIC EXPLOSIVES	109
Production and use of uranium-235 and plutonium	
CRACK DETECTOR FOR PRODUCTION TESTING , by John H. Jupe	114
DESIGN OF STABLE HETERODYNE OSCILLATORS , by John B. Moore	116
AUTOMATIC FADER , by Dan Hunter	119
MICROWAVE TECHNIQUES , by Frederic A. Jenks	120
BRIDGE NULL INDICATOR , by E. W. Herold	128
New circuit provides sensitivity with overload protection and visual indication of output	
COAXIAL CABLE TESTS , by Perry H. Ware	130
INDUSTRIAL TEST EQUIPMENT DESIGN , by Ted Powell	135
Why circuit analyzers used for heavy field-duty fail, and how to avoid it	
CRYSTAL-TUNED F-M RECEIVERS , by William Maron	138
GRAPHICAL ANALYSIS OF COMPLEX WAVES , by Larry S. Cole	142
Arithmetic combined with 6, 8, or 12 measurements gives equation and amplitudes of harmonics up to the sixth	
REACTOR MEASUREMENTS , by Howard L. Daniels	146
Circuit for measuring electrical parameters of iron-core inductors	
TRANSMISSION LINES AS TUNING ELEMENTS , by H. E. Newell, Jr.	150
Graphical determination of line length and shunting capacitance for resonance	

NOVEMBER, 1945

THE LORAN SYSTEM—PART I	94
NON-METALLIC MINE DETECTOR , by T. E. Stewart	100
THE SCR-584 RADAR—PART I	104
PROXIMITY FUZE	110
GROUND-CONTROLLED APPROACH FOR AIRCRAFT , by Captain C. W. Watson	112
Two radars and ground-to-plane radio bring pilots down safely in zero-zero weather	
RADAR SPECIFICATIONS	116
Constants of radar declassified by Signal Corps are tabulated and explained	
DIELECTRIC HEATING FUNDAMENTALS , by Douglas Venable	120
PLANE-TO-GROUND RADIO TELEMETERING , by David W. Moore, Jr.	125
System utilizing radio link permits reading altimeter from ground	
CRYSTAL-PICKUP COMPENSATION CIRCUITS , by B. B. Bauer	128
ELECTRONIC WATTMETER , by L. P. Malling	133
INDUSTRIAL X-RAY TUBES , Z. J. Atlee	136
SENSITIVITY LIMITS IN RADIO MANUFACTURING , by A. S. Blatterman	141
Procedure for finding economical control limits for receivers coming off production line	
WOOFER-TWEETER CROSSOVER NETWORK , by Paul W. Klipsch	144
MANUFACTURE OF SILVERED MICA CAPACITORS , by Alan T. Chapman	146
ARTIFICIAL ANTENNA , by Sidney Wald	150
PERMEABILITY TUNING , by W. J. Polydoroff	155
RESISTANCE MEASUREMENT AT HIGH IMPULSE VOLTAGES , by Scott L. Shive	158
MULTIPLE MAGNETIC CIRCUITS , by Joseph F. Manildi	160
Small magnets in parallel give higher field strength than an equivalent single magnet	
RESISTANCE-CAPACITANCE FILTER CHART , by Ernest Frank	164
SINGLE-SIDEBAND GENERATOR , by M. A. Honnell	166
Undersized sideband is balanced out without use of filters	
WINDING UNIVERSAL COILS , by A. W. Simon	170
ELECTRONICS DIRECTORY OF MANUFACTURERS (between pages 172 and 237)	D-1 to D-64

ELECTRONICS BUYERS' GUIDE—June 15, 1946

DECEMBER, 1945

FIRE-CONTROL RADAR MPG-1 , by H. A. Straus, L. J. Rueger, C. A. Wert, S. J. Reisman, M. Taylor, R. J. Davis, and J. H. Taylor	92
GENERATOR-POWERED PROXIMITY FUZE , by R. D. Huntoon and B. J. Miller	98
THE SCR-584 RADAR	104
LORAN RECEIVER-INDICATOR	110
GEOPHYSICAL PROSPECTING EQUIPMENT , by David Sheffet	116
VOLUME EXPANDER DESIGN , by Robert W. Ehrlich	124
CRYSTAL-DRIVEN MODULATOR FOR D-C AMPLIFIERS , by James A. Williams	128
A 1000-cycle oscillator excites a Rochelle-salt crystal that drives a carbon microphone	
CURVE-TRACER FOR ACOUSTIC DEVICES , by R. K. Hellmann	130
Details of production fixtures and curve tracer used to check handset receivers	
MACHINE GUN RATE-OF-FIRE INDICATOR , by Arvid D. Peterson	134
CHECKING UHF OSCILLATOR STABILITY , by L. E. Pinney	139
CASE STUDIES OF PRODUCTION , by Michael Lechner	140
Practical examples of efficient use of workers and their tools	
A-C GALVANOMETER , by Arthur L. Quick and Henry D. Hall	147
REDUCTION OF HETERODYNE INTERFERENCE , by H. W. Belles	150
ELECTRONIC TIMER FOR AIRCRAFT DE-ICER , by D. W. Bloser and G. R. Holt	152
VHF IMPEDANCE MEASUREMENTS , by D. Stanley Henry	156
Construction and operation of a Q-meter type instrument	
INTERFERENCE-FREE WEATHEROMETER , by W. B. Ritchie Agnew	160
Automatically accelerated weathering tests, with photoelectric measuring of results	

JANUARY, 1946

RADAR COUNTERMEASURES	92
Equipment for detecting and jamming enemy radar	
RADAR ON 50 CENTIMETERS, (TP S-3) by Harold A. Zahl and John W. Marchetti	98
VEHICULAR-MOUNTED MINE DETECTOR , by H. G. Doll, M. Lebourg, G. K. Miller	105
THE MPG-1 RADAR , H. A. Straus, L. J. Rueger, C. A. Wert, S. J. Reisman, M. Taylor, R. J. Davis, and J. H. Taylor	110
2,660-MC TRAIN COMMUNICATION SYSTEM , by E. A. Dahl	118
Microwave f-m system to be installed on Rock Island Railroad	
CAPACITOR-CHARGING RECTIFIER , by H. J. Bichsel	123
CAVITY MAGNETRONS	126
Microwave pulse generators capable of producing four million watts peak power at 3000 mc	
SUPERSONIC FLAW DETECTOR , by Ralph B. De Lano	132
MINIMUM ATTENUATION IN AIR-CORE WAVEGUIDES , by Edwin N. Phillips	137
Tabulation of design equations and graphical procedure for quickly finding optimum conditions	
PICKUP WITH LOW MECHANICAL IMPEDANCE , by Henry P. Kalmus	140
PULSE RESPONSE OF DIODE VOLTMETERS , by Allan Easton	146
ELECTRONIC A-C VOLTAGE REGULATOR , by L. Dale Harris	150
BRIDGING AMPLIFIER FOR F-M MONITORING , by George E. BEGGS, Jr.	152
BETATRON PULSING SYSTEM , by I. Paul and T. J. Wang	156
Circuit employs thyratron and ignitron to give 1,000-ampere pulse as capacitor discharges through orbit-shift coils	

FEBRUARY, 1946

THE RESNATRON , by Winfield W. Salisbury	92
Most powerful uhf oscillator tube in existence, used to jam German radar with 50 kw at up to 650 mc	
RADAR ON 50 CENTIMETERS , by Harold A. Zahl and John W. Marchetti	98
PROXIMITY FUZES FOR ARTILLERY , by Harner Selvidge	104
THE SCR-584 RADAR	110
GERMANIUM CRYSTAL DIODES , by E. C. Cornelius	118
THE TELERAN PROPOSAL , by P. J. Herbst, Irving Wolff, Douglas Ewing and Loren F. Jones	124
A radar-television system for aviation traffic control	
ELECTRONIC SHUTTER-TESTERS , by R. F. Redemski	128
CAVITY OSCILLATOR CIRCUITS , by A. M. Gurewitsch	135
AUDIO AID FOR VACUUM-LEAK HUNTING , by Victor Wouk	138
INSTANTANEOUS PROGRAM SWITCHING , by Joseph Zelle	142
TUBE-SEASONING TIMER , by M. Silverman	145
Unit for controlling time schedule of cathode-ray tube seasoning	
PRODUCTION CONTROL WITH 2,000,000-VOLT X-RAYS , by David Goodman	146
Continuous radiographic inspection of loaded shells and bombs	
MEASURING PULSE CHARACTERISTICS , by Allan Easton	150
THYRATRON STIMULATOR , by Walter I. Weiss	155
Thyratron-type relaxation oscillator provides 0.3 to 30,000-cps pulses	

173

DESIGN OF COMPACT TWO-HORN LOUDSPEAKER , by Paul W. Klipsch	156
For room corners where walls multiply mouth area of woofer	
EFFECTIVENESS OF CONDUIT AS R-F SHIELDING , by Scott L. Shive	160
Simple tester measures attenuation incurred by r-f electromagnetic field in passing through conduit wall	

MARCH, 1946

LORAN TRANSMITTING STATIONS	109
SENSORY AID FOR THE BLIND , by Lawrence Cranberg	116
R-F SOLDERING OF METAL-TO-GLASS SEALS , by R. A. Ammon	120
Use of small r-f generators energized by central d-c power pack boosts production	
GASEOUS DISCHARGE TUBES AND APPLICATIONS , by R. C. Hilliard	122
New crater-type modulator glow lamp for facsimile and new stroboscopes for flash photography	
ELECTRONIC RUBBER PREHEATER , by Eugene Mittelman and G. P. Bosomworth	128
Wartime tank-tread manufacturing equipment is converted to peacetime preheating of molded plastics and rubber	
FACSIMILE SYNCHRONIZING METHODS , by Daniel Schulman	131
ELECTROFORMING MICROWAVE COMPONENTS , by F. Hassell and F. Jenks	134
TELEPHONE AMPLIFIER , by Howard K. Van Jepmond	139
Two-way amplifier for use on long leased line between broadcast studio and transmitter	
THE MPG-1 RADAR , by H. A. Straus, L. J. Rueger, C. A. Wert, S. J. Reisman, M. Taylor, R. J. Davis, and J. H. Taylor	140
ELECTRODYNAMIC DIRECT-INKING PEN , by Harry B. Shaper	148
FUEL CONSUMPTION INDICATOR , by David W. Moore, Jr.	152
An accurate remote-indicating device to register liquid flow	
SUPERREGENERATIVE DETECTOR SELECTIVITY , by Allan Easton	154
HIGH-RESISTANCE D-C VOLTMETER , by D. L. Waidelich	158
Design of a reflex vtvm for measuring 1,000-megohm voltage sources	
WIRE LENGTH OF UNIVERSAL COILS , by A. W. Simon	162

APRIL, 1946

RADAR ECHOES FROM THE MOON , by Jack Mofenson	92
Techniques underlying the first recorded radio transmission through outer space	
SONAR FOR SUBMARINES , by R. S. Lanier and C. R. Sawyer	99
Technical details of JP sonar gear used for underwater listening and tracking of surface vessels	
PRINTED ELECTRONIC CIRCUITS , by C. Brunetti and A. S. Khourl	104
Silk-screen technique used for applying wiring directly on a steatite chassis	
COLOR TELEVISION FOR ULTRAHIGH FREQUENCIES	109
ULTRASONIC GENERATOR , by Frederick W. Smith, Jr. and Paul K. Stumpf	116
AFC FOR R-F HEATING , by S. Ivan Rambo	120
SPECTROGRAPH EXPOSURE CONTROL , by J. R. Cosby	123
Semi-automatic phototube device permits duplication of exposure despite arc variations	
VIBRATION AND SHOCK TESTING OF MOBILE EQUIPMENT , by John H. Best	126
F-M RADAR ALTIMETER	130
HIGH SPEED OSCILLOGRAPH , by N. Rohats	135
Direct optical-viewing film-recording oscillograph for studying high-speed transients	
GROUNDED-GRID POWER AMPLIFIERS , by E. E. Spitzer	138
Characteristics, advantages and design for television, f-m and industrial applications	
RADIUM-TYPE VACUUM GAGE , by Glenn L. Mellen	142
Alpha particles from pellet of radium ionize gas particles in linear relation to pressure	
TRANSIENT DELAY LINE , by John M. Lester	147
Graphical solution for inductance and capacitance in a network to delay pulses	
FOUR-CHANNEL ELECTRONIC SWITCH , by N. A. Moerman	150
Four waveforms are shown simultaneously on a cathode-ray tube when inputs are fed through a switching unit	
THE SONOBUOY	154
Expendable radio-equipped buoy used to detect submerged enemy submarines	
COAXIAL BUTTERFLY CIRCUITS , by Ervin E. Gross, Jr.	156
BEAT-FREQUENCY INTERFERENCE CHART , by Don Barton	162
Points in the standard band where interference may be heard from stations operating between 100 and 4,000 kc	

MAY, 1946

PATENT PUZZLE , by Donald K. Lippincott	92
Over 6,000 microwave patent applications were filed during the war, and few were issued	
MEASUREMENT OF OCEAN WAVES GENERATED BY ATOMIC BOMBS , by Norman J. Holter	94
Bikini Atoll test plans, instruments and methods	
ENGINEERING APPROACH TO WAVE GUIDES , by Theodore Moreno	99
WHERE COLOR TELEVISION STANDS , by Donald G. Fink	104
ELECTRONIC HEATING IN THE FURNITURE INDUSTRY , by E. S. Winlund	108
Applying high-frequency power to set bonding-glues in joints, core lumber and plywood	
JAPANESE MAGNETRONS , by Marvin Hobbs	114
RECORDING CAA TRAFFIC CONTROL INSTRUCTIONS , by K. M. MacIlvain	116
Flight instructions are automatically recorded on flexible belts suitable for permanent filing	
RADIOSONDE TELEMETERING SYSTEMS , by V. D. Hauck, J. R. Cosby and A. B. Dember	120
PULSE-MODULATED RADIO RELAY EQUIPMENT , by John J. Kelleher	124
Eight-channel multiplex radio communication equipment for links up to 200 miles long	
DESIGN DATA FOR BEADED COAXIAL LINES , by C. R. COX	130
TWO-TERMINAL OSCILLATOR , by Murray G. Crosby	136
RADAR FOR BLIND BOMBING—PART I , by J. V. Holdam, S. McGrath and A. D. Cole	138
Technical details of H2X airborne microwave radar	
GATE CIRCUIT FOR CHRONOGRAPHS , by L. B. Tooley	144
Two thyatron provide a simple switching system controlling a succeeding amplifier	
2-MC SKY-WAVE TRANSMISSION , by J. A. Pierce	146
Timing accuracy to within a few microseconds over long distances is possible with the nocturnal E layer	
CIRCUITS FOR SUBMINIATURE TUBE	154
Circuits for very small triode suitable for lightweight, compact applications	
PHASE-SHIFTER NOMOGRAPH , by Raymond E. Lafferty	158

JUNE, 1946

RAILROAD RADIO . . . FROM FCC TO ICC , by Jeremiah Courtney	92
ELECTRONIC NIGHT SIGHT	95
Infrared light illuminates target and special tube translates reflected light into visible image	
SELECTIVE CALLING SYSTEM , by J. K. Kulansky	96
Unwanted transmitters are locked off the air when the desired mobile units are dialed	
PHOTOELECTRIC SIGHT FOR SOLAR TELESCOPE , by Walter O. Roberts	100
Disc masking direct light is automatically centered so that corona photographs can be taken	
REMOTE RECORD-SELECTION SYSTEM , by Fred M. Berry	104
TORSIONAL MAGNETOSTRICTION PICKUP , by Stanley R. Rich	107
PHOTOELECTRIC CONTROLS FOR COLOR PRINTING , by J. Robins and L. E. Varden	110
Electronic controls make possible high-speed production of color prints from transparencies	
PULSE-TYPE RADIO ALTIMETER , by Albert Goldman	116
ELECTRONIC CODE TRANSLATOR , by Horace W. Babcock	120
Code signals are caused to appear as letters and numerals on a moving screen	
REENTRANT PENTODE A-F AMPLIFIER , by Robert Adler	123
Special pentode is operated as two triodes in cascade to give gain of 500 with 45-volt supply	
ULTRASONIC TRAINER CIRCUITS , by Finn J. Larsen	126
Electronic circuits and a 15-mc ultrasonic beam rotating over underwater map simulate ppi patterns	
TRANSIENT VIDEO ANALYZER , by Clement Moritz	130
Cathode-ray test set checks performance of wide-band amplifiers used in television equipment	
WAVE GUIDE TRANSMISSION SYSTEMS , by Theodore Moreno	136
H2X RADAR FOR BLIND BOMBING—PART II , by J. V. Holdam, S. McGrath and A. D. Cole	142
THEORETICAL SIGNAL-TO-NOISE RATIOS , by J. Ernest Smith	150
Noise comparison between frequency and amplitude modulation systems	

Langevin Audio Facilities... from the simplest unit to a complete system are high in quality and dependable in service.

Worthy of an Engineer's Careful Consideration

LANGEVIN ENGINEERING includes design, manufacture, assembly, testing, and installation supervision of complete audio systems for—

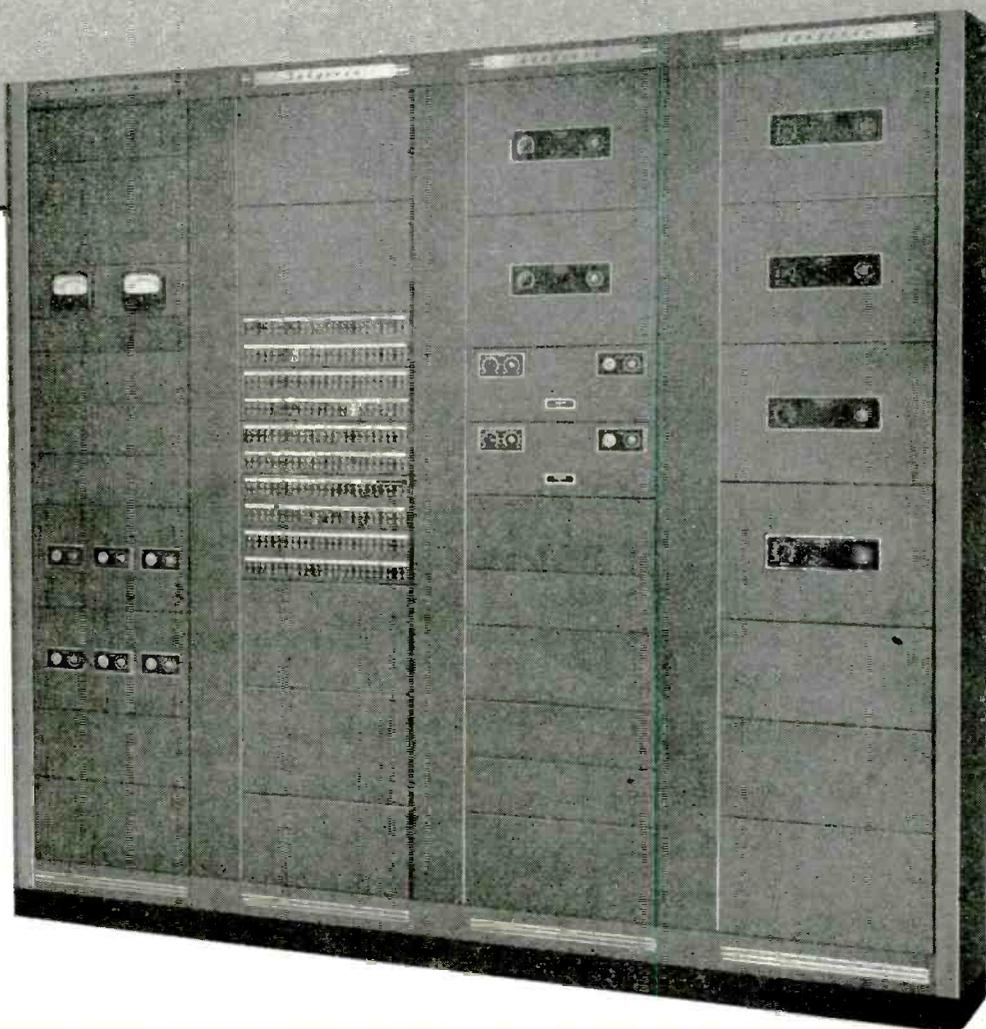
RADIO STATIONS—studios—master control equipment—transmitter audio amplifiers—monitor systems, etc.

WIRED MUSIC INDUSTRY—complete studio and subscriber equipment.

SOUND SYSTEMS—airports—sport arenas—clubs—churches, etc., indoors and outdoors.

FACTORIES, MILLS, OFFICES, ETC.—music distribution and paging systems.

HOTELS—complete room systems—dining rooms—banquet and ball rooms, etc.



ASSEMBLY and MOUNTING ACCESSORIES

Shown below are various units which are used in complete assemblies, whether rack or cabinet mounting.

3-A FRAME—Permits mounting 102, 106, 111 and 114 Series Amplifiers and/or the 201 Rectifiers, each on a third of this frame, which then may be mounted vertically in a standard rack or inserted in a 201-A Cabinet for wall or table mounting. Requires 10½ in. of rack space.



BLANK MAT PANELS

Panels in various sizes from 1¾ in. to 12½ in. can be supplied in 1¾ in. multiples. Finished in aluminum grey.

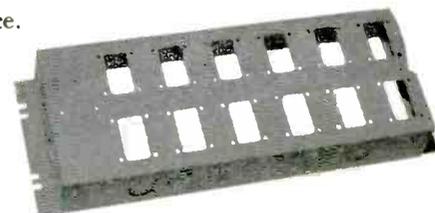


TYPE 3 TERMINAL STRIP SERIES

consists of:

- 3-A— 80 terminals 2 rows 40 each
- 3-B—120 " 3 " 40 each
- 3-C—160 " 4 " 40 each
- 3-D—240 " 6 " 40 each

They are designed for standard rack mounting and occupy 7¼ in. of rack space.



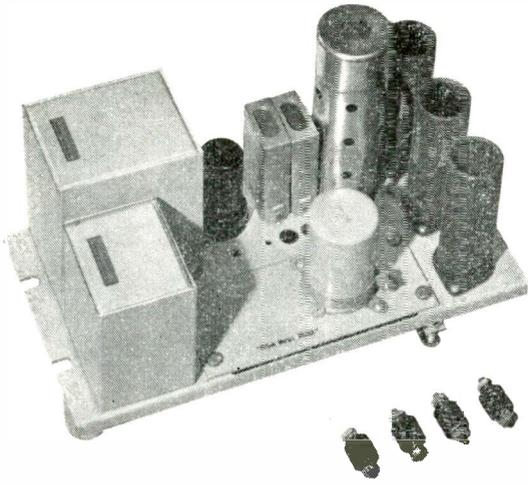
COIL MOUNTING FRAMES

The 5-A and 7-A Transformer Mounting Frames hold 12 and 7 line-to-line transformers, respectively, of the Langevin 602-A Type or an equal number of bridging transformers of the Langevin 606-A Type. Standard rack mounting requiring 7 in. of rack space for the 5-A and 3½ in. for the 7-A.

The Langevin Company

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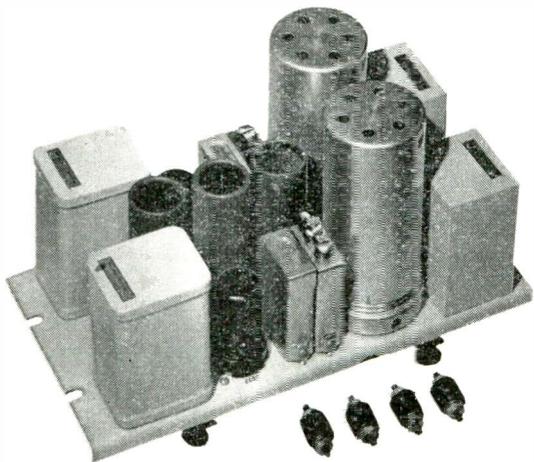
106-A PRE-AMPLIFIERS

Type 106-A is a two stage pre-mixing or booster amplifier with very low noise level. When used as a booster its gain of 38 db can be dropped to 28 or 18 db. With modification it serves as an RC equalizer for transcription reproducers, instead of the usual LC circuit.

ELECTRICAL CHARACTERISTICS

TUBE COMPLEMENT, 1 1603; 1 6SJ7. GAIN, approximately 38 db with provisions for decreasing to 28 or 18 db maximum. OPERATES FROM, source impedance of 30, 250 or 600 ohms. OPERATES INTO, load impedance of 600 ohms. OUTPUT POWER, approximately .038 watt (+16 VU) with less than 1% total RSS harmonic distortion at 400 cycles single fre-

quency. OUTPUT NOISE is equivalent to an input signal of -118 dbm (db below 0.001 watt) over a band width of 20,000 cycles. FREQUENCY CHARACTERISTIC, production run $\pm .5$ to 1 db over the range 30/15,000 cycles. EXTERNAL POWER SUPPLY REQUIREMENTS, Filament 6.3 volts, .6 ampere. Plate 275 volts, 8 milliamperes.



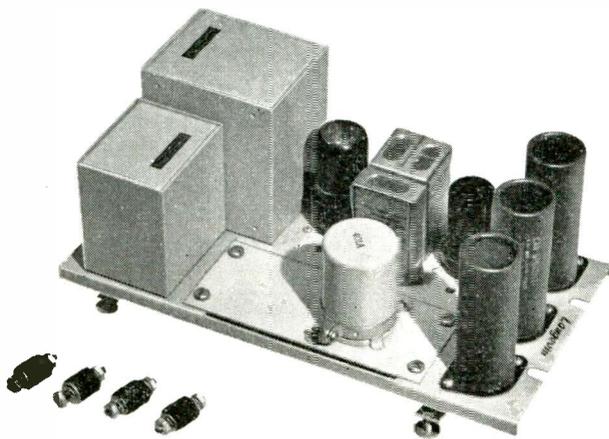
111-A DUAL PRE-AMPLIFIERS

The 111-A Pre-Mixing or Booster Amplifier is extremely quiet, with excellent frequency response and low distortion. There are two complete individual two-stage amplifiers on each chassis.

ELECTRICAL CHARACTERISTICS

TUBE COMPLEMENT, 2 1603; 2 6SJ7. GAIN, approximately 47 db. OPERATES FROM, source impedance of 30, 250 or 600 ohms. OPERATES INTO, load impedance of 600 ohms. OUTPUT POWER, approximately .038 watt (+16 VU) with less than 1% total RSS harmonic distortion (RMA Standards). OUTPUT NOISE is equivalent

to an input signal of -122 dbm (db below 0.001 watt) over a band width of 20,000 cycles. FREQUENCY CHARACTERISTIC, production run $\pm .5$ to 1 db over the range 30/15,000 cycles. EXTERNAL POWER SUPPLY REQUIREMENTS, Filament 6.3 volts, 1.2 amperes. Plate 275 volts, 16 milliamperes.



102 SERIES LINE AMPLIFIERS

The 102 Series Amplifiers come in three models, A, B and D, and are program line amplifiers of different gains—the A, 35-45-55 db gain; the B, 75-85-95 db gain; the D, 55 db gain when matching a 600 ohm source and 36 db when bridging a 600 ohm source.

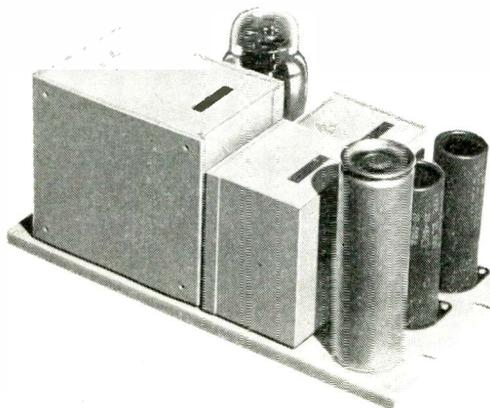
ELECTRICAL CHARACTERISTICS 102-A

TUBE COMPLEMENT, 1 6SJ7; 1 6V6 or 6V6GT. GAIN, approximately 55 db with provision for decreasing to 45 db or 35 db maximum. OPERATES FROM, source impedance of 30, 250 or 600 ohms. OPERATES INTO, load impedance of 600 ohms. OUTPUT POWER, approximately 0.6 watt (+28 dbm) (db above 0.001 watt) with less than 1% RSS total harmonic distortion at

400 cycle single frequency. OUTPUT NOISE is equivalent to an input signal of -112 dbm (db below 0.001 watt). FREQUENCY CHARACTERISTIC, production run $\pm .5$ to 1 db over the range of 30/15,000 cycles. EXTERNAL POWER SUPPLY REQUIREMENTS, Filament 6.3 volts, 0.75 ampere. Plate 275 volts, 31 milliamperes.

RECTIFIERS

Type 201 Series Rectifiers supply plate and filament power for the 102, 106, 111 and similar amplifiers from a 105/125 volt 50/60 cycle AC source. The 201-A Rectifier has a single filter stage, while the 201-B has an additional filter section for use with the 106-A or 111-A Amplifiers.



ELECTRICAL CHARACTERISTICS

TUBE COMPLEMENT, 1 5Y3GT or 5U4G. POWER REQUIREMENT, 105/125 volts, 50/60 cycles AC.

OUTPUT—

with Power Transformer on High Tap

MA OUTPUT	5Y3GT TUBE	5U4G TUBE
75	260V.	280V.

30 325V. 340V.
10 365V. 375V.

FILAMENT SUPPLY, 6.3 volts at 8 amperes maximum with center tap. RIPPLE VOLTAGE, approximately .04% ripple at full power output. Approximately .02% at 30 milliamperes load.

AMPLIFIERS

FOR WIRED MUSIC . . . STUDIOS . . . PAGING SYSTEMS . . . HOTELS

108 SERIES AMPLIFIERS

The 108 Series Amplifiers are high quality, 20 watt units. They are available in four different types, all having the same general and output characteristics. The four types differ only in the inputs.

a. 108-A has a single input channel with a choice of two sets of input connections, a low gain (43 db) bridging input connection, nominal 25,000 ohms, and a high gain (63 db) connection, nominal 600 ohms.

b. 108-B also has a single input channel but with one additional stage of amplification employing a 1612 tube. Total gain is 103 db. Two sets of input connections are available to operate from source impedances of 30 or 250 ohms. Electronic volume control for remote operation has been provided. This model is intended to be used with low impedance, low level devices.

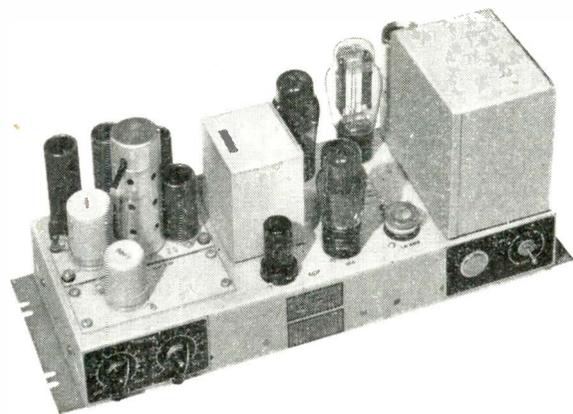
c. 108-C has two separate inputs and dual gain controls—it combines the input channels of the 108-A and 108-B.

d. 108-D has two separate input channels of the type used on 108-B, each employing a separate tube. Both channels have 103 db gain and a choice of 30 or 250 ohms input connections.

ELECTRICAL CHARACTERISTICS 108-A

TUBE COMPLEMENT, 2 6SJ7; 2 6L6G; 1 5U4G. GAIN, from 600 ohm source 43 db on bridging input connection and 63 db on the high-gain connection. OPERATES FROM, 0 to 1,000 ohms using nominal 600 ohm input, 0 to 25,000 ohms using nominal 25,000 ohm input. OPERATES INTO, 500 or 8 ohms. OUTPUT POWER, approximately 20 watts +43 VU with less than 3% RSS total

harmonic distortion. OUTPUT NOISE, unweighted, 70 db below +43 VU. FREQUENCY CHARACTERISTIC, production run ± 5 to 1 db over the range 30/15,000 cycles. VOLUME CONTROL, 250,000 ohm gain control in secondary of input transformer with 40 db range effective on both inputs. POWER CONSUMPTION, 150 VA maximum at 120 volts 50/60 cycles.



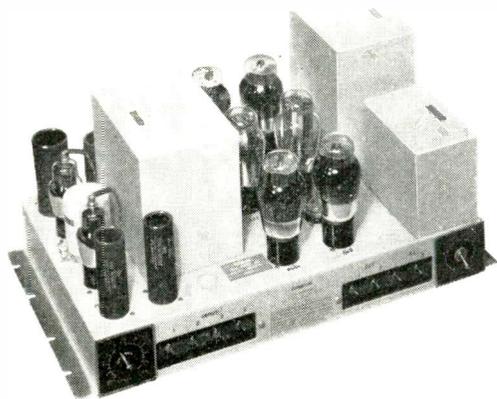
101 SERIES AMPLIFIERS

The 101 Series Amplifiers are medium gain, high power, bridging amplifiers. Their excellent frequency characteristic and wave form, both at the high and low frequency ends of the spectrum, make them particularly desirable where quality is a prime consideration. The two models, 101-A and 101-C, are identical with the exception of the output transformer, the A giving even better wave form over the full frequency spectrum than does the C. They are designed and built to provide years of trouble-free service.

ELECTRICAL CHARACTERISTICS

TUBE COMPLEMENT, 2 6J7; 6L6G; 2 5Z3. INPUT IMPEDANCE, operates from 1 to 25,000 ohms (nominal range of bridging connections), 1 to 1,000 ohms (nominal range of high gain connection). GAIN, 46 db (bridging connection). From 600 ohm circuit, 60 db (non-bridging—high-gain). FREQUENCY CHARACTERISTIC, 30

to 15,000 cycles ± 1.0 db. OUTPUT IMPEDANCE, any value from 1 to 1,000 ohms. OUTPUT POWER 50 watts (+47 VU) with less than 3% total harmonic distortion (RMA Standards). OUTPUT NOISE LEVEL, 68 db below rated output of +47 VU. POWER SUPPLY, AC 50/60 cycle, 110/125 volts. Fused with a 2.5 A. Fustat.



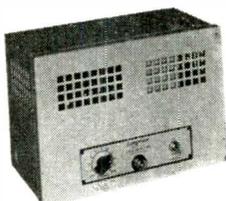
114-A AMPLIFIER

Type 114-A Amplifier is a two-stage medium gain, 4 watt, power amplifier, for 110/120 volt AC or DC operation, which can be used with a 600 ohm terminating input impedance, or across 600 ohms as a bridging amplifier. An inexpensive amplifier to drive one or two loudspeakers.

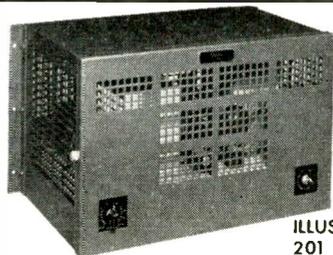
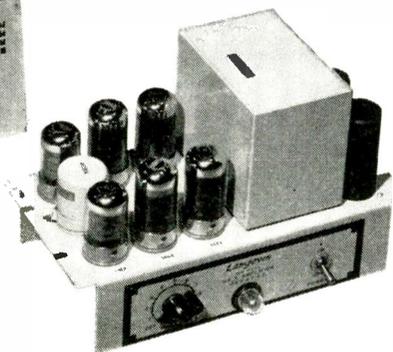
ELECTRICAL CHARACTERISTICS

TUBE COMPLEMENT, 2 35Z5; 2 50A5; 2 14C7. GAIN, approximately 61 db high gain and 43 db when bridging a 600 ohm source. OPERATES FROM, 0/1,000 ohms using nominal 600 ohm input, 0/25,000 ohms using nominal 25,000 ohm input. OPERATES INTO, nominal load impedance of 4 ohms. OUTPUT POWER, approximately 4 watts with less than 5%, and 3 watts with less than

2% RSS total harmonic distortion. (RMA Standards). OUTPUT NOISE, 42 db below +35 VU (7 db below 0.001 watt) or better. FREQUENCY CHARACTERISTIC, production run ± 1.5 db over the range 30/15,000 cycles. POWER EQUIPMENT, 110/120 volts, 25/1,000 cycles AC, or 110/120 volts DC. Amplifier draws 70 watts at 120 volts.



The 204-A Cabinet is for the 114-A Amplifier and will also mount single amplifiers of the 102, 106, 111 and 114 or the 201 Series Rectifier.



ILLUSTRATED
201 A-CABINET

201-A and 202-A CABINETS

The 201-A and 202-A Wall or Shelf Mounting Cabinets have been designed to house the 101 Series and the 108 Series Amplifiers, respectively. Made of 16 gauge steel, welded, bonderized and finished with baked enamel aluminum grey finish. Sufficient ventilation has been provided to keep amplifier ambient temperatures at safe level. Supplied with mounting brackets and conduit knockout. Front cover is removable. Amplifier slides out for changing tubes or servicing. The 201-A Cabinet will also house a 3-A Mounting Frame with its associated equipment.

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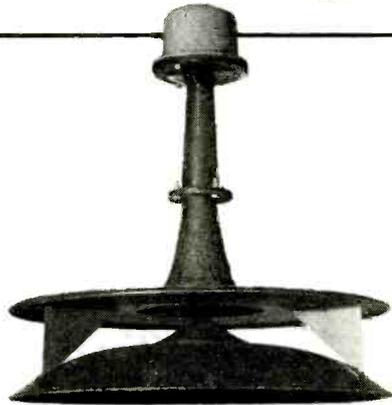
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HORNS



MODEL 24-A HORN

The Model 24-A Horn is a high power projector intended for outdoor use. Made entirely of aluminum with thick wall castings at high pressure points, it is unusually efficient. Receiver unit attachments are available for coupling two or four driver units, making the horn capable of handling electrical inputs of 50 or 100 watts. Frequency response and sound power output largely depend on receiver units used. Normal response 110 to 6500 c.p.s. with no objectionable peaks. Swivel adjustable mounting bracket furnished with each horn. Dimensions over-all, length 30 in., width 26 in.



MODEL L-360 HORN

The Model L-360 Horn has been designed for indoor and outdoor paging systems. Made entirely of aluminum with acoustic treatment. Receiver unit attachments are available for coupling one or two driver units to horn, making horn capable of handling electrical inputs of 25 or 50 watts. Frequency response and sound power output largely depend on receiver units used. Normal response 300 to 6500 c.p.s. with no objectionable peaks. Principal advantage of Model 360 Horns is sound distribution uniform as to power and frequency over 360 degrees horizontally and 40 degrees vertically, resulting in better coverage and lower installation costs. Dimensions over-all, 23 in. in diameter, 25 in. in height.



TYPE 26-A HORN

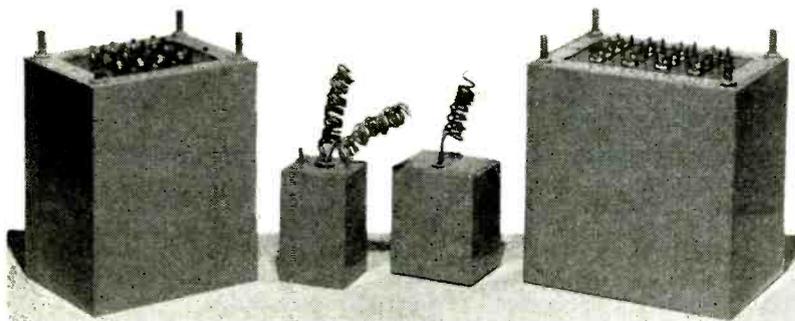
The Type 26-A Horn is intended for voice paging and announcing systems and as the high frequency horn in dual speaker wide range music systems. Of cast aluminum, the 26-A is very efficient. Attachments are available for coupling one or two receiver units, providing for 25 or 50 watts of electrical input. Frequency response as well as sound power depend largely on type of driver unit used. Normal response 300 to 6500 c.p.s., but with good high frequency units upper limit may be extended to 10,000 c.p.s. Sound distribution uniform as to frequency and power over horizontal angle of 120 degrees and vertical angle of 40 degrees. Supplied with mounting bracket. Dimensions 22 in. wide, 14½ in. deep and 20 in. high, including drive unit.



3-A LOUDSPEAKER HOUSING

The 3-A Loudspeaker Housing has been designed for 8 in. cone loudspeakers. It is intended for ceiling or wall mounting in music and voice distribution systems. Made of heavy spun aluminum lined with ¾ in. hair felt for acoustic treatment, this housing provides optimum back loading for both low and high frequency response. Speaker can be removed easily from front for servicing. Carefully designed deflector cup provides 360 degree distribution horizontally and 140 degrees vertically. Frequency response and sound power output depend on loudspeaker unit used. Easily adjustable for base reflexing if desired. Has knockouts for conduit, also mounts on any standard outlet box. Ideal for department store, industrial wired music, and similar systems. Dimensions 20 in. in diameter and 9 in. in depth (10½ in. total depth when assembled with deflector cup).

TRANSFORMERS



The prime function of the Langevin transformer department is to make quality transformers for Langevin amplifiers and audio communication equipment. Any of the transformers used in this equipment are available for separate purchase, if desired. In addition, surplus productive capacity is sometimes available for the manufacture of specialized quality units for others.

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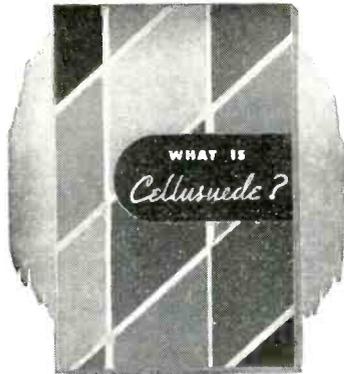
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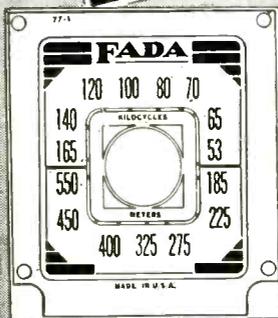
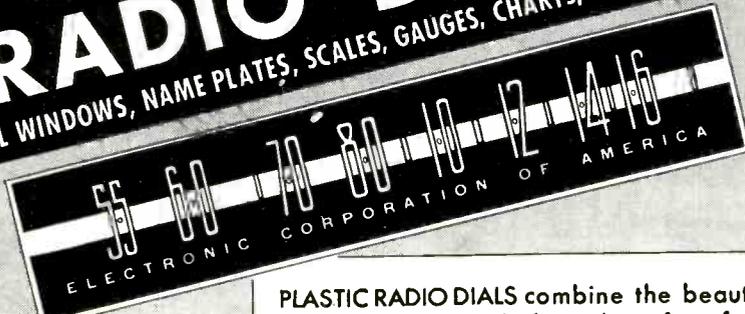
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Bi-Directional Velocity
Models V-3, V-2, V-1

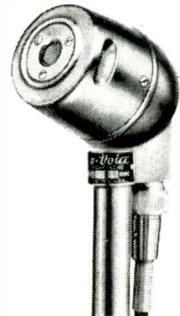


Differential Carbon
Hand-Held Model 205-S

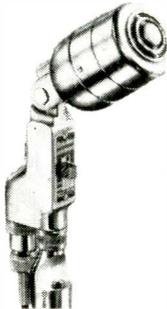


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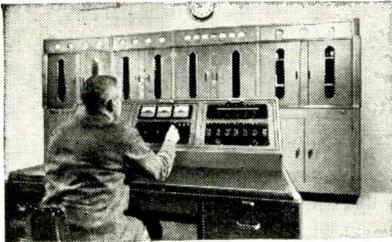
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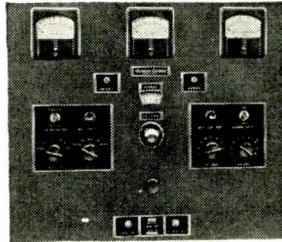
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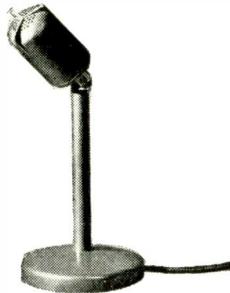
2A PHASE MONITOR: Makes possible quick, accurate adjustment of directional antenna arrays. Western Electric also offers you a line of antenna coupling and phasing units.



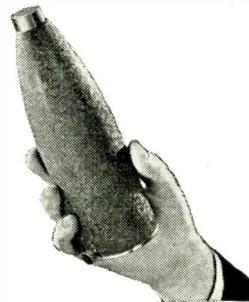
54A CLOVER-LEAF FM broadcast antenna has high efficiency and a circular azimuth pattern. Simple to install and maintain. For any power up to 50KW.



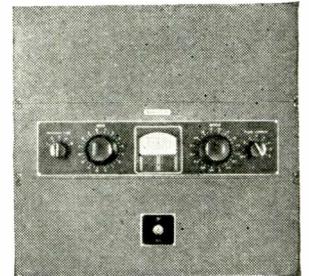
CARDIOID MIKES: Two models—the 639A with 3 pick-up patterns and the 639B with 6 patterns—which combine highest quality with maximum flexibility.



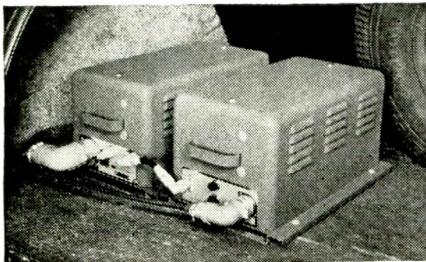
SALT-SHAKER MIKE: The 633A is a rugged, dependable, high quality dynamic mike well suited to radio broadcasting, announcing and sound distribution systems.



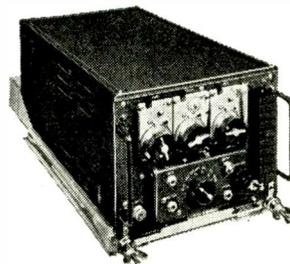
640 DOUBLE-A MIKE: Ideal for ultra faithful, single mike pick-ups in large broadcast studios. Originally developed as a laboratory instrument for measuring sound pick-up and reproducing devices.



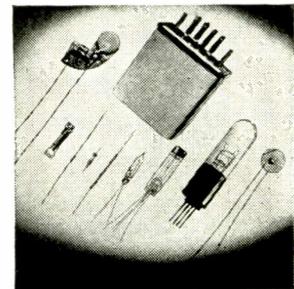
1126B AMPLIFIER: A program-operated level-governing amplifier with peak-limiting features! It limits excessive peaks of modulation, protects against over-modulation and excessive input levels.



MOBILE RADIO: Equipment for trucks, autos, railroad and marine service.



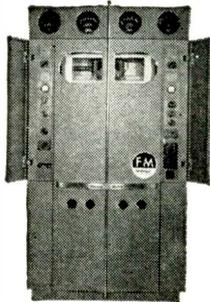
AVIATION RADIO: The Western Electric ARC-1 is a VHF transmitter-receiver for communications between planes and ground stations.



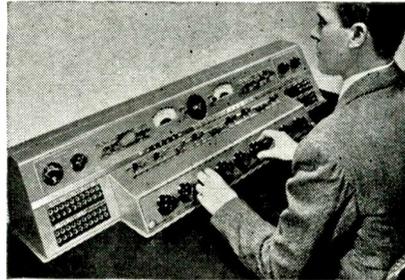
THERMISTORS: Extremely sensitive temperature control elements adaptable to a wide range of uses in communications, transportation, manufacturing and other fields.

Electric

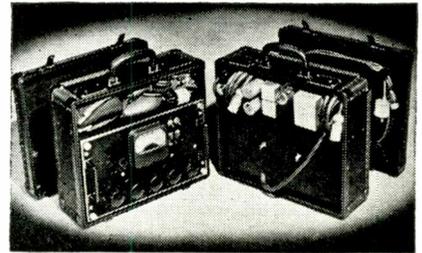
Sound Distribution and Engineering Analysis and Control.



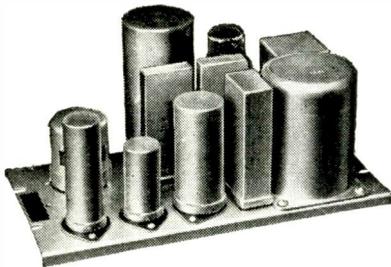
FM TRANSMITTERS: Designed by Bell Laboratories, Western Electric's line includes 250 Watt, 1KW, (shown) 3KW, 10KW, 25KW and 50KW Synchronized FM transmitters.



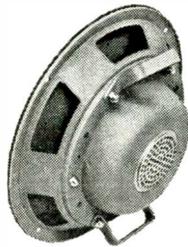
25B SPEECH INPUT: Beautifully styled, this console provides maximum operating flexibility, highest quality and exceptional accessibility. It's tops for FM!



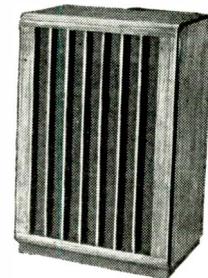
22D SPEECH INPUT: A compact portable speech input system. Light in weight and designed to provide complete pick-up facilities for remotes of every kind.



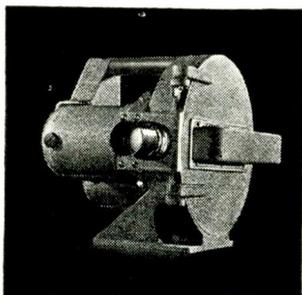
AMPLIFIERS: The 132A amplifier shown is just one of a well rounded line of amplifiers for pre-mixing, main line, monitor, audition and talk-back applications



728B LOUDSPEAKER: Its special design provides unsurpassed realism and "presence." Ideal for broadcast studios and sound systems where high quality is desired.



753 TYPE LOUDSPEAKERS: For broadcast monitoring and sound systems. Frequency range of 753C is flat from 60 to 10,000 cycles, only 6db down at 15,000. The 753B is flat from 60 to 6500 cycles.



FASTAX CAMERA: Takes motion pictures at speeds up to 8000 frames per second to "stop" the action of high speed machines and other split-second phenomena. A new industrial tool!

ACOUSTIC INSTRUMENTS

If your product must meet noise specifications, Western Electric acoustic testing and measuring instruments can help you obtain accurate facts on any noise or vibration problem. Included in the line are:

- Recording Frequency Analyzer
- Sound Level Meters
- Noise Analyzers
- Vibration Pick-Ups



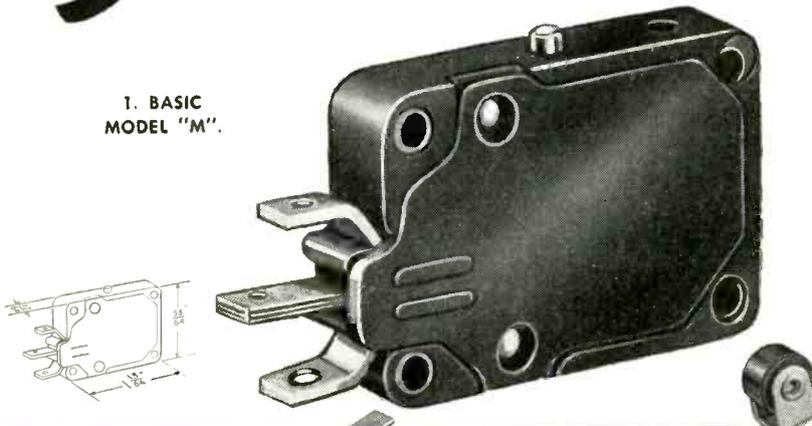
FREQUENCY STANDARD

The Western Electric D-175730 is a 100 KC primary frequency standard of the highest accuracy. Its frequency is maintained to *within one part per 10⁸ or better per day*, irrespective of moderate changes in ambient temperature, humidity and air pressure. Performance tests in a Government laboratory showed an actual frequency variation of less than 1.4 parts per 10⁹ per day.

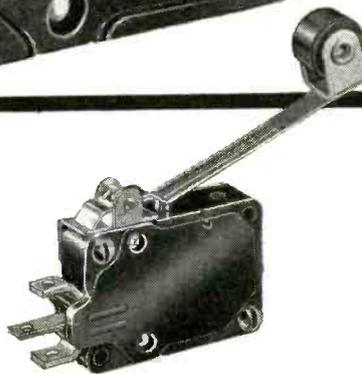
For full technical information on these and other Western Electric products—and for delivery schedules—get in touch with your nearest Graybar representative. Or write to Graybar Electric Company, 420 Lexington Avenue, New York 17, N. Y.

ACRO'S *Sturdier* MODEL "M"

1. BASIC
MODEL "M".



2. MODEL "M"
WITH A-18 LEAF BRACKET.



3. MODEL "M" WITH
A-18-M ROLLER LEAF BRACKET.

In keeping with the ever-widening demand for small ACRO Snap Action Switches, built with the patented Beryllium Rolling Spring and with the experience gained in building hundreds of thousands, ACRO now adds a sturdier, more durable housing for its popular long life Model "M".

NEW FEATURES

1. **New stronger molded case**—cover recessed into case, clear of the four 3/32" mounting holes. • 2. **Sturdier barriers between terminals**, affording generous electrical clearances. • 3. **Heavier solder terminals** with .082" terminal holes for easier wiring. • 4. **Greater compactness** for multiple assemblies—four can be mounted in a space of less than 1 1/4".

This better built, better performing switch is made with single pole, single or double throw contacts—rated at 10 amps. 125 volts A. C. Can be fitted with leaf actuators illustrated above. For immediate help on your switch problems, send full details of operating characteristics required and proposed assembly.

Manufacturers of a full line of small open blade switches and fully enclosed snap action switches.

ACRO ELECTRIC COMPANY

1316 SUPERIOR AVENUE • CLEVELAND 14, OHIO

LARGEST and most complete STOCKS *Under One Roof!*



Call **ALLIED First**
for Everything in
RADIO and
ELECTRONICS

IT'S simpler, faster to get all your radio and electronic needs from this one central source. 20 years of specialized experience... in peace and war... are at your service.

In our large stocks, we carry over 10,000 items... including tubes, parts, equipment, public address... ready for quick shipment. Close contact with leading manufacturers assures latest "supply data" on all types of items. Veteran staffs gladly assist on technical problems.

This complete, centralized Allied service saves time... simplifies procurement... expedites delivery of many diverse needs for production, research and maintenance.

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ALLIED RADIO

CORPORATION

833 W. Jackson, Dept. 24-46, Chicago 7

SUPPLIERS OF ELECTRONIC PARTS AND EQUIPMENT TO INDUSTRIAL AMERICA

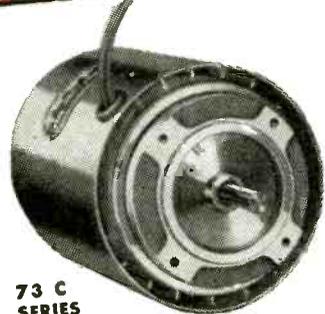
Tubes, Rectifiers, Power Supplies, Intercommunicating and Sound Equipment, Photo-Cell Equipment, Batteries, Chargers, Spot Welding Tips and Holders, Fuses, Test Instruments, Meters, Broadcast Station Equipment, Relays, Condensers, Capacitors, Resistors, Rheostats, Transformers, Switches, Cable, Wire, Tools, Technical Books, etc.



FRACTIONAL H.P. MOTORS

BLOWER UNITS

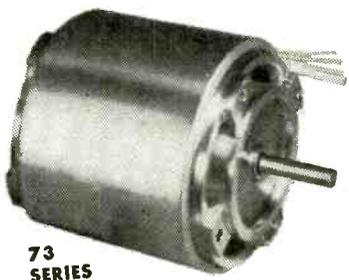
CONTROL COMPONENTS



73 C SERIES

115 Volts—60 cycles... continuous duty. Sleeve Bearing... Fan cooled... totally enclosed. Outside Diam. 3 7/8".

TYPE	H. P.	R. P. M.
Capacitor	1/15, 1/20, 1/30	1600 & 3200
Shaded Pole	1/30, 1/50, 1/100	1500
Synchronous	1/50, 1/100	1800 & 3600

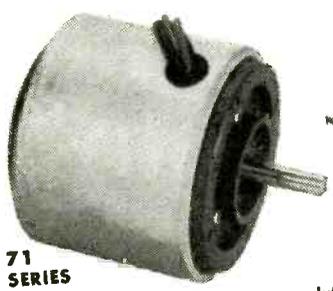


73 SERIES

115 Volts—60 cycles... continuous duty. Sleeve Bearing... totally enclosed. Outside Diam. 3 5/16".

TYPE	H. P.	R. P. M.
Capacitor	1/20*, 1/30*, 1/50	1600 & 3200
Shaded Pole	1/30*, 1/50*, 1/100	1500
Synchronous	1/50*, 1/100, 1/200	1800 & 3600

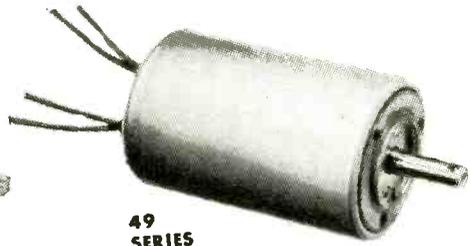
* Fan Applications



71 SERIES

115 Volts—60 cycles... continuous duty. Sealed Ball Bearing... totally enclosed. Outside Diam. 3 5/16", 3 7/8".

TYPE	H. P.	R. P. M.
Capacitor	1/15, 1/20, 1/30, 1/50, 1/100	1600 & 3200
Shaded Pole	1/30, 1/50, 1/100	1500
Synchronous	1/50, 1/100, 1/200	1800 & 3600



49 SERIES

115 Volts—60 cycles... continuous duty. Ball Bearing... totally enclosed. Outside Diam. 1 3/4".

TYPE	H. P.	R. P. M.
Capacitor	1/100*, 1/250	2800 & 3100
Shaded Pole	1/1000	1400

* Intermittent Duty only

TYPICAL APPLICATIONS

- Cameras and Projectors
- Chart Recorders
- Floor Fans
- Dispensing Machines
- Timing Apparatus
- Turntables
- Air Conditioning

Eastern Air Devices' units embody all of the important advances in design and construction made during the war. Included are such features as: replaceable "capsule" bearings, snap ring construction for easy disassembly, radically improved cooling means, insuring long life with minimum size and weight, etc. Let us fit an E. A. D. unit to your application.

EASTERN AIR DEVICES, INC.

585 DEAN STREET • BROOKLYN 17, N. Y.
An Affiliate of THE FRED GOAT CO., INC., Est. 1893



31 SERIES

115 Volts, 400 cycles, 1/25 to 1/100 H. P. Weight of units 15 oz. Diam. 1 15/16. Length 2 29/32".



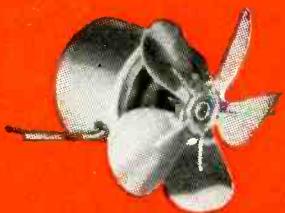
36 SERIES

D.C. Voltage Generators for Control and Tachometer applications... 2 Volts per hundred R. P. M. Permanent magnet field... weight, 20 oz. Diameter 2 1/4". Length 3".



ALTERNATORS

Special Alternators designed for any application. 20 to 1000 cycles up to 50 watts. Specialists in permanent magnet designs.



AXIAL FLOW BLOWERS

Numerous types for 60 cycle, 400 cycle and D. C. applications. 170 to 800 C.F.M. (NEMA Code) 65 to 300 C.F.M. (NAFM Code). Designed for use in electronic or industrial equipment.



CENTRIFUGAL BLOWERS

Numerous Types for 60 cycle, 400 cycle and D.C. application. 6 to 110 C.F.M. For use in electronic or industrial equipment.

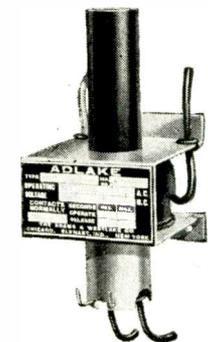
Adlake PLUNGER-TYPE MERCURY RELAYS

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:

1. 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*.

TYPE 1040 TIME DELAY RELAY FOR A. C. ENERGIZATION



(Contact Normally Open)

Maximum time delay . . .
up to 30 minutes

Time delay limits . . .
10% unless otherwise
specified*

Coil voltage . . .
up to 110 v. A.C.
(25-50 and 60 cy.)

Coil—watts input . . .
3.5 to 8 watts
(depending on frequency)

Contact arrangement . . .
single pole normally open
or closed

Available in . . .
slow operate—quick release
slow operate—slow release
quick operate—slow release

*Greater tolerance is required for time delays above ten minutes.

CONTACT RATINGS

TIME DELAY— CONTACT NORMALLY OPEN		110 VOLTS		220 VOLTS	
		A.C.	D.C.	A.C.	D.C.
Slow operate	Non-inductive	15 amp	1.5 amp	5 amp	.5 amp
Quick release	Inductive	10 amp	1 amp	3 amp	.3 amp
Slow operate	Non-inductive	5 amp	.5 amp	1.5 amp	.15 amp
Slow release	Inductive	2.5 amp	.15 amp	.8 amp	.1 amp
Quick operate	Non-inductive	5 amp	.5 amp	1.5 amp	.15 amp
Slow release	Inductive	2.5 amp	.15 amp	.8 amp	.1 amp

WHEN TIME DELAYS:

.5 to 10 seconds
11 to 60 seconds
61 to 120 seconds
Over 120 seconds

Loads as above
50% of above loads
25% of above loads
10% of above loads

TIME DELAY— CONTACT NORMALLY CLOSED

TIME DELAY— CONTACT NORMALLY CLOSED		110 VOLTS		220 VOLTS	
		A.C.	D.C.	A.C.	D.C.
Slow operate	Non-inductive	5 amp	.5 amp	1.5 amp	.15 amp
Quick release	Inductive	2.5 amp	.15 amp	.8 amp	.1 amp
Slow operate	Non-inductive	5 amp	.5 amp	1.5 amp	.15 amp
Slow release	Inductive	2.5 amp	.15 amp	.8 amp	.1 amp
Quick operate	Non-inductive	15 amp	1.5 amp	5 amp	.5 amp
Slow release	Inductive	10 amp	1 amp	3 amp	.1 amp

WHEN TIME DELAYS:

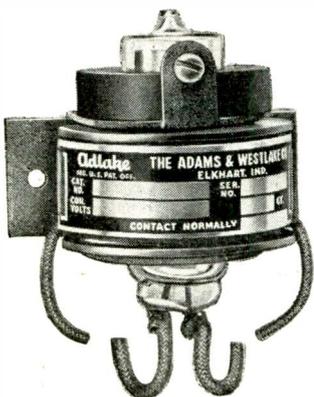
.5 to 10 seconds
11 to 60 seconds
61 to 120 seconds
Over 120 seconds

Loads as above
50% of above loads
25% of above loads
10% of above loads



Type 1040
Time Delay Relay
(Contact Normally Closed)
For A.C. Energization

TYPE 1110 QUICK-ACTING RELAY FOR A. C. ENERGIZATION



Coil voltage . . .
to 110 v. A.C.
(25-50 and 60 cy.)

Coil—watts input . . .
3.5 to 6 watts
(depending on frequency)

Contact arrangement . . .
single pole normally open

Contact rating . . .
15 amp, non-inductive
at 110 v. A.C.

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

TYPE 1200 TIME DELAY RELAY FOR D. C. ENERGIZATION

Maximum time delay up to 30 minutes

Time delay limits 10% unless otherwise specified*

Coil voltage to 130 v. D.C.

Coil—watts input 3.0 to 5.5 watts

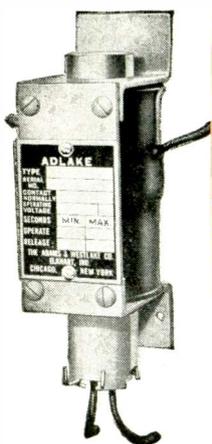
Contact arrangement single pole normally open or
normally closed

Contact ratings identical to type 1040 above

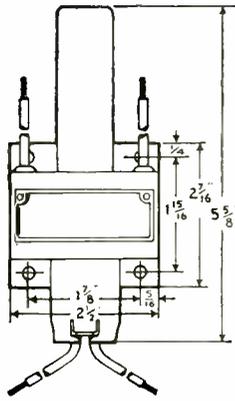
Available in slow operate—quick release
slow operate—slow release
quick operate—slow release

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

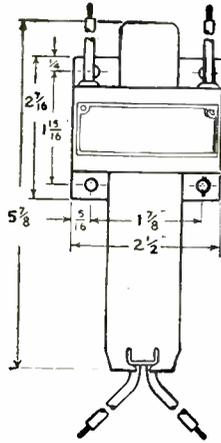
*Greater tolerance is required for time delays above ten minutes.



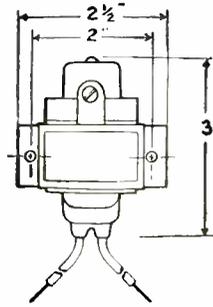
DIMENSIONAL DIAGRAMS



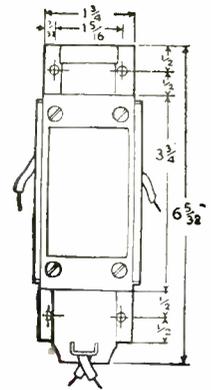
PROJECTION 2 9/16"
No. 1040 normally open relay



PROJECTION 2 9/16"
No. 1040 normally closed relay



PROJECTION 2 1/16"
No. 1110 normally open load relay

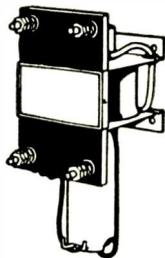


PROJECTION 2 1/2"
No. 1200 relay normally open or normally closed

OPTIONAL TERMINAL BOARD ARRANGEMENTS



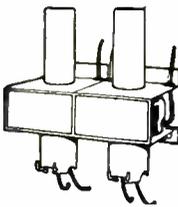
Type No. 1040 Normally open time delay or quick-acting relay with front panel mounting.



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

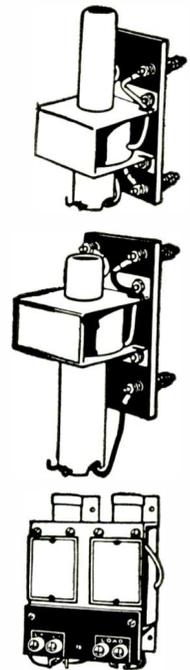
Type No. 1040 Normally closed time delay or quick-acting relay with front panel mounting.

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



Type No. 1040 Double unit normally open relay assembly. Time delay and load relay—two-time delays or two-load 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 two-load relays, or time delay relays.



THE ADAMS & WESTLAKE COMPANY

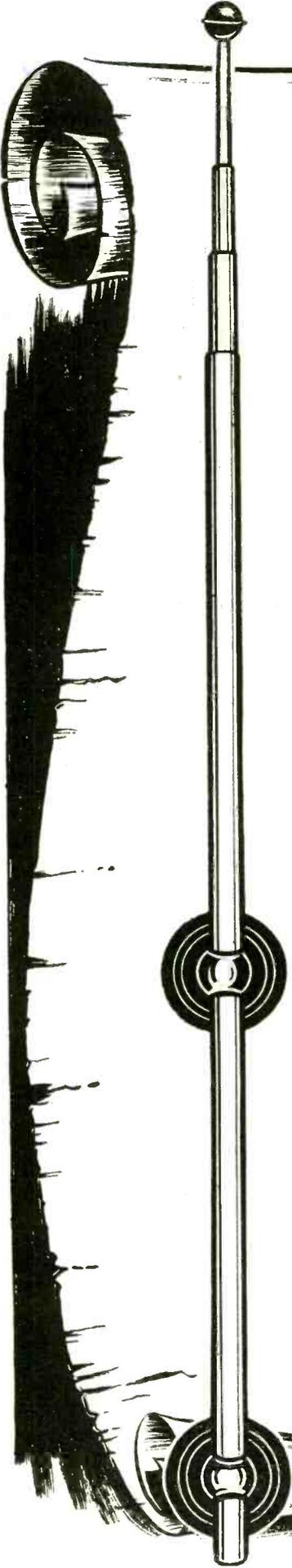
ESTABLISHED IN 1857

ELKHART, INDIANA

NEW YORK · CHICAGO

MANUFACTURERS OF ADLAKE HERMETICALLY SEALED MERCURY RELAYS FOR TIMING, LOAD AND CONTROL CIRCUITS

ELECTRONICS BUYERS' GUIDE — June 15, 1946



Dominant *Quality*

With WARD PRODUCTS CORPORATION, the word *quality* is more than just a symbol. It represents the highest standard of excellence and leadership achieved through many years' experience in the *exclusive* manufacture of precision-built antennas. WARD antennas are built by master craftsmen using the most modern equipment under ideal conditions. Top quality through and through they render highest efficiency for all automobile and home radio applications. That's why WARD is "first choice" the world over.

*Only WARD Gives You All
These Important Features*

- ★ Easy One Man Installation
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- ★ Positive Silver-to-Silver Contacts
- ★ Extra Heavy Triple Chrome Rust-proof Plating
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- ★ 100% Shielded

*World's Finest for Car and Home Combining Precision and
Streamlined Beauty*

WARD "HiQ" *Antennas*

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1523 East 45th Street
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Steatite

SEALEX BUSHINGS

the **GUARANTEED** hermetic seal!

RANGE OF SIZES:

0.5 to 20 amperes.

FLASHOVER VOLTAGES:

2,000 to 40,000 volts

LOW LOSS FACTOR:

0.7% to 1000 kilocycles

TEMPERATURE RANGE:

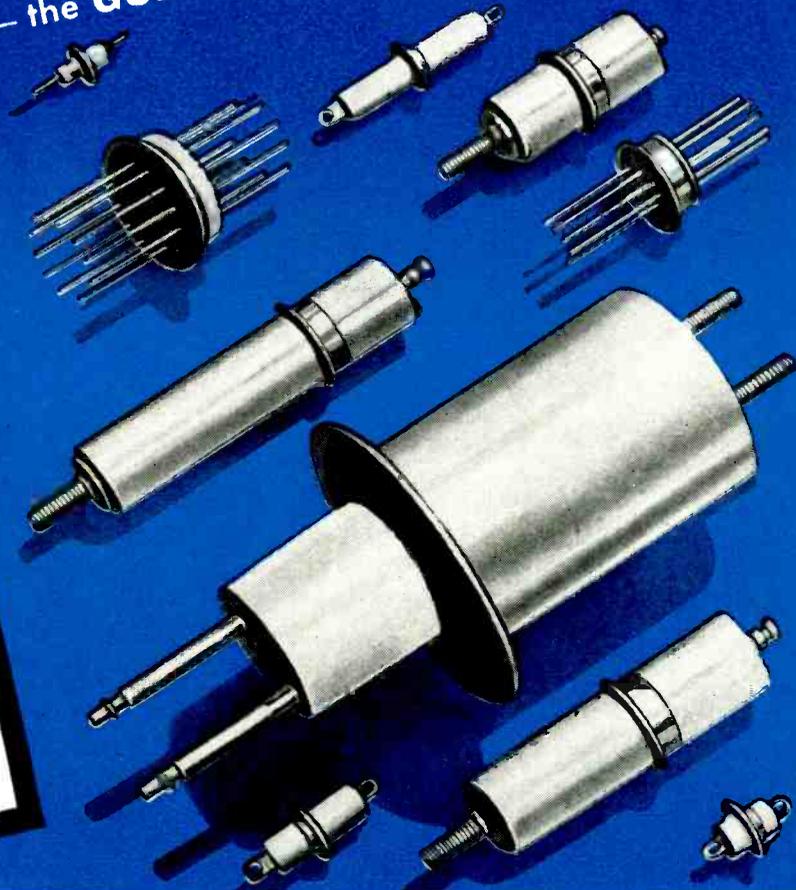
55° C to 978° C

NUMBER OF TERMINALS:

Up to 16 maximum

AIR PRESSURE TEST:

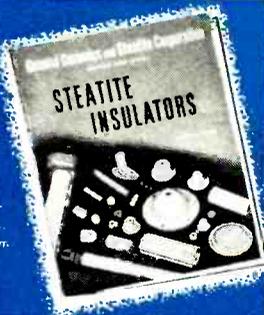
Individually to 50 psi before shipment



**Available in many standard designs from stock
... with "specials" to order on short notice**

FREE DATA BOOK:

Write today for your 48 page book. Contains complete information including mechanical and electrical characteristics of all General Ceramic's standard Steatite insulators. Address request on company letterhead.



There are several important reasons why SEALEX Bushings provide permanent hermetic sealing capable of withstanding severe shock and vibration. First, the steatite dielectric is chemically bonded to the metal electrodes and collar; second, matched coefficients of expansion assure a permanent bond through an extreme range of temperatures. Last, every bushing is subjected to an air pressure test of 50 psi prior to shipment.

These facts, plus the added feature that all metal parts are hot tinned to facilitate soldering, is your guarantee that SEALEX Bushings will meet your requirements to the letter. Standard types include both individual lead terminals and multiple headers with as many as 16 leads. Special types can be supplied to practically any specifications. Write for details.



General CERAMICS and STEATITE CORP.
GENERAL OFFICES and PLANT: KEASBEY, NEW JERSEY



Westinghouse Electric Corporation

PLANTS IN 25 CITIES—OFFICES EVERYWHERE

ELECTRONICS AT WORK

The science of electronics is so broad and so varied that any definition must depend largely on its specific application. While the basic principle of operation depends on the electron as the source of energy, the application is as varied as the problem to be solved.

Shown here are many Westinghouse electronic devices; more detailed and specific information about equipment and applications can be supplied on request.

RADIO BROADCAST TRANSMITTERS

AM TRANSMITTERS. Twenty-five years of experience in the operation of broadcast stations is incorporated in Westinghouse 5, 10, and 50 kw AM Transmitters. The transmitters feature surge-proof metal rectifiers, minimizing tube replacement; equalized audio feedback; supervisory control, with indicator lamps showing operating condition at all times; completely fuseless overload protection, with automatic reset after interruptions; air-cooled tubes, with cooling system operation from a single blower; fireproof and explosion-proof transformers and reactors. Cubicle construction simplifies installation of the transmitters—5 and 10 kw transmitters consist of three cubicles and the 50 kw transmitter of eight cubicles which may be installed "in-line" or in unit groups to meet layout requirements.

FM TRANSMITTERS. Designed to meet operators' requirements, Westinghouse 1, 3 and 10 kw FM transmitters are backed by many years' experience in operating five FM broadcast stations. Outstanding features include accessibility of all tubes from front of transmitter; self-contained transmitter, with no external parts; aluminum cubicle, improving shielding and reducing weight; Class "B" temperature insulated transformers; two complete crystal oscillators; completely electronic frequency control, without moving parts or critically tuned circuits; and an individual meter in each important circuit.

ACCESSORY EQUIPMENT. FM antennas and transmission lines, transmitter consoles, speech input equipment, antenna phasing, branching, and coupling equipment, tower lighting, and spare parts are also available.

POWER LINE CARRIER

Power Line Carrier is a specialized adaptation of radio wherein high frequency (50 to 150 kc) currents are sent over transmission lines without impairing normal flow of power. Power line carrier is used for communications, relaying, telemetering, load control and supervisory control. Features include full-length, swing-out type control panel to permit complete and easy access to all internal components from the front of cabinet, and single sideband circuit, doubling the number of carrier channels, reducing the signal to noise ratio 8 to 1 over standard AM carrier, and eliminating corona modulation by absence of carrier wave. Individual application requirements are met with the new type JY equipment, which is built up from co-ordinated units to give great flexibility. Single sideband power line carrier is an exclusive Westinghouse product.

RAILROAD RADIO

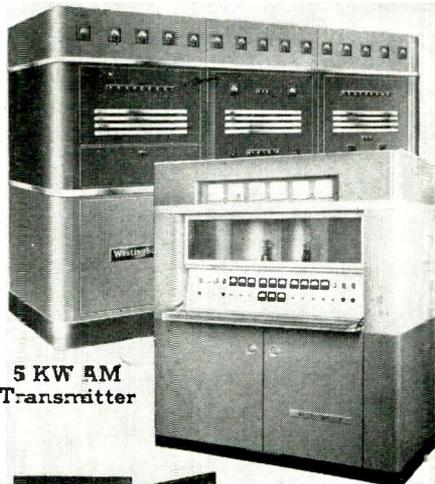
Railroad radio provides instant three-way communication between engine, wayside station, and another train. Improved FM circuits and automatic controls assure noise-free, undistorted communication. No wayside wires are needed. Westinghouse railroad radio is unaffected by adverse weather conditions such as extreme heat, ice, sleet, rain, or snow. Equipment operates from 117 volts a-c, with rotary converters provided for mobile units. Transmitter and receiver chassis are fully interchangeable between fixed and mobile stations, thus simplifying replacement problems.

X-RAY

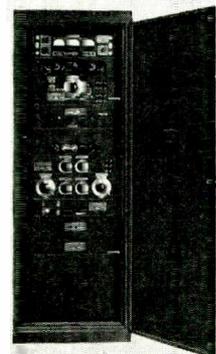
"Micronex" is the latest development in Westinghouse industrial x-ray units. It is designed for ultra-high-speed radiography, taking pictures at .000001 of a second, with sufficiently high intensity to photograph through one inch steel plate. Micronex converts low voltage (power available at a standard outlet) to high-energy, short-duration surge to actuate the x-ray tube. Micronex is portable, can be moved easily on large rubber-tired casters. It is used in ballistics for the study of projectile flight and impact, investigating internal conditions of high speed motors, and in the study of high rpm rotating equipment and dust in flight.

RADIO FREQUENCY GENERATORS

Standard Westinghouse radio frequency generators suitable for either induction or dielectric heating are made in 2, 5, 10 and 20 kw ratings as stock items—with 50, 100 and 200 kw standard designs built to order. Most applications can be met with stock generators, and Westinghouse engineers will work out problems where higher capacities are needed. All units have automatic timing controls to permit adjustment of the load cycle to a predetermined time which may be repeated with absolute accuracy by simply pressing a button. All equipment is shielded to minimize radiation losses, air-cooled to reduce maintenance, and shock mounted to assure maximum tube life and quiet operation. Single phase power system operates 2 and 5 kw units; 10 and 20 kw units are furnished to operate from 60 cycle, 3-phase, 230 or 460 volt supply.



5 KW AM Transmitter

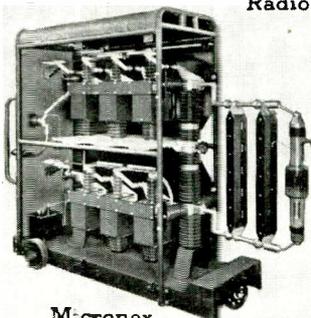


1 KW FM Transmitter

Power Line Carrier



Railroad Radio

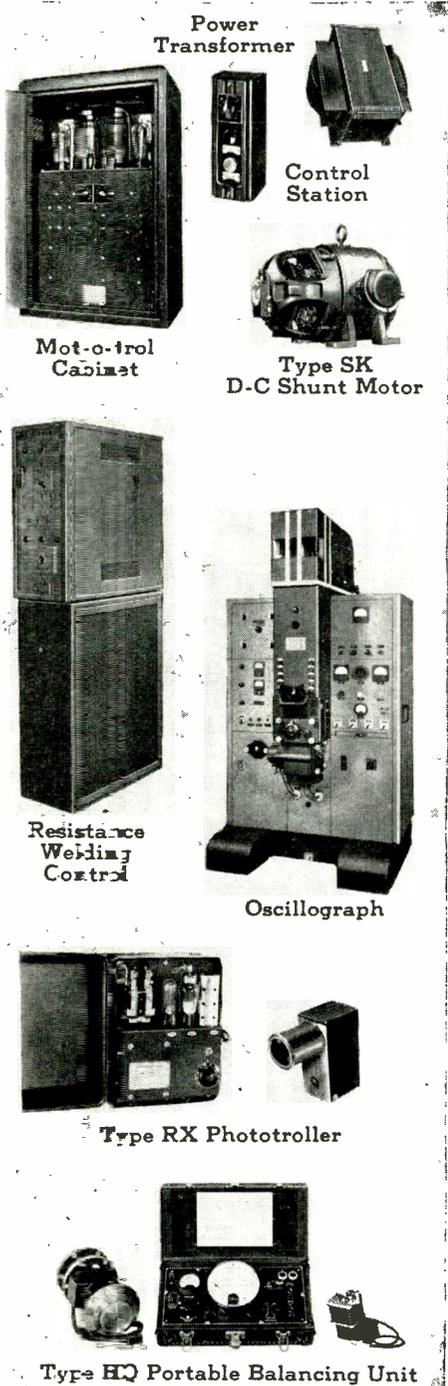


Micronex X-Ray Unit



2 KW RF Generator

WESTINGHOUSE ELECTRIC CORPORATION



MOT-O-TROL (Motor Speed Control)

Mot-o-trol employs the precision of electronics to provide a wide (80:1) stepless range of speed control for d-c motors from an a-c source. The system is based on a thyatron tube, which takes power from an a-c input and rectifies it to d-c for use by a regular shunt wound d-c motor. The Mot-o-trol provides smooth, rapid acceleration to preset speed, stepless control over a wide range of speeds with excellent regulation over the entire range, dynamic braking, and reversing. Control for speed variations, starting, stopping and reversing are on the control station. Four pieces are involved—power transformer, electronic control cabinet, control station, and the d-c motor.

RESISTANCE WELDING CONTROL

The Westinghouse Type AC fully electronic resistance welding control for welder side mounting combines in a single unit exceptionally accurate and precise control for seam, pulsation-spot, and spot welding. Heat selecting dial gives stepless adjustment of the welding current from 20% to 100% of maximum current on 440 to 550 volts, and 40% to 100% on a 220 volt supply. The normal time adjustment is from 1 to 30 cycles in 1 cycle steps for "weld" and "off" time in seam welding and "heat" and "cool" time in pulsation or spot welding. From 1 to 15 pulsations may be selected for pulsation welding.

OSCILLOGRAPH

The Electronic Oscillograph is an instrument recording extremely short, single electrical transients with respect to time, or two electrical phenomena with respect to each other. The new streamlined unit is completely self-contained and consists of a cabinet which houses all the energizing and control circuits. In addition to the fluorescent screen for direct observation, the instrument contains a stationary film for recording electrical phenomena lasting 1/100,000 of a second or less. For phenomena lasting from 1/1000 to 1/10 of a second, where longer oscillograms are desired, a rotating film drum is used.

PHOTO-TROLLER (Photo-electric Relays)

Photo-trollers are general purpose photo-electric relays operated by an increase or decrease in the amount of light falling on a phototube. They are arranged to initiate an electrical sequence in response to changes of illumination caused by partially or completely breaking a light source. Type RX-1 (illustrated) is for general purpose indoor industrial applications where the change in light on the phototube is more than 50% and where less than 150 operations per minute with equal "off—on" periods are required. It may be used up to 40 feet maximum distance.

BALANCING EQUIPMENT

Dynamic and Dynetric Balancing Apparatus accurately indicates the amount and location of unbalance in two or more selected planes of a rotating machine, determining the amount of correction necessary to balance the equipment.

TYPE HQ (Dynamic) portable unit (illustrated) employs velocity type vibration pickup with dynamometer type wattmeter and sine wave generator.

TYPE U (Dynetric)* uses an electromagnetic pickup with wattmeter and generator.

TYPE S (Dynetric)* stroboscopically locates unbalance and indicates amount of correction to be made.

*Information on dynetric equipment may be obtained from Gisholt Machine Company, Madison, Wisconsin

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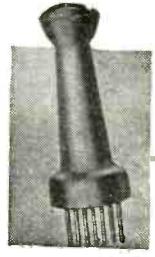
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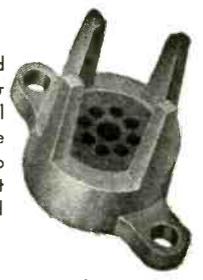
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#JE-12 — (Hardened tool steel insert) or JE-13 (Stainless steel insert) Miniature tube pin straightener to obtain a perfect fit when the tube is placed in the set.



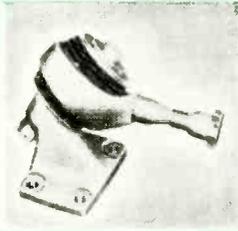
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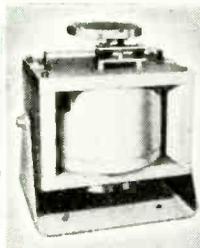
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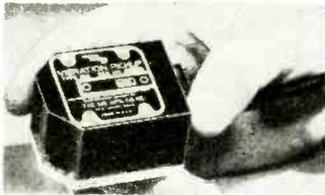
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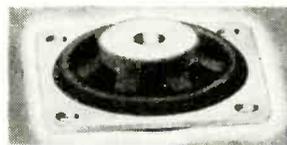
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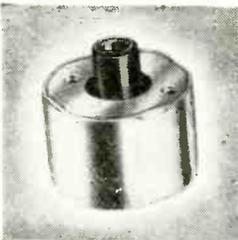
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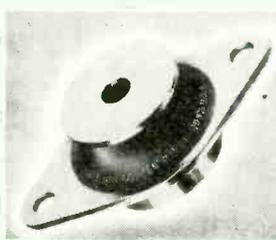


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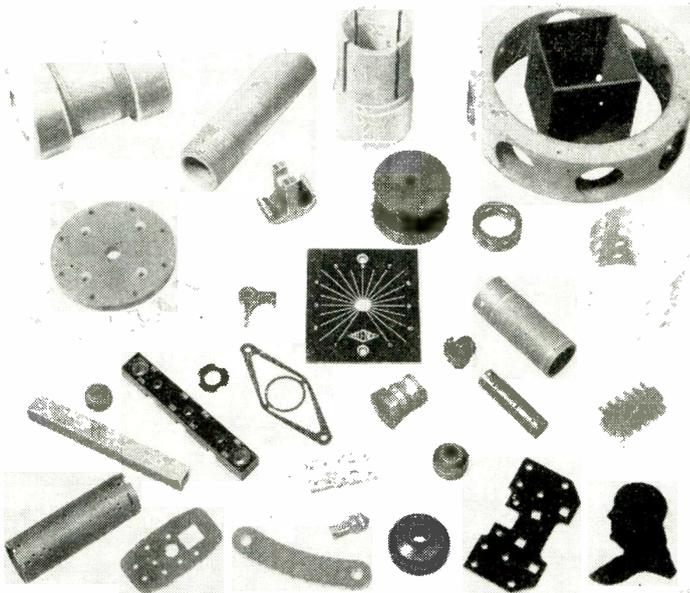
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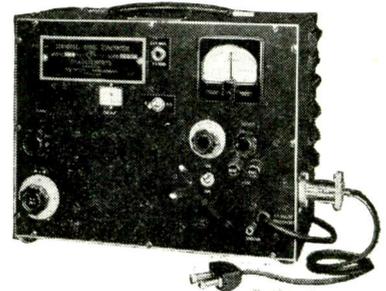
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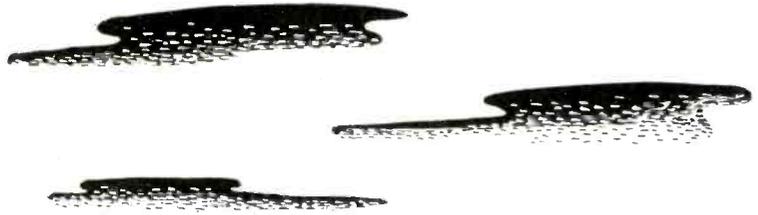
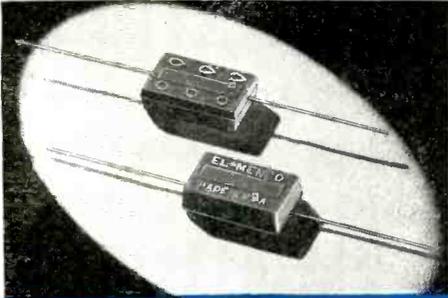
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In three ranges
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OUTPUT: 150 volts

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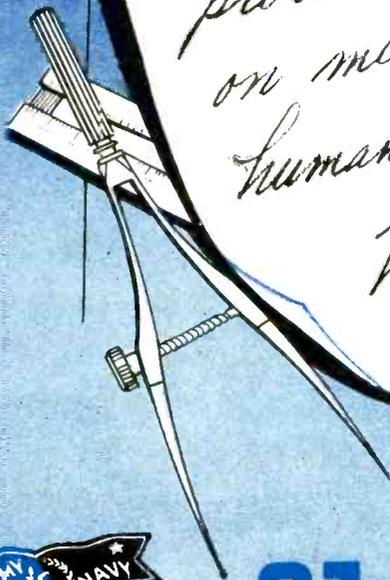
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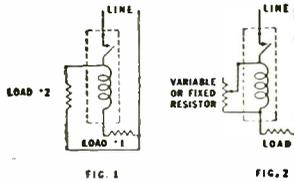
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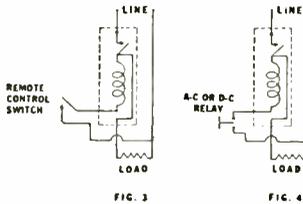


CALIBRATING TAP

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.

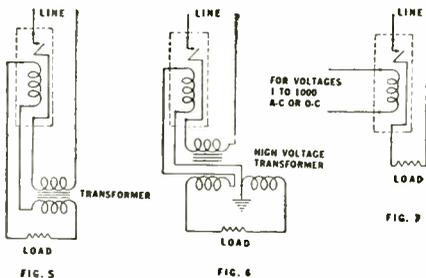


SHUNT TRIP

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.

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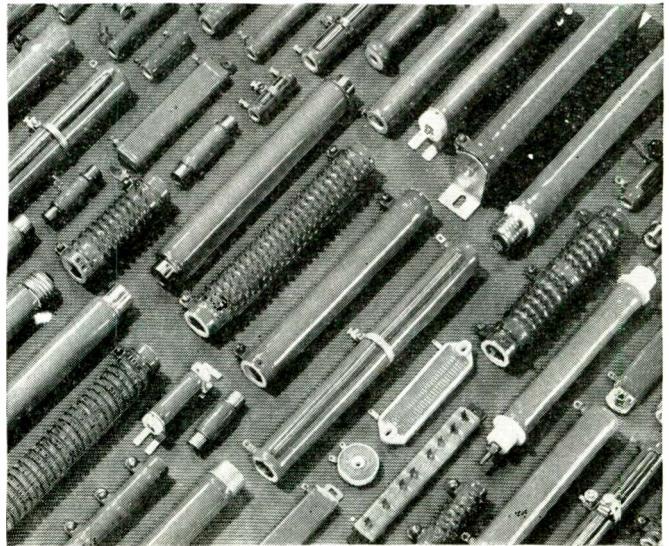
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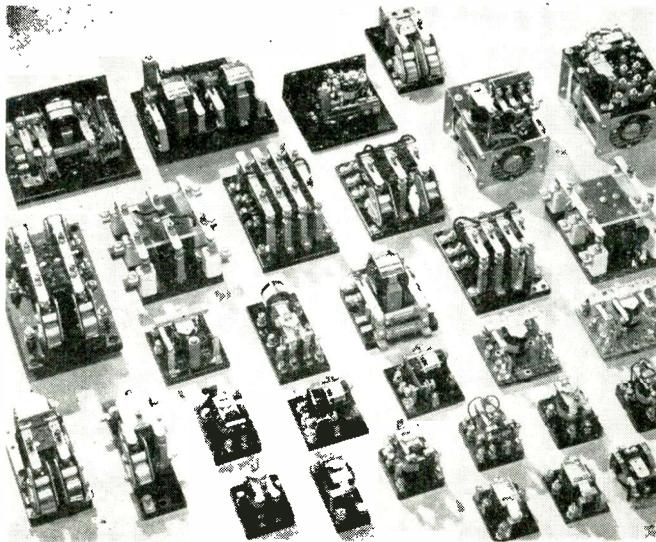
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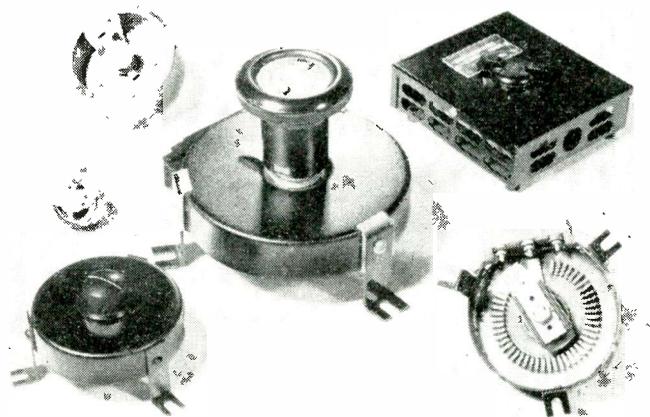
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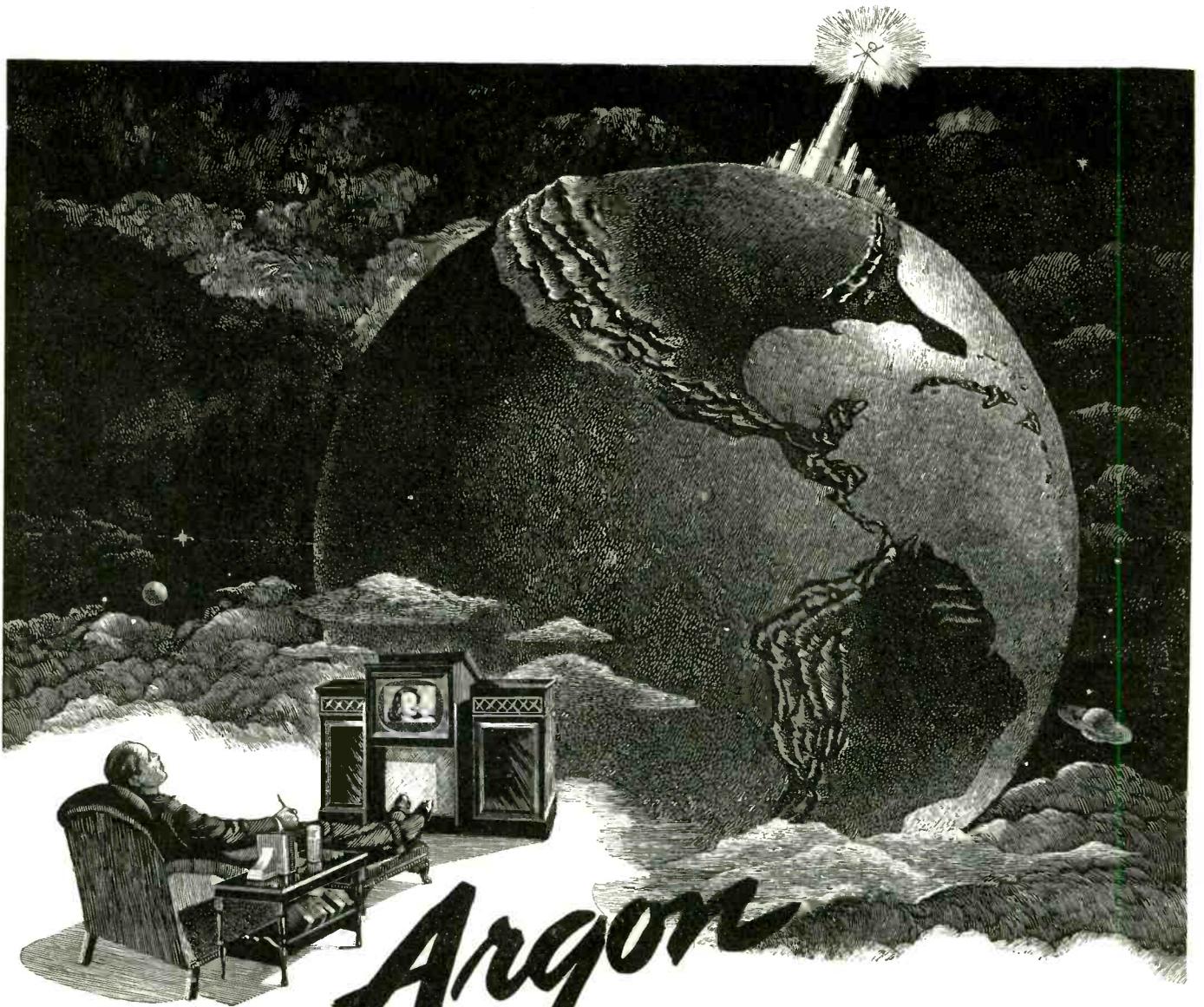
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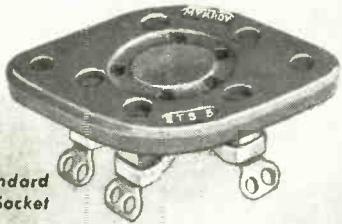
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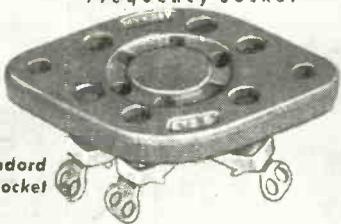
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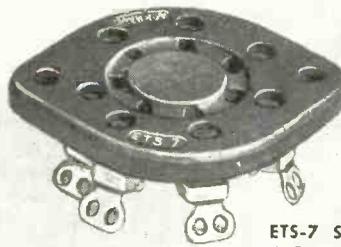
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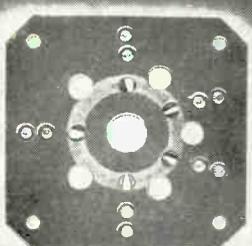


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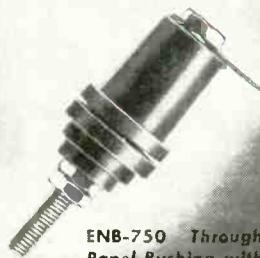
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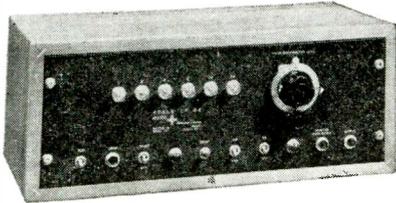
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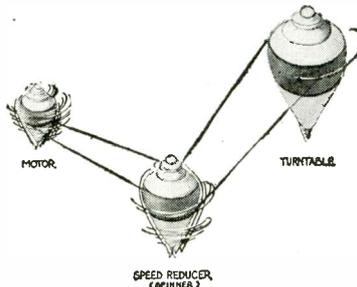


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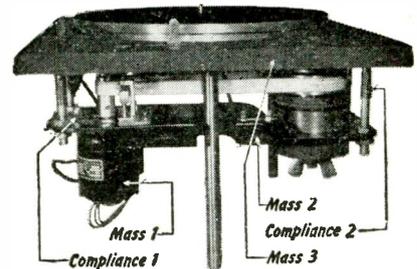
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Materials for potting, dipping or impregnating all types of radio components or all kinds of electrical units. • Tropicalized fungus proofing waxes. • Waterproofing finishes for wire jackets. • Rubber finishes. • Inquiries and problems invited by our engineering and development laboratories.

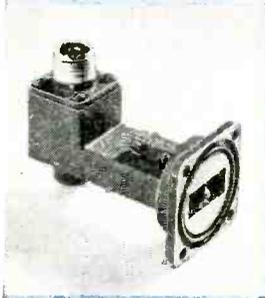
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EVERY DE MORNAY-BUDD WAVE GUIDE is Electrically Tested, Calibrated and Tagged



Crystal Mount DB-453



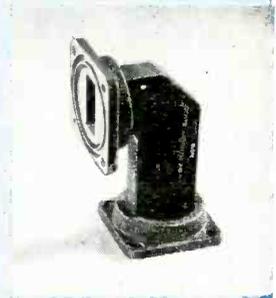
Rotating Joint DB-446



90° Elbow (H Plane) DB-433



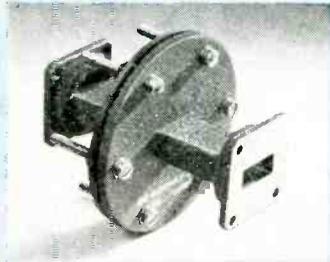
Pressurizing Unit DB-452



Mitered Elbow (H Plane) DB-439



Uni-directional Broad Band Coupler DB-442



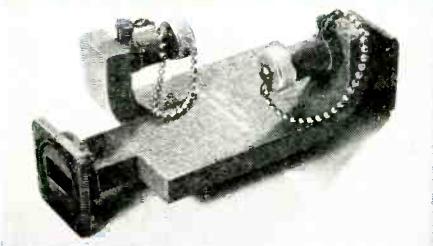
Bulkhead Flange DB-451



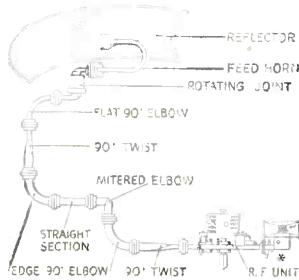
Uni-directional Narrow Band Coupler DB-440



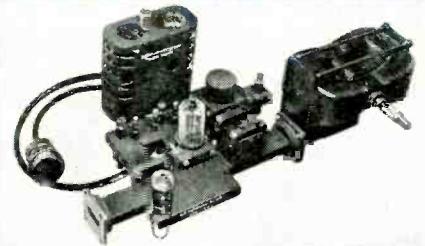
90° Twist DB-435



Bi-directional Narrow Band Coupler DB-441



Typical wave guide assembly illustrating use of De Mornay-Budd components available from standard stocks.



RF Radar Assembly DB-412

When you use any De Mornay-Budd wave guide assembly, you know exactly how each component will function electrically. You avoid possible losses in operating efficiency through impedance mismatches, or breakdown and arcing caused by a high standing wave ratio. (See chart below.)

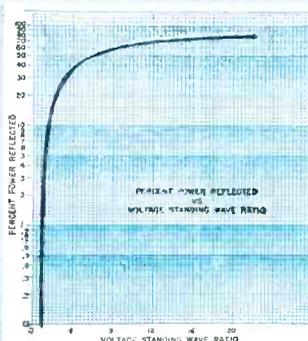
De Mornay-Budd wave guides are manufac-

tured from special precision tubing, and to the most stringent mechanical specifications. Rigid inspection and quality control insure optimum performance.

Complete laboratory service and consultations on micro-wave transmission line problems available.

The curve shows the manner in which the reflected power increases with an increase in the voltage standing wave ratio. The curve is calculated from the following equation:

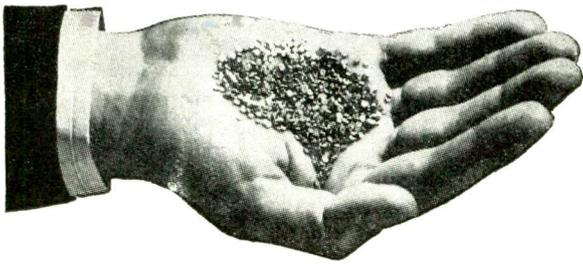
$$\% \text{ Power Reflected} = \left(\frac{\left(\frac{V_{\max}}{V_{\min}} \right) - 1}{\left(\frac{V_{\max}}{V_{\min}} \right) + 1} \right)^2$$



Write for catalog of standard bench test equipment.



De Mornay-Budd, Inc., 475 Grand Concourse, New York 51, N. Y.

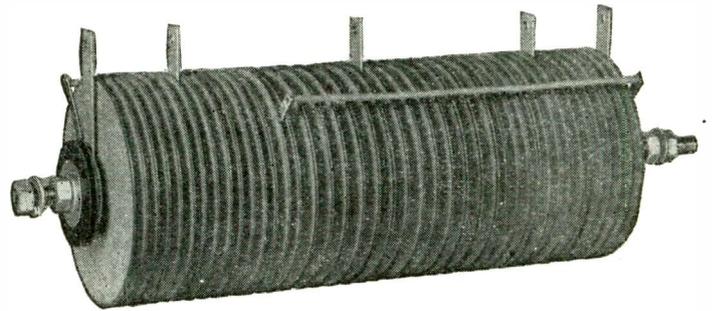


38,000 *rectifiers per lb*

Selenium Rectifiers 4 volts 0.1 milliamperes d-c

5 lb *per rectifier*

Selenium Rectifier Stack 110 volts 5 amperes d-c



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Selenium rectifiers, withstand extreme variations in ambient temperature, humidity, and pressure. Low leakage factor insures maximum operating efficiency.



For information that will help you make efficient use of G-E selenium rectifiers in your designs, write for our booklet "G-E Selenium Rectifier Stacks." Section A668-119, Appliance and Merchandise Department, General Electric Company, Bridgeport, Conn.

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*Frequency Range 1000 KC to
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Type Z-1, the new standard crystal unit for marine, aircraft and police service, is a precision low temperature coefficient unit that meets all F.C.C. requirements. Temperature coefficient less than 2 cycles per MC. °C. Calibrated to within .005% of specified frequency.

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PETERSEN RADIO COMPANY



2800 WEST BROADWAY — TELEPHONE 2760

COUNCIL BLUFFS, IOWA

Free

TO ELECTRONIC ENGINEERS

New handy Guide for choosing the right "Eveready" Battery!

● This new engineering specification folder can save you a lot of time and trouble. For it summarizes all the essential details you need to know about "Eveready" "Mini-Max" batteries for designing battery-operated radio receivers and other electronic equipment.

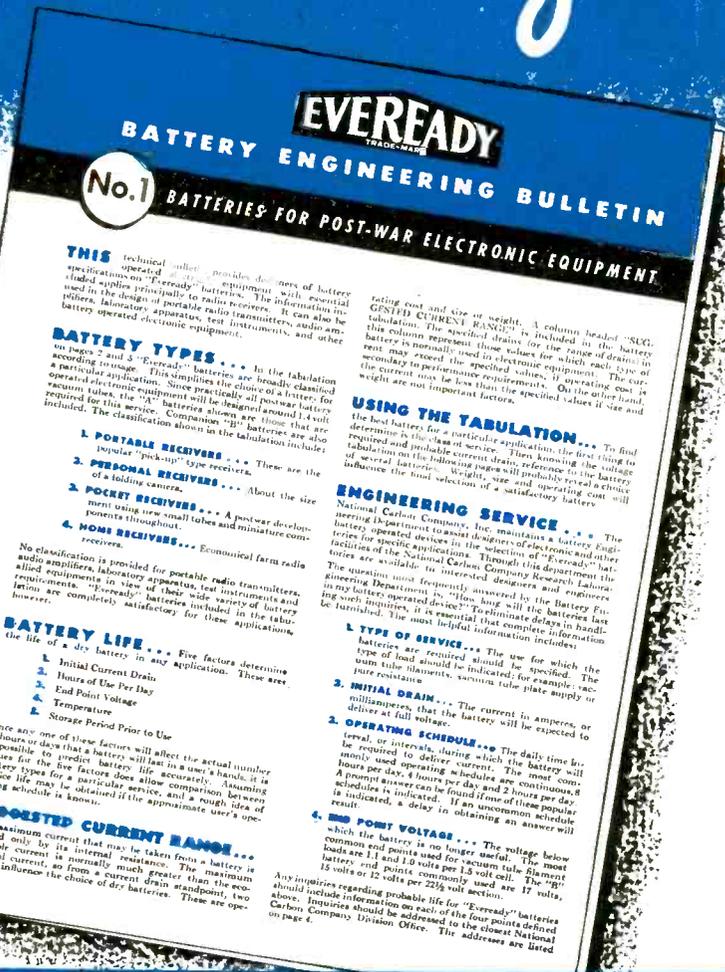
The various batteries are classified according to class of service. Thus, all the possible batteries that can be used for a particular application are grouped together, making it easy for you to make a quick, accurate selection.

SEND FOR IT TODAY!

GUIDE DESCRIBES:

Type of battery	Arrangement of terminals
Voltage	Current range
No. and size of cells	Approximate weights
Maximum dimensions	List prices

The registered trade-marks "Eveready" and "Mini-Max" distinguish products of National Carbon Company, Inc.



EVEREADY BATTERY ENGINEERING BULLETIN No. 1 BATTERIES FOR POST-WAR ELECTRONIC EQUIPMENT

THIS technical folder provides designers of battery-operated electronic equipment with essential specifications on "Eveready" batteries. The information included applies principally to radio receivers. It can also be used in the design of portable radio transmitters and amplifiers, laboratory apparatus, test instruments, and other battery-operated electronic equipment.

BATTERY TYPES... In the tabulation a particular application. This simplifies the choice of a battery for a particular electronic equipment. Since practically all post-war battery vacuum tubes, the "A" batteries shown are those that are required for this service. Companies "B" batteries are also included. The classification shown in the tabulation includes:

- 1. PORTABLE RECEIVERS... These are the popular "pocket" type receivers.
- 2. PERSONAL RECEIVERS... About the size of a folding camera.
- 3. POCKET RECEIVERS... A post-war development using new small tubes and miniature components throughout.
- 4. HOME RECEIVERS... Economical farm radio.

No classification is provided for portable radio transmitters, audio amplifiers, laboratory apparatus, test instruments, and other electronic equipment. "Eveready" batteries included in the tabulation are complete, satisfactory for these applications.

BATTERY LIFE... Five factors determine the life of a dry battery in any application. These are:

- 1. Initial Current Drain
- 2. Hours of Use Per Day
- 3. End Point Voltage
- 4. Temperature
- 5. Storage Period Prior to Use

Since any one of these factors will affect the actual number of hours or days that a battery will last in a user's hands, it is impossible to predict battery life accurately. Assuming values for the five factors does allow comparison between battery types for a particular service, and a rough idea of service life may be obtained if the approximate user's operating schedule is known.

SUGGESTED CURRENT RANGE... The maximum current that may be taken from a battery is limited only by its internal resistance. The maximum available current is normally much greater than the nominal current, so from a current drain standpoint, two factors influence the choice of dry batteries. These are operating cost and size of weight. A column headed "SUGGESTED CURRENT RANGE" is included in the battery tabulation. The electrical drains for which each type of battery is normally used in electronic equipment. The current may exceed the specified values, if operating cost is secondary to performance requirements. On the other hand, weight are not important factors.

USING THE TABULATION... To find the best battery for a particular application, the first thing to determine is the class of service. Then, knowing the tabulation and probable current drain, reference to the voltage of several batteries. Weight, size and operating cost will influence the final selection of a satisfactory battery.

ENGINEERING SERVICE... The National Carbon Company, Inc. maintains a Battery Engineering Department to assist designers of electronic and other battery-operated devices in the selection of "Eveready" batteries for specific applications. Through the department facilities of the National Carbon Company Research Laboratories are available to interested designers and engineers. The questions most frequently answered by the Battery Engineering Department is, "How long will the batteries last in my battery-operated device?" Prompt answers are given. Inquiries, if it is essential that complete information be furnished, the most helpful information includes:

- 1. TYPE OF SERVICE... The use for which the batteries are required should be specified. The type of load should be indicated, for example: vacuum tube filament, vacuum tube plate supply or pure resistance.
- 2. INITIAL DRAIN... The current in amperes, or milliamperes, that the battery will be expected to deliver at full voltage.
- 3. OPERATING SCHEDULE... The daily time interval, or intervals, during which the battery will be required to deliver current. The battery will be used for 4 hours per day and 2 hours per day. A prompt answer can be given if one of these popular schedules is indicated. If an uncommon schedule is indicated, a delay in obtaining an answer will result.
- 4. END POINT VOLTAGE... The voltage below which the battery is no longer useful. The most common end points used for vacuum tube filament loads are 1.1 and 1.0 volts per 1.0 volt cell. The "B" battery end points commonly used are 1.7 volts, 1.6 volts or 1.2 volts per 2.0 volt section.

Any inquiries regarding probable life for "Eveready" batteries should include information on each of the four points defined above. Inquiries should be addressed to the closest National Carbon Company Division Office. The addresses are listed on page 4.

NATIONAL CARBON COMPANY, INC.

30 EAST 42nd STREET, NEW YORK 17, N. Y.

Unit of Union Carbide and Carbon Corporation



SHURE . . . YOUR HEADQUARTERS FOR RELIABLE MICROPHONES, PHONOGRAPH PICKUPS and CARTRIDGES



"556" Super-Cardioid (For Broadcast)

"556" SUPER-CARDIOID DYNAMIC (FOR BROADCAST)

Reduces reflections and reverberation—decreases random noise pickup by 73%. Smooth response from 40 to 10,000 cycles over wide angle at front—dead at rear. Single unit construction accomplished through Shure "Uniphase" principle (Patented). Floating moving coil system. Swivel head. Standard $\frac{5}{8}$ "—27" thread. 18" cable. Convenient terminals for attaching longer length cables. Case: $4\frac{1}{4}$ " high, $3\frac{1}{4}$ " wide, $3\frac{1}{2}$ " deep. Shipping weight $4\frac{1}{2}$ lbs.

MODEL	IMPEDANCE	OUTPUT LEVEL	CODE	LIST PRICE
556 A	35-50 Ohms	62.8 db below 6 Milliwatts per 10 bar signal	RUDOM	\$82.00
556 B	200-250 Ohms	63.8 db below 6 Milliwatts per 10 bar signal	RUDOP	\$82.00
556 C	HIGH	55 db below 1 volt per bar	RUDOR	\$82.00

"UNIDYNE" SUPER-CARDIOID DYNAMIC (FOR GENERAL PURPOSE)

Reduces feedback and background noise. Permits greater volume. Simplifies sound installations. Faithful reproduction from 40 to 10,000 cycles. Practically unaffected by atmospheric conditions. Exclusive Shure "Uniphase" principle. (Patented) Swivel head. Built-in cable connector. $\frac{5}{8}$ "—27" thread. Case same size as "556" series. Shipping weight $4\frac{1}{2}$ lbs.



"Unidyne" Super-Cardioid Dynamic (For General Purpose)

MODEL	IMPEDANCE	OUTPUT LEVEL	CABLE	CODE	LIST PRICE
55A	35-50 Ohms	62.8 db below 6 Milliwatts per 10 bar signal	25 ft.	RUDAR	\$51.45
55B	200-250 Ohms	63.8 db below 6 Milliwatts per 10 bar signal	25 ft.	RUDAT	\$54.20
55C	HIGH	55 db below 1 volt per bar	25 ft.	RUDAS	\$54.20



"Uniplex" Cardioid Crystal

"UNIPLEX" CARDIOID CRYSTAL

The lowest cost Cardioid Microphone. True reproduction from 30 to 10,000 cycles over wide angle at front—dead at rear. Reduces feedback. Permits more volume. Uses Shure "Uniphase" principle. (Patented) Output level 63 db below 1 volt per bar. Specially moisture-proofed Grafoil Bimorph Crystal. Swivel head. Built-in cable connector. Standard $\frac{5}{8}$ "—27" thread. Diam. $3\frac{1}{8}$ ", depth $3\frac{3}{8}$ ". 25 ft. shielded cable. Shipping weight $1\frac{1}{2}$ lbs.

Model 730B. Code: RUPEL. List Price \$37.20.

(Crystal Microphones and Pickups licensed under patents of The Brush Development Co.)

707A CRYSTAL MICROPHONE

Good reproduction at low cost. Iridescent Gray finish. Output level 49.7 db below 1 volt per bar. Bimorph Crystal. 7' cable. Standard $\frac{5}{8}$ "—27" thread. Diam. $2\frac{3}{8}$ ". Shipping weight $1\frac{1}{4}$ lbs.

Model 707A. Code RUDOE. List price \$13.50



707A Crystal



"Stratoliner"

"STRATOLINER" MICROPHONES

Distinctive appearance. Smooth response. Die cast case, swivel head, built-in cable connector. Diam. $2\frac{1}{2}$ ", length $4\frac{1}{8}$ ". Stand thread $\frac{5}{8}$ "—27". Shipping weight $2\frac{3}{4}$ lbs. 25' cable.

DYNAMIC
508B—200 ohm—Code RUVAP.
List price \$31.50
508C—High Impedance—Code RUVAS
List Price \$31.50

CRYSTAL
708A—7' cable—Code RUDUM.
List price \$21.35

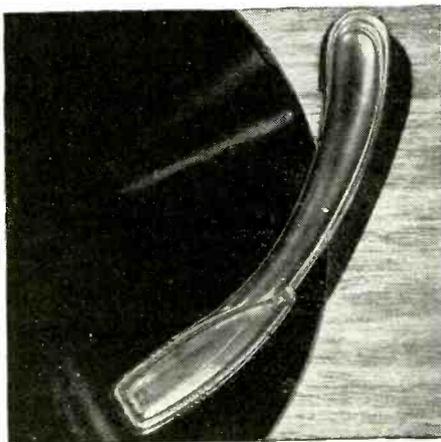
"100 SERIES" MILITARY CARBON MICROPHONES

Tough military carbon Microphones for ruggedness and dependability. Sharp voice response. High output. Heavy duty push-to-talk switch. Standard with leading manufacturers of police transmitters. Output level: 32 db below 1 volt for 10 bar speech signal. Net wt. 14 oz. Shipping wt. 1 lb. Case: $3\frac{3}{4}$ " high, $1\frac{1}{4}$ " deep, $2\frac{3}{4}$ " wide. List price : : : : \$27.35



"100 Series" Military Carbon

SHURE PHONOGRAPH PICKUPS AND CARTRIDGES . . .



NEW SHURE GLIDER CRYSTAL PICKUPS

Low needle point impedance saves needles and records. High output voltage. True natural reproduction free from resonant peaks and dips. Low surface noise. Curved arm minimizes tracking error. Beautiful brown finish. Lightweight aluminum arm with new lever-type Cartridge. Needle force only $1\frac{1}{2}$ oz.

MODEL	OUTPUT at 1000 CPS.	RESPONSE	NEEDLE SCREW	SHIPPING WEIGHT	CODE	LIST PRICE
93A	1.6 volts	60-6000 CPS	SET and THUMB	13 oz.	RUGLI	\$6.10
93AN	Same as 93A	Same as 93A	Same as 93A	Same as 93A	RUGLO	8.60

NEW SHURE LEVER-TYPE PICKUP CARTRIDGES

Uses new lever construction for driving crystal. Lowest needle point impedance for highest output voltage ever available in crystal cartridges. Aluminum case cartridges will replace steel—reduce needle force of old pickups—permit use of permanent-point needles—save needles and records. Pin and jack terminals.

MODEL	REPLACES	MIN. NEEDLE FORCE	OUTPUT VOLTAGE	SHIP. WT.	CODE	LIST PRICE
W57A	Any Standard Flat-Type Cartridge of Equal Output	$\frac{3}{4}$ oz.	1.6	$\frac{3}{4}$ oz.	RUGLA	\$4.45
*W57AN		$\frac{3}{4}$ oz.	1.6	$\frac{3}{4}$ oz.	RUGAN	6.95
W58A		$\frac{3}{4}$ oz.	1.6	1 oz.	RUGLU	4.45
W59A		1 oz.	2.5	1 oz.	RUGAT	4.45

**With Sapphire Point Needle*

SHURE BROTHERS

Designers and Manufacturers of Microphones and Acoustic Devices

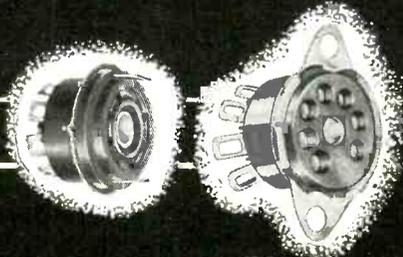
225 West Huron Street, Chicago 10, Ill. • U.S.A. • Cable Address: SHUREMICRO



Franklin QUALITY Sockets

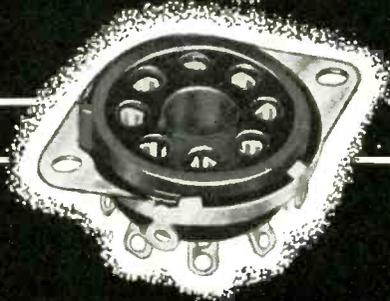
for Personal . . . Broadcast . . . Television Receivers

PERSONAL RECEIVERS

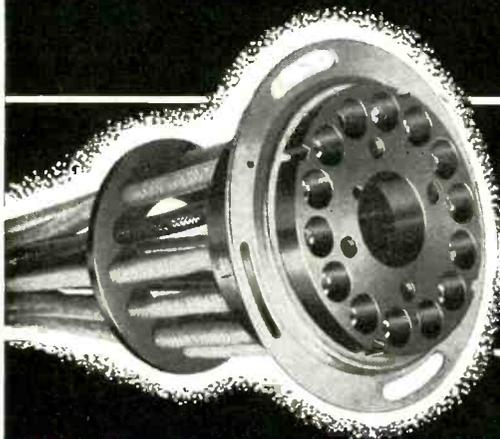


SERIES 55A4 MINIATURE MOLDED

BROADCAST RECEIVERS

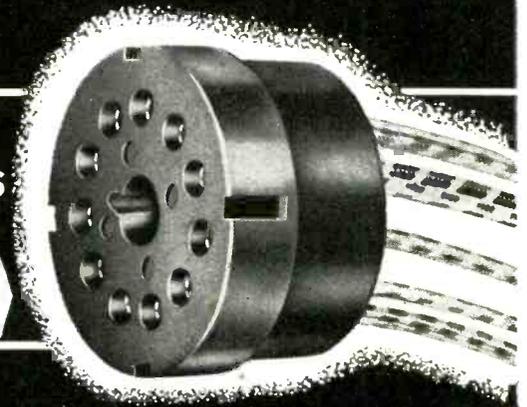


SERIES 60 MOLDED OCTAL



TELEVISION
ONE PIECE SOCKETS

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. . . and for general purposes, the Series 39 Socket, with patented bow spring action contacts (with or without a soldering tab to eliminate wiring to ground) is the favorite of all time. Automatically machine made, tens of thousands are being delivered to the radio industry to enable peak production of standard receivers. The millions in use give testimony to its being the favorite socket of pre and post war receivers.



ELECTRONIC
COMPONENTS



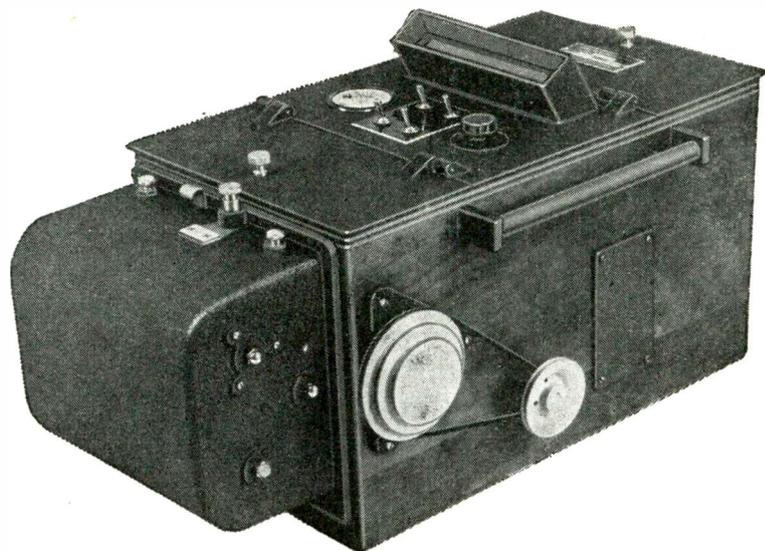
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Hathaway Type S14-A
Student's Oscilloscope

Ultra-simple measuring and recording instrument of unusual accuracy and dependability. Meets the need of Colleges and Technical Schools for a low-price precision oscilloscope adaptable to general field and laboratory work.

Complete in every essential detail with simultaneous viewing and recording, instant magazine loading, automatic brilliancy control and four operating speeds, 48", 24", 12", and 6" per second. Operates from 110-volt a-c outlet. Weighs 40 lbs. Measures 10" wide x 17½" long x 10½" high.

Hathaway Oscilloscopes are available in a wide variety of sizes. Type S8-B, 12 to 24 elements, general laboratory and field unit. Type S8-C similar to Type S8-B, but contains 24 to 36 elements. Type S8-D similar to Type S8-B except minus automatic features. Type S12-A portable 12 element field and general laboratory instrument.

Write for detailed information. Hathaway Instrument Company, 1315 S. Clarkson St., Denver 10, Colorado.



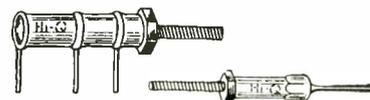
TO INSURE A
BIG JOB IN A
 LITTLE SPACE

SPECIFY

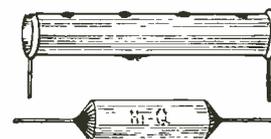
HI-Q

COMPONENTS

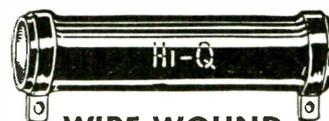
**DUREZ
 COATED
 CAPACITORS**



STAND-OFF CONDENSERS



**CERAMIC
 CAPACITORS**



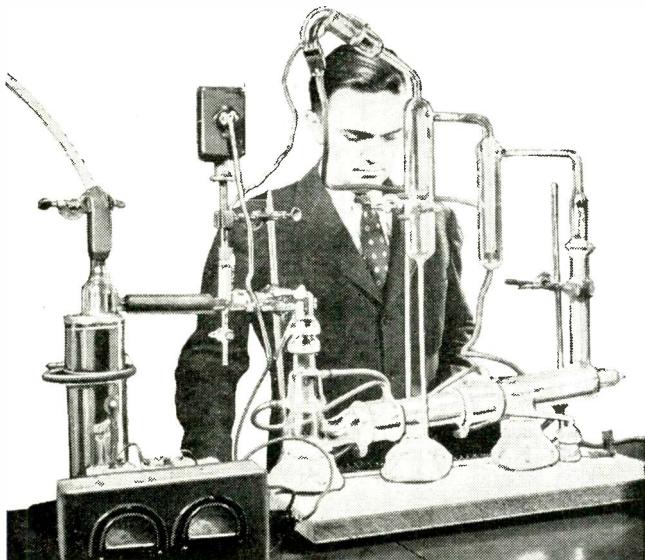
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CHOKE COILS

**ELECTRICAL REACTANCE
 CORPORATION**
 FRANKLINVILLE, N. Y.

NOW AVAILABLE **DC** 702 AND **DC** 703



LABORATORY TEST DATA: In this three-jet, water-cooled glass diffusion pump, DC 703 produces a vacuum of 10^{-6} m.m. in less than 10 minutes. With the heaters on and the fore pump off, the system is then opened to the air for 15 minutes and the fluid is exposed to the atmosphere at temperatures up to 300° C. The system is then closed and DC 703 reestablishes a vacuum of 10^{-6} m.m. in less than 10 minutes. Pumping time is often shorter after such exposure to air.

SILICONE FLUIDS

for use in DIFFUSION PUMPS
producing HIGH VACUUMS

STABLE TO AIR AND MOISTURE AT 175° TO 250° C.



For further information, write for our new pamphlet, "DC 702 and DC 703, Silicone Fluids For Use In Diffusion Pumps Producing High Vacuum."

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MIDLAND, MICHIGAN

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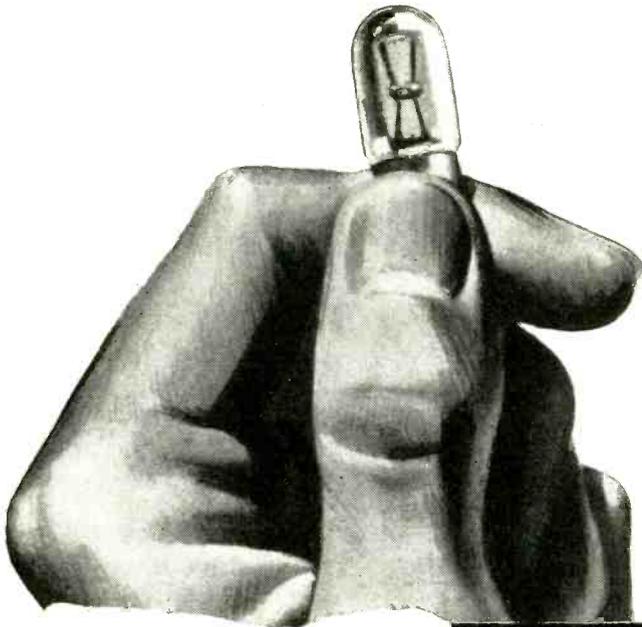
In Canada: Dow Corning Products Distributed by Fiberglas Canada, Ltd., Toronto

These new silicone diffusion pump fluids produce at least as high a vacuum in as short a time as the best diffusion pump oils available. In addition to having equal or superior properties for producing high vacuums rapidly, DC 702 and DC 703 do not decompose on exposure to air and moisture at operating temperatures of 175° to 250° C. They are unsurpassed for use in high vacuum systems frequently opened to air, such as electron microscopes and equipment for producing vacuum tubes, for evaporating metals and for concentrating foods and pharmaceuticals. DC 702 and DC 703 do not foul the heating surfaces of vacuum pumps even after months of operation.

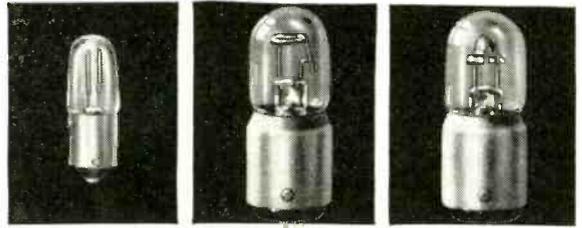
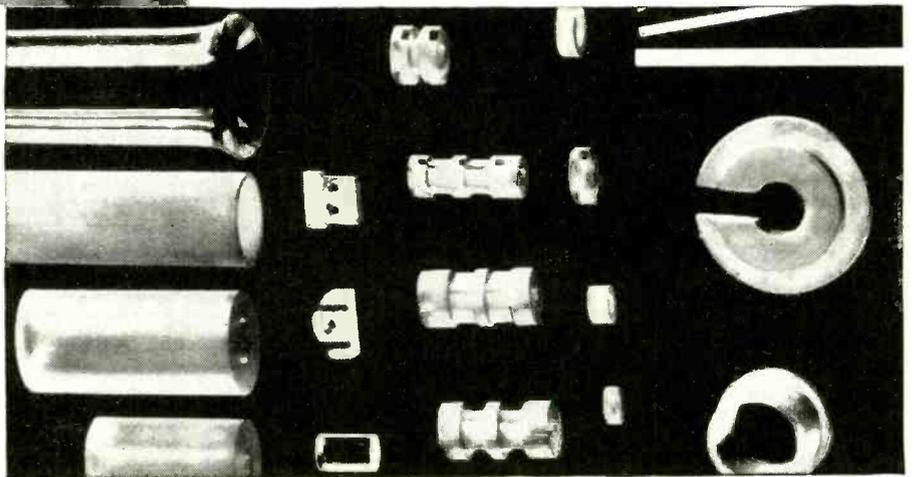


3 Shortcuts to better design of Electronic Products

The products of General Electric Lamp Research shown on this page may help you save time and money in designing electronic products. For further information, write to General Electric Company, Division 166, EBG, Nela Park, Cleveland 12, Ohio.



3 FUSED QUARTZ for insulators. General Electric makes fused quartz, both clear and translucent, in rod, tubing, ingot and special forms for critical electronic work. Stands high temperature and thermal shock, has low power loss and surface leakage, has high dielectric strength, is non-hydroscopic, stands high current flashovers without failure, has high crushing strength.



NE-51 For general indication, such as showing existence of potential across various parts of electrical circuits.

NE-17 Indicator and pilot lamp that flashes to show condition of B-battery in portable radios. Frequency of flashes decreases as battery runs down.

NE-48 (also N-E 16). Indicator lamps. Special volt-ampere characteristics indicate use as voltage regulators. Screw base lamp available as NE-45.

CONSIDER THE ADVANTAGES OF G-E GLOW LAMPS

1. Distinctive orange-red glow—no colored cover glass needed.
2. Dependable performance and long life—rated at 3,000 hours.
3. Low current consumption—less than ½ ma. for smallest lamp.
4. Variety of sizes and wattages.
5. High resistance to vibration, shock.
6. Normally usable on a-c or d-c.
7. Screw base lamps for 105-125 v. circuits; similar lamps available with bayonet bases, but external resistance required.
8. Produce practically no heat.
9. Nearly flat volt-ampere characteristics.
10. Insensitive to voltage variations above critical value.

1 G-E NEON GLOW LAMPS. The unique characteristics of General Electric Neon Glow Lamps recommend them for a variety of uses in radios and electronic devices . . . as indicators, voltage regulators, pilot lights and test lamps. The lamps shown above are just three of many types available.

2 G-E INCANDESCENT MINIATURE LAMPS are widely used for radio dial and other applications. G-E makes a complete line for every use—all types are rigidly tested to assure dependable performance, high light output, low current consumption.

GENERAL  **ELECTRIC**

THE IMC ENGINEER IS
On Your Staff-
 BUT NOT ON YOUR PAYROLL



Call him when you need Insulation assistance

A quick summons brings the IMC engineer to your side to give expert consideration and advice on all your most intricate and stubborn electrical insulation problems. He will serve you well . . .

1. Assist in selection of best insulating materials for the specific job. (Note well-known nationally recognized products from which to make selections.)
2. Give instructions as to proper application.
3. Suggest ways to eliminate waste.
4. Speed up and increase your production.

He will welcome your call . . . any time. Phone or write to us or nearest branch office.

IMC PRODUCTS: Macallen Mica Products—Vartex Varnished Cloth and Tapes—Varslot Combination Slot Insulation—Varnished Silk and Paper—Fiberglas Electrical Insulation—Manning Insulating Papers and Pressboards—Daw Corning Silicones—Dieflex Varnished Tubings and Saturated Sleeveings of Cotton and Fiberglas—National Hard Fibre and Fishpaper—Phenolite Bakelite—Adhesive Tapes—Asbestos Woven Tapes and Sleeveings—Cotton Tapes, Webbing, and Sleeveings—Pedigree Insulating Varnishes—Wedgie Brand Wood Wedges.

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Complete line for the amateur bands.

Custom units for laboratory, experimental, and
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Let us engineer your frequency control problems.

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Established 1936

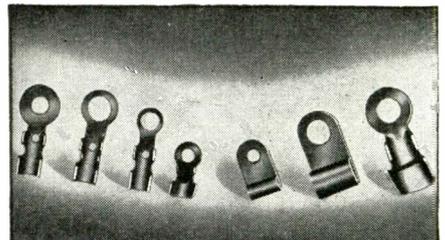
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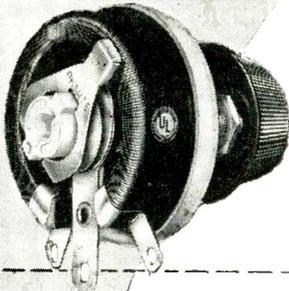
**RHEOSTATS • RESISTORS
TAP SWITCHES**

Wide Variety of Types and Sizes!

Stock and Special Units!

Time Proved Performance!

Experienced Engineering Cooperation!



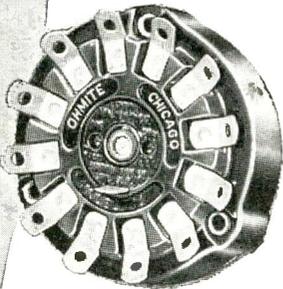
Close Control RHEOSTATS

10 Wattage Sizes from 25 to 1000 Watts, from 1 3/4" to 12" Diameter, with Standard or Special Features, with Uniform or Tapered Windings, in Stock or Special Resistances, in Single, Tandem, or Concentric Units.



Wire Wound RESISTORS

Widest Range of Types, Sizes and Ratings in Stock and Made-to-Order Units. Fixed, Adjustable or Tapped. General-Purpose, Non-Inductive or Precision. Standard or Special Windings. Variety of Terminals and Mountings. Also Hermetically Glass-Sealed Resistors.



High Current TAP SWITCHES

Compact, enclosed, all-ceramic, rotary, non-shorting, multi-point Selector Switches. 5 Sizes rated at 10, 15, 25, 50 and 100 Amperes 150, 300 V.A.C. As few as 2 or as many as 12 taps. Sizes from 1 3/4" to 6" Diameter. Single or Tandem units. Also Open Type Tap Switches in "shorting" (commutator) and "non-shorting" units. In Stock or Made-to-Order.

Send for Catalog and Engineering Manual No. 40

Write on company letterhead for valuable, helpful guide in the selection and application of rheostats, resistors, tap switches, chokes and attenuators.

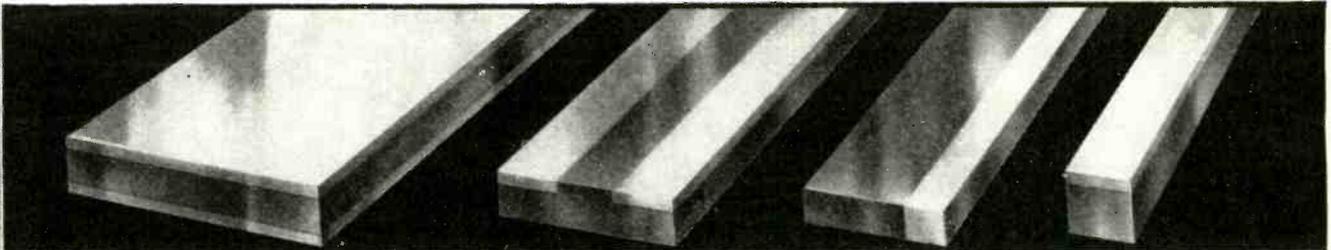


Be Right with
OHMITE
**RHEOSTATS • RESISTORS
TAP SWITCHES**

Laminated Precious Metals

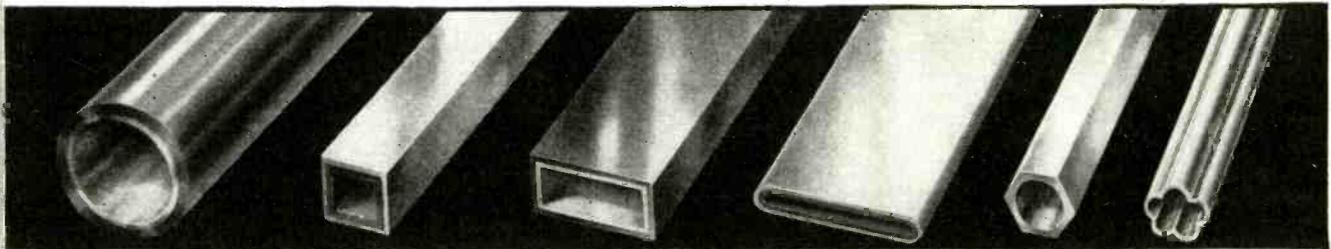
make these things possible . . .

- Desirable electrical, mechanical or chemical qualities of precious metals can be added to the strength or other desirable properties of base metals, precisely where and as required.
- Precious metal properties of corrosion resistance, electrical superiority, and durability can be obtained without solid precious metal costs.
- Finer, more lasting finishes than are otherwise obtainable in base metals.
- Uniform maintenance of lamination ratios with no porosity, pit marks or defects.



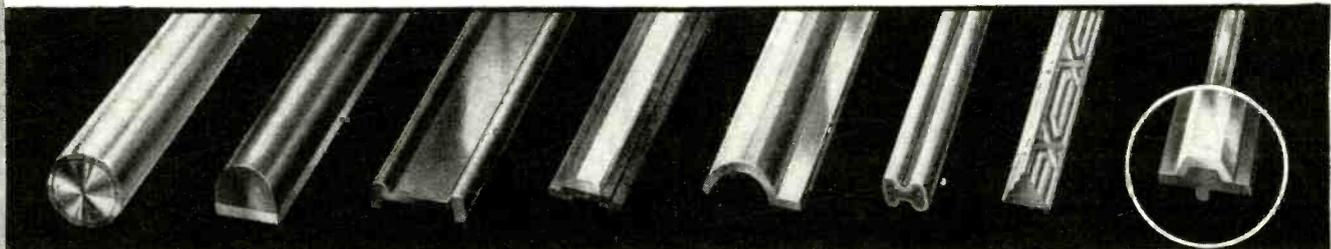
SHEET: Sheet is manufactured in any combination of metals and in any quality or ratio, single or double plate or striped. A recently developed specialty is edgelay. Laminated sheet can be produced as thin as .003 of an inch; in widths from 1/8 inch wide to 6 inches wide, and within tolerances of .0001" to .0002" depending on the material.

We are able to supply laminated or solid sheet with a fine mirror finish suitable for production of the finest precision parts or decorative pieces. Sheet or strip is supplied coiled or flat according to the customer's specifications and depending on the dimensions. From this sheet practically any form or type of product may be produced.



TUBING: Because our tubing is actually deep-drawn sheet, its quality is easily controlled. Dimensional limits lie between approximately .015" O.D. to 2" O.D. with wall thickness as small as .005". Very close tolerances can be maintained both on wall thickness and diameters. Laminated tubing is now used in the electrical industry, for electronic applications, high frequency radio parts, delicate instrument

assemblies and in the chemical industry, for non-corrosive containers and conveyors. In addition to round tubing, almost every other conceivable shape may be had, whether rectangular, octagonal, or star shaped, etc. Rings, sleeves and jackets are quickly and economically cut from laminated tubes. Machining and forming operations can often be eliminated or reduced by the use of specially shaped tubing.



WIRE: We draw wire to diameters as fine as .005" to .006" depending on the material, and the precious metal thickness can be held to a tolerance of .0001". In spite of such small dimensions, such wires are often engraved for decorative purposes or shaped for industrial use. Laminated wires, available in every conceivable shape, are widely used

in spectacle frames, in various instruments, for formed plated springs, low cost electric wire (silver coated steel), radio electronic parts, where expansion must be held to a minimum (silver on invar), and in chemical apparatus when corrosion must be prevented. We also make solder wire and preformed rings for straight line production.

To assist you in the application of our products to your products we are maintaining a staff of thoroughly experienced metallurgists, chemists, designers and consultants . . . an up-to-date research and testing laboratory . . . and a splendidly equipped tool room. These are all at your service to cooperate with your own staff to the full extent of our facilities.

Your inquiries are cordially invited. Ask, too, for a copy of our new descriptive folder on silver solders.



Makepeace PRODUCTS

SHEETS • WIRE • TUBING • SOLDERS • FABRICATED PARTS AND ASSEMBLIES

D. E. MAKEPEACE COMPANY

Main Office and Plant, Attleboro, Massachusetts

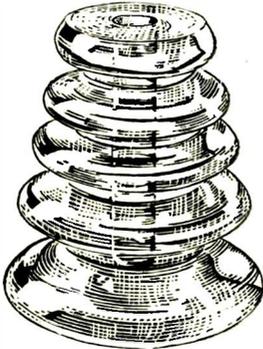
NEW YORK OFFICE, 30 CHURCH ST. CHICAGO OFFICE, 55 EAST WASHINGTON ST.

HANOVIA Fused Quartz Insulators

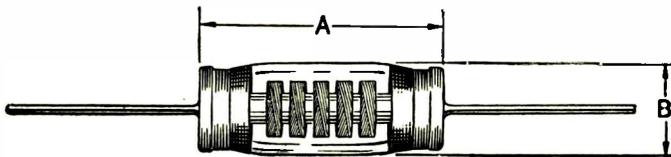
Fused quartz of transparent quality is the finest electrode insulator known. It contains a minimum of air lines and will stand up under heavy current conditions and high temperature. Some of its superior qualities are listed.

If you have an insulator problem investigate the use of fused quartz.

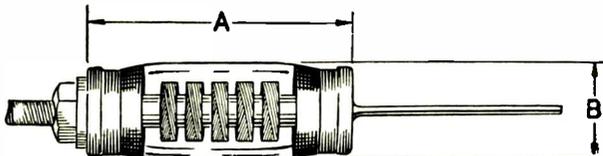
Coefficient of expansion . . .00000054 in. per inch degree C. This is the lowest of any known substance.
 Index of Refraction1.458
 Compression Strength190,000 lbs. per sq. in.
 Tensile Strength7,000 lbs. per sq. in.
 Melting PointAbout 1750° C
 Hardness4.9 on Mohs Scale
 Dielectric Constant4.4
 Dielectric Power Loss . . . 0.97; 1/8 that of wet process porcelain
 Surface LeakageAbout 6.7 x 10-12 amperes per cm at 500 volts. Has less affinity for water than any known material.
 Dielectric Strength410 volts per mill at 5.° C



HANOVIA HERMETICALLY SEALED R. F. CHOKES



MILLI-HENRIES	A	B
1.0	1-3/4"	5/8"
2.0	1-3/4"	5/8"
2.5	2"	5/8"
5.0	2"	11/16"
10.0	3"	11/16"



AVAILABLE IN ABOVE TWO FORMS
 RATED AT 125 M.A. FOR ALL SIZES

Complete information on these and other Hanovia Chokes on request.

HANOVIA Chemical & Mfg. Co.

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 find the
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QUICKLY
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*Use it for
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OZALID does these jobs in seconds!

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Reproduces Engineering Drawings or other translucent originals as any one of ten different types of positive (not negative) Ozalid prints. Lines and images are reproduced in black, blue, red, or sepia colors . . . on paper, cloth, foil, or film.

You make the type of Ozalid print best suited for the job at hand—in just two steps—Exposure and Dry Development.

2.



Produces Beautiful Advertising Posters and Direct Mail Folders without engravings or make-ready. Your ideas can be in printed form, in the desired number, ready for distribution—the same day they originate.

3.



Matches Typed Material. Ozalid Rapid Black prints do this so *exactly that they are used for form letters*—with personalized headings and references typed in on the print. Recommended for reports, specification sheets, applications, etc.

4.



Copies Continuous-tone Photographic Material without loss of tonal values. OZALID DRYPHOTO prints actually are more vivid, have more sales appeal. What's more, transparent film overlays—in different colors—can be made to show relation of various features of your product.

OZALID does these jobs in seconds . . . because it employs a dry development technique which simplifies printmaking . . . and permits the processing of practically every type of material.

You'll find many additional uses for Ozalid prints on paper, cloth, foil, and film—as all departments will use them

to save time, labor, and materials.

OZALID MACHINES are available for all production requirements . . . and can be operated efficiently by anyone.

SEE the 10 types of Ozalid prints and learn the complete story. Write today for free booklet 86.



OZALID

DIVISION OF GENERAL ANILINE & FILM CORPORATION
JOHNSON CITY, NEW YORK

Ozalid in Canada—Hughes-Owens Co., Ltd., Montreal



Sigma Relays

will Meet Your Requirements for:

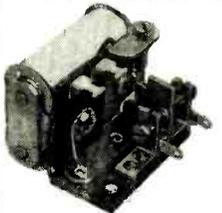
Precision • Sensitivity • Ruggedness • Compactness • Positive Action



TYPE 4F
 $1\frac{3}{8}'' \times 1\frac{3}{4}'' \times 1\frac{5}{32}''$
 Weight: $2\frac{5}{16}$ oz.

Recommended for:

- Light Weight
- High Speed
- Moderately severe environment (temperature and vibration)
- Moderate Sensitivity
- Minimum input power 10 milliwatts
- Coil resistance up to 14,000 ohms.



TYPE 5F
 $1\frac{3}{8}'' \times 1\frac{3}{8}'' \times 1\frac{5}{8}''$
 Weight: $3\frac{1}{2}$ oz.

Recommended for:

- Exceptionally severe environmental conditions
- Maximum Sensitivity
- Minimum input power 0.5 milliwatts
- Coil resistance up to 18,000 ohms.

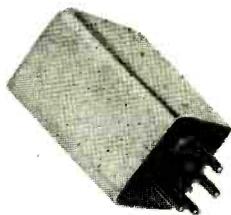


TYPE 41F
 $1'' \times 1\frac{17}{32}'' \times 2\frac{3}{16}''$
 Weight: $2\frac{5}{16}$ oz.

Recommended for:

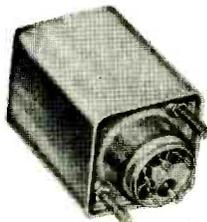
- Critical performance requirements at a low price in high volume applications. Features of other SIGMA Relays not needed in these applications have been omitted.
- Minimum input power 20 milliwatts
- Coil resistance up to 14,000 ohms.

A Wide Range of Enclosures are Available



TYPE R

Mounted on a standard 5-pin base and enclosed in an aluminum can.



TYPE RJ

Mounted in a hermetically-sealed enclosure of cadmium-plated brass. Also available with octal base, type RJO.



TYPE A

Mounted on a standard 5-pin, molded bakelite base with snap-on aluminum enclosure.

CONSULT SIGMA

Our Engineering Department will be glad to help you on your relay problems.

SIGMA
 Sigma Instruments, Inc.
 Sensitive RELAYS

64 CEYLON ST., BOSTON 21, MASS.

SIGMA A. C. RELAYS

The Series 4 and 5 relays are available with a built-in, full-wave bridge-type rectifier for operation on alternating current at any audio frequency. In specifying, add the letter "S" to the designation of the desired type.

The operating characteristics on A. C., including sensitivity and precision, are essentially the same as for the D. C. input relays.

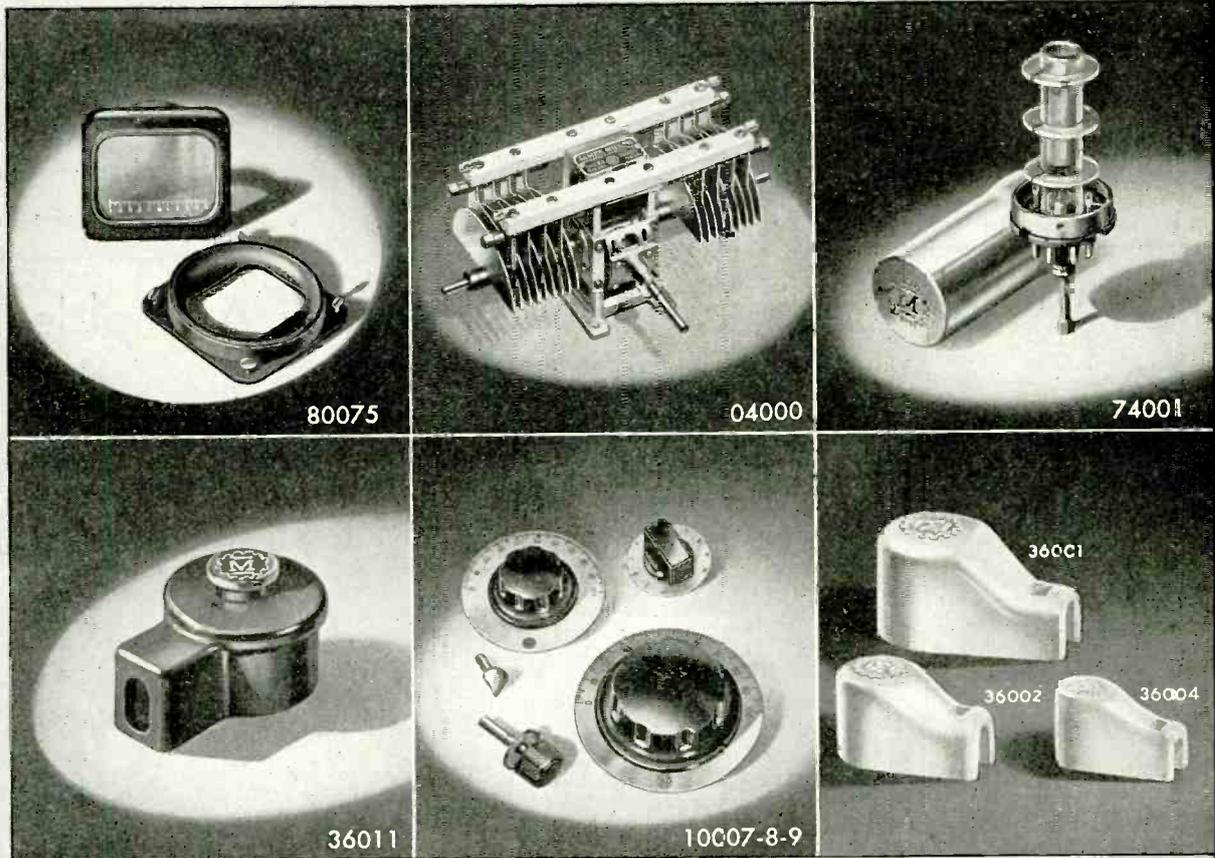
Series 41 A.C. Relays are of shaded coil construction and do not require rectifiers. They are unusually efficient and absolutely quiet. Coils are available for any voltage from 1 to 230 volts—minimum input of 0.1 volt amperes. In specifying, the letter "Z" is added to the designation of the desired type.

Designed for



Application

Millen "Designed for Application" components are different! As a designer and manufacturer for many years of complex electronic and communication equipment, we are our own best customer for component parts. Consequently, we have to perform an outstanding job of designing and manufacturing such parts in order to satisfy our own applications. Our parts are "different", also, because as symbolized by the "Gear wheel" of our registered trade mark, they are designed by mechanical engineers working in close cooperation with our electronic circuit group. Below are illustrated a typical half dozen of the thousand-odd items we manufacture.



Illustrated above, left to right; Top row: The No. 80075 cathode ray tube Bezel, the No. 04000 series of adjustable shaft angle, center drive variable transmitting condensers and the No. 74001 permeability tuned shielded plug-in coil form. Bottom row: The No. 36011 snap lock multiple finger contact plate caps, the small panel dials and finally the Ceramic insulated plate caps.

JAMES MILLEN MFG. CO., INC.

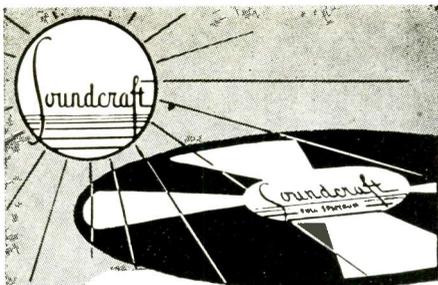
MAIN OFFICE AND FACTORY

**MALDEN
MASSACHUSETTS**

SALES OFFICES
IN ALL
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CANADIAN SALES
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SCARBORO BLUFFS (TORONTO)

6



DAWN OF A DISC!

• It is inevitable that new names appear every so often in every line of business.

• Reeves Soundcraft is a new name in the field of instantaneous recording discs but its personnel are well known to that industry.

• Directly or indirectly almost every recordist has benefitted in some way from the past contributions of these men.

• For many years they have been actively associated with both disc and film recording, the manufacture of recording equipment, the fabrication of machines for making professional recording blanks, the compounding of recording lacquers, and the merchandising not only of radio specialties but specifically of recording discs.

• These experts know the shortcomings of the past. From their knowledge you profit in the present.

• During the war Reeves Soundcraft personnel were divided. Some were fighting the shooting war. Some, by manufacturing apparatus related to radio, radar, gun direction, and synthetic training were winning the equipment war. Some were still engaged in producing ever increasing quantities of professional blanks for broadcasting activities essential to war information, counter-propaganda, and morale.

• Now united, these men represent a solid front — for new physical perfection, higher fidelity and specialized distribution.

• Experience counts.

**REEVES
SOUNDCRAFT CORP.**

10 EAST 52 ST., NEW YORK 22, N. Y.
PROGRESS ALONG SOUND LINES



Springs

for

ELECTRONIC USES



The maxim that no product is better than its springs holds true in the field of radar as elsewhere. All electronic regulating and control devices, instruments, and equipment put a very high premium on precision parts. The operation of such products can be vitally affected by one small spring, hidden from sight, in an intricate mechanism.

Whatever the purpose of a spring — top efficiency can be engineered into it only by experts in spring design. Reliable is experienced in accurately suiting the spring to the job. We are used to tight tolerance, and to keeping every variable under almost absolute production control. The making of many millions of springs, for every conceivable function, has given Reliable engineers a razor-sharp conception of the best way to create and produce a spring for a given job.

When it comes to springs, let Reliable help in planning your product, and in furnishing uniformly better springs, stampings, and wire forms. May we see your specifications?

Ask for Reliable Spring Catalog

THE RELIABLE SPRING & WIRE FORMS CO.

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Representatives in Principal Cities

YOU CAN RELY ON

Reliable Springs

ROUND AND FLAT
WIRE SPRINGS

CLIPS

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BENDS

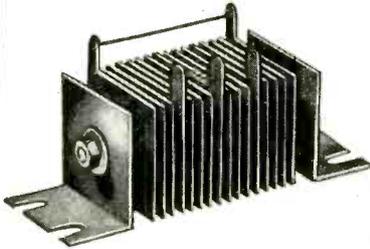
LIGHT STAMPINGS

THE

BRADLEY

LINE

SELENIUM RECTIFIERS



Bradley selenium rectifiers give good efficiency and stability for medium voltage power applications at D.C. ratings up to 24 volts and at current ratings up to 5 amperes per plate. Ratings are for continuous operation in naturally circulating air at 35°C. ambient.

The current density of Bradley selenium rectifiers is conservatively listed at 0.333 amperes per square inch of plate. For power applications, square plate designs allow a maximum ratio of rating to space factor.

In high voltage electronics uses they are rated up to 37 volts peak inverse per plate. Current ratings as low as 500 microamperes are available. Special designs can be supplied for high frequency applications at even lower current ratings.

Bradley engineers will gladly assist you in any rectification problem involving instruments, electronic devices or power applications. Let them specify the proper selenium rectifier for your circuit, or design and produce a special unit for you.

● Above, Model Se-11U20-F9. Full-wave rectifier rated at 110 volts A.C., 80 volts D.C., and 1.15 amperes D.C.

COPPER OXIDE RECTIFIERS



"Coprox" rectifiers by Bradley feature gold-coated positive contact pellets to combat aging. Specially designed terminals and pre-soldering of lead wires prevent overheating during assembly.

High leakage resistance, low forward resistance make for efficient operation. To insure perfect sealing, standard units are sealed with waterproof lacquer and critical application units are potted in wax.

All ratings of Bradley rectifiers are conservative. Highly adaptable mountings provide a wide variety of installations that will stand up longer in service.

Let Bradley's application experience help you solve circuit design problems. Bradley engineers are leaders in the development and production of special rectifiers for special jobs.

● Above, A Coprox Model CX-1C2B1, a center tap, full-wave rectifier. Completely enclosed in Bakelite, low capacitance. Rectifies high frequency current. Conservatively rated up to 4.5 volts A.C., 3.0 volts D.C., 500 microamperes D.C.

● Above, B Coprox Model CX-2E4F2, a full-wave rectifier rated up to 4.5 volts A.C., 3.0 volts D.C., 5 milliamperes D.C.

PHOTO ELECTRIC CELLS



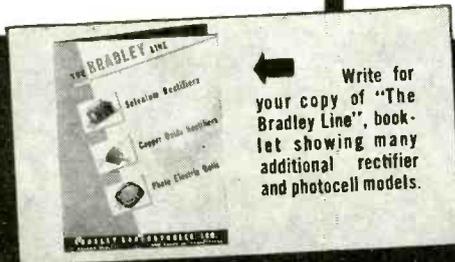
Bradley's Luxtron photocells efficiently convert light into electric energy sufficient to operate meters and meter relays without costly amplifiers. Lightweight, rugged and true to rating, they give long life under the most strenuous operating conditions.

Luxtron photocells are, so far as we have been able to determine, the very finest on the market although priced with inferior grades.

Shapes of Luxtron photocells vary from circles to squares, with every in-between shape desired. In size they range from the diminutive to the largest sizes required.

For precision control of light into electric energy, specify Luxtron photocells. Write Bradley today for samples and engineering assistance on any photocell problem you have in mind.

● Above, the pigtail contact model shown here is only one of a series of standard mountings. Others include housed models with plug-in contacts, tube socket and nut-and-bolt types.

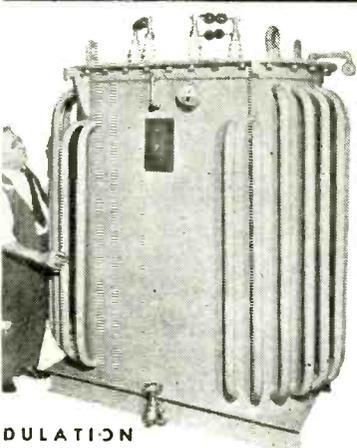


Write for your copy of "The Bradley Line", booklet showing many additional rectifier and photocell models.

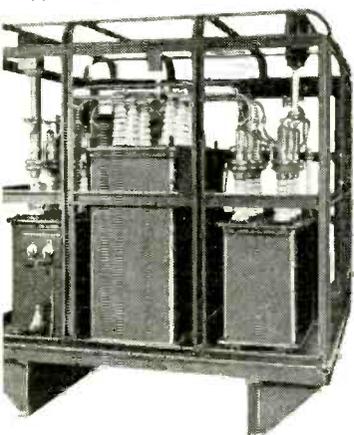
BRADLEY LABORATORIES, INC.

82 MEADOW STREET, NEW HAVEN 10, CONN.

The Majority of Large American Transmitters — BROADCAST, F.M., TELEVISION, and COMMUNICATION — are AMERTRAN Equipped!



INDUCTION TRANSFORMERS—Class B matched units for large size of transmitter. Some of those we supplied are rated 500 Kilowatts.

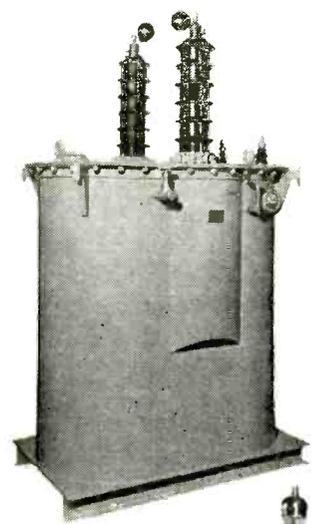


VOLTAGE AND POWER RECTIFIERS—Standard complete units for radio and industrial installation.

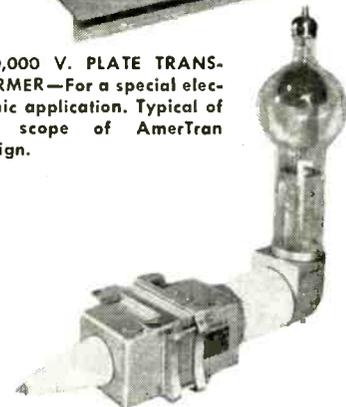
A visit to practically any important transmitting station of any type would show how universally AmerTran products are accepted and used. Since AmerTran and the electronics industry have grown up together, it isn't strange that AmerTran engineers not only know their profession, but that they are widely known as authorities on the practical applications of energy transformation in electronics.

When you deal with AmerTran you are using the facilities of our entire organization. We manufacture only transformers and allied components—such as filters, reactors and amplifiers. Your inquiries are welcome. Please write for Bulletin "G"

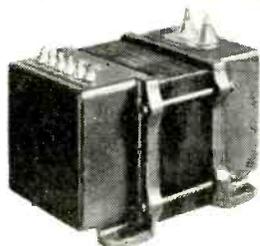
AMERICAN TRANSFORMER CO.
178 EMMET ST., NEWARK 5, N. J., U. S. A.



110,000 V. PLATE TRANSFORMER—For a special electronic application. Typical of the scope of AmerTran design.



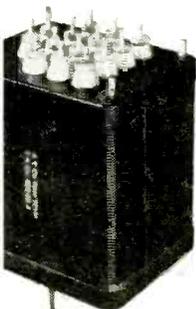
"INTEGRATED" FILAMENT TRANSFORMER—Used for "O.W.I." Pacific Transmitters. Rectifier tube socket and transformer form one "leadless" unit.



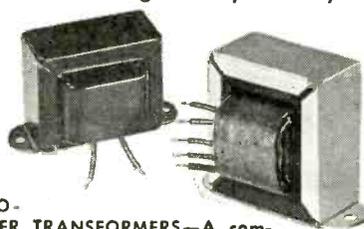
"W" DRY TYPE TRANSMITTER COMPONENTS—Economical self-cooled transformers and reactors—wound and treated to withstand wide ranges of climatic conditions. Complete electrostatic shielding.

Complete Line of Quality Standard and Special Transformers for All ELECTRICAL and ELECTRONIC APPLICATIONS

*We can show only a few units here. We'll be glad to quote on your requirements.

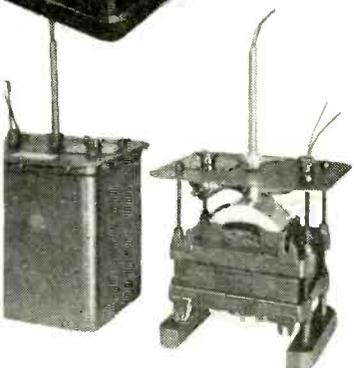


AMERTRAN HERMETICALLY SEALED TRANSFORMERS—Impervious to moisture, dust and fungus formation. Highly resistant to shock, pressure and wide temperature variation. Either oil immersed or compound filled. Oil immersed type for high voltages shows savings in size and weight, with reduced corona effect.



RADIO-RECEIVER TRANSFORMERS—A complete line of audio and power transformers and chokes—now available for home radio manufacture and replacement.

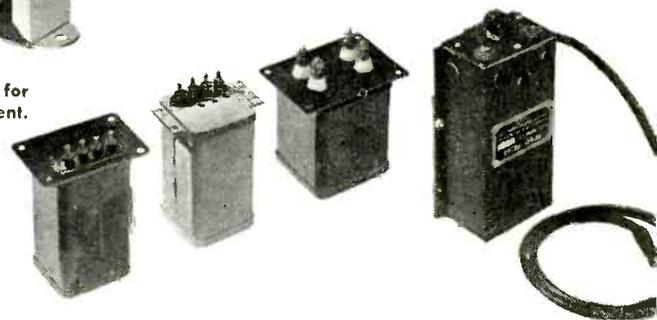
SPECIAL FILTERS—For precision control applications involving frequency discrimination. Custom built High Pass, Band Pass, Low Pass, Band Rejection, Combination Filters and Equalizers. Uniformity and minimum distortion!



SHIELDED TRANSFORMERS—Used for power supply to shielded apparatus—eliminating high frequency strays from power lines. Sizes to 10 KVA 3 phase.



POWER SUPPLY AND AMPLIFIERS—Designed to provide the highest quality equipment at moderate cost for monitoring, P. A. systems, etc.



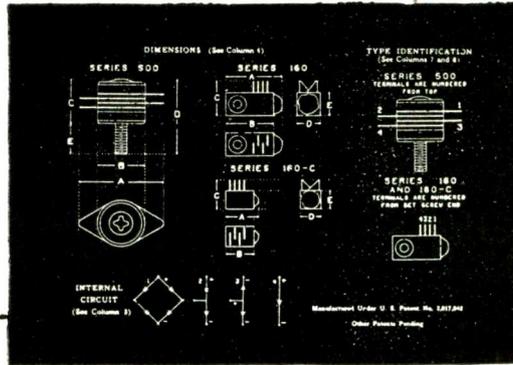
AMERTRAN

REG. U. S. PAT. OFF.
MANUFACTURING SINCE 1901 AT NEWARK, N. J.

Pioneer Manufacturers of Transformers, Reactors and Rectifiers for Electronics and Power Transmission



Conant Instrument Rectifiers



SPECIFICATIONS (STANDARD TYPES)

Type	Series	Col. 3 Internal Circuit	Col. 4 Dimensions (Inches)				Col. 5 Mounting Screw Size	Col. 6 Weight (Grams)	Col. 7 No. of Terminals	Col. 8 Color, Terminal Number				Col. 9 PEAK ELECTRICAL RATINGS						Col. 10 *List Price	
			A	B	C	D				E	1	2	3	4	Instantaneous Volts	Intermittent Volts	Continuous Volts	Instantaneous Mils	Intermittent Mils		Continuous Mils
M	500	1	.890	.500	.485	.800	.328	6-32	13.012	4	red	no	blk	no	30	100	20	60	10	30	\$3.50
HS	500	2	.890	.500	.445	.800	.360	6-32	9.158	3	red	no	blk	—	15	100	10	60	5	30	2.70
T	500	3	.890	.500	.445	.800	.360	6-32	9.158	3	no	red	no	—	30	100	20	60	10	30	2.70
H	500	4	.890	.500	.400	.800	.392	6-32	7.730	2	red	no	—	—	15	100	10	60	5	30	1.50
B	160	1	.595	.485	.375	.250	.250	2-56	3.400	4	red	no	blk	no	30	15	20	10	10	5	3.50
BHS	160	2	.625	.550	.375	.250	.250	2-56	2.880	3	red	no	blk	—	15	15	10	10	5	5	2.70
BT	160	3	.625	.550	.375	.250	.250	2-56	2.880	3	no	red	no	—	30	15	20	10	10	5	2.70
BH	160	4	.625	.550	.375	.250	.250	2-56	2.700	2	red	no	—	—	15	15	10	10	5	5	1.50
B-C	160-C	1	.345	.297	.310	.220	.200	none	1.743	4	red	no	blk	no	30	15	20	10	10	5	3.50
BHS-C	160-C	2	.345	.297	.310	.220	.200	none	1.385	3	red	no	blk	—	15	15	10	10	5	5	2.70
BT-C	160-C	3	.345	.297	.310	.220	.200	none	1.385	3	no	red	no	—	30	15	20	10	10	5	2.70
BH-C	160-C	4	.345	.297	.310	.220	.200	none	1.293	2	red	no	—	—	15	15	10	10	5	5	1.50

Over ninety per cent of all rectifier requirements are served by 12 types—4 basic assemblies in 3 series. These 3 series are the three primary units of Conant rectifiers. Special types, however, can be developed as needed, and you'll find Conant ready to cooperate.

SERIES 500 UNITS are for general applications requiring greater output current for meters, relays or other apparatus requiring more than 1 milliamperere. Recommended for all such applications at commercial and the lower audio frequencies. Will also operate up to 50,000 c.p.s. in special applications wherein accuracy of readings is not essential.

SERIES 160 and 160-C are for applications requiring good frequency response over the entire commercial and audio range and especially when the meter, relay or other apparatus requires less than 1 milliamperere for operation. In some special applications these units may be operated at frequencies up to 15,000,000 c.p.s. with special circuit treatment.

SPECIAL TYPES are available in both series 500 and 160-C. When requesting a quotation on a special type include a sketch of the rectifier required or a circuit diagram showing source and frequency of the input voltage, resistance and kind of load, required load current and the ambient temperatures.

SERIES 500 Disc diameter .500 inch. Area each disc .15 square inch. Furnished with 3" braided, tinned copper leads. Finished in clear lacquer. Nickel plated end plates.

SERIES 160 Disc diameter .160 inch. Area each disc .02 square inch. Furnished with 3" stranded, tinned double silk covered copper leads. Nickel plated case. Assembly sealed with specially developed moisture proof compound.

SERIES 160-C Disc diameter .160 inch. Disc area, lead wire and length and moisture proof seal are identical with Series 160. Dimensions of the nickel plated case have been reduced to the most compact size. These units may be mounted in a standard midget fuse clip.

Conant Instrument Rectifiers are available from leading radio jobbers everywhere—consult your local jobber.



Instrument Rectifiers

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DEHYDRATING

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 and varnish is removed by this operation leaving all machined surfaces and counter bores clean and smooth.

POLISHING

All smooth surfaces are polished to a dust-free hard finish.

SPRAYING

Parts are sprayed with varnishes to protect the laminated bakelite edges.

DOW CORNING FLUID #200 IMPREGNATION

This new method of waterproofing protects steatite ceramic parts against moisture absorption and fungus attack.

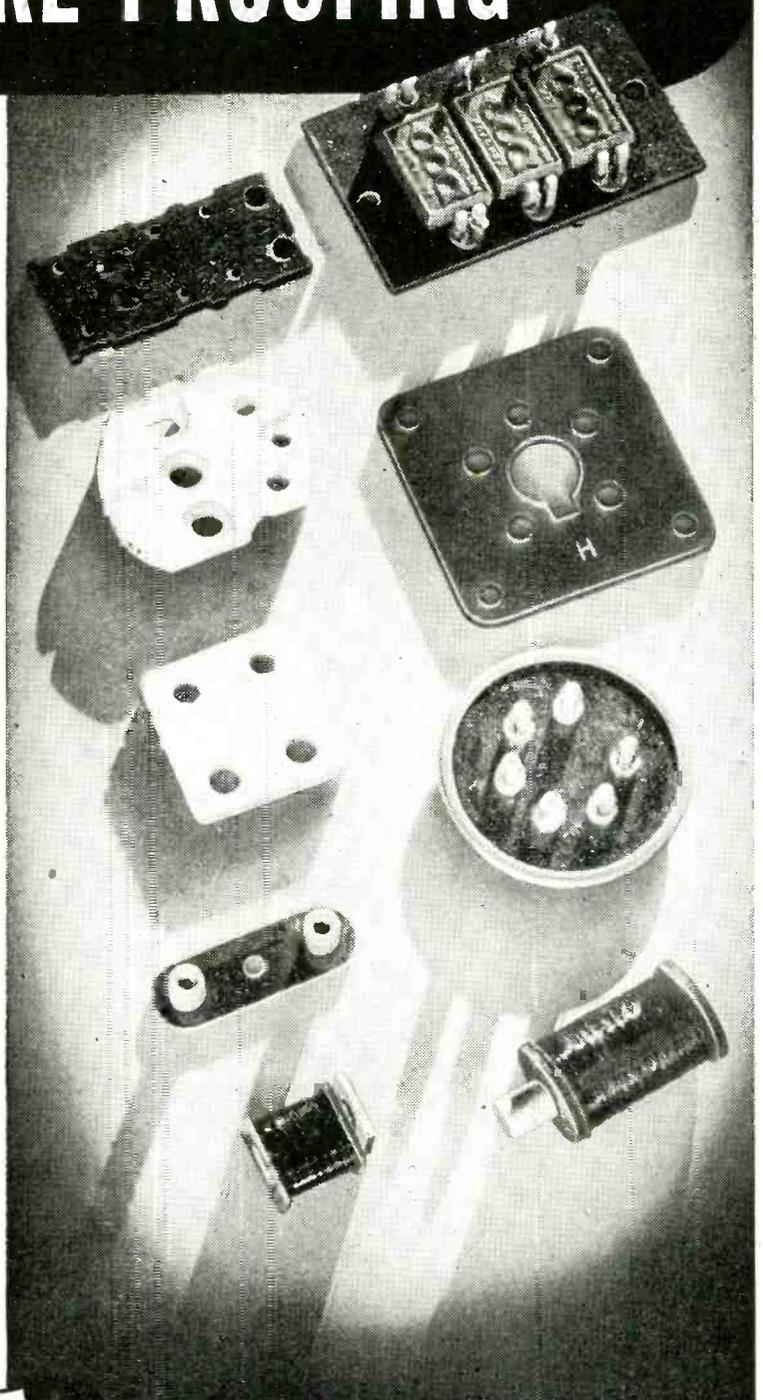
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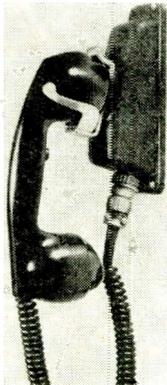
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* Photo courtesy of American Airlines and Tommy Weber.

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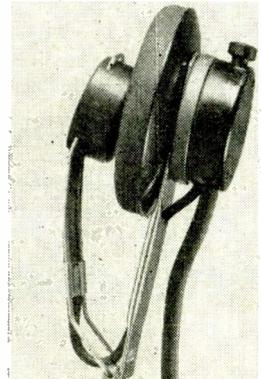


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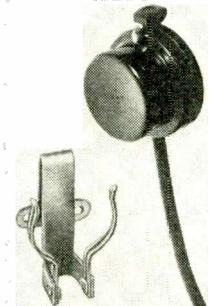
Noise cancelling — anti-noise — high fidelity — multiple push button controls — moulded bakelite, black and color cases — Exceptionally fine performance — Light in weight — Hangers—Mounting switch boxes.

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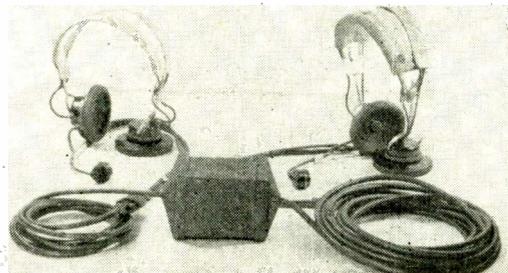
High fidelity — Anti-noise — Compact — Light weight — designed for Executive Aircraft intercom — Railroad trainmen and yardmen — Walkie-talkie. An Aviometer exclusive.



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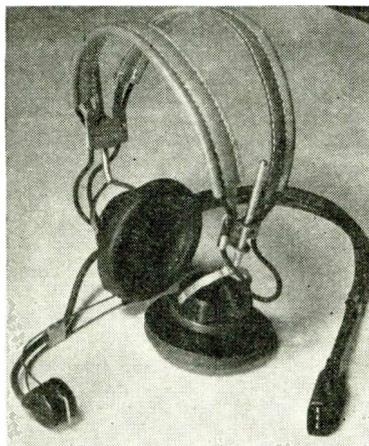


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Here is *the* way to measure RF output in the spectrum between 10-1500 megacycles and power levels of 1-500 watts. Combining unique and proven methods of line termination with meter readings, the Model 63-A is now widely used in the VHF-UHF field.

USES: Determination of power output and alignment of transmitters on either the production line or in the laboratory. Ruggedly built, the 63-A is adaptable to most power measurement problems.

METHOD: Employing a length of attenuating coax as a termination, thermocouples, inserted in the line serve as measuring elements. Wide-band impedance constancy is realized and standing-wave ratios (voltage) are held to a maximum SWR of 1.25 between 10 and 1500 MC.

CALIBRATION: Meter readings of the Model 63-A are linearly related to power at fixed frequency. Thermocouples, through skin effect, increase in sensitivity with frequency. With the instrument, curves are furnished showing a single multiplying factor which, applied to scale reading, gives power value. Control of impedance and individual couple adjustment permit the use of standardized calibration curves.

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THE Selector Switch FOR COAXIAL CIRCUITS



USES: As a channel selector in transmitter or receiver controls; production line testing of coaxial circuited equipment; selection of antennas; with phase monitors in directionals; etc.

CABLE TYPES AND CONNECTORS: Three models now available for use with 50/52-ohm cables and Type "N" Fittings. Adapters available for use with other type fittings. Other impedance levels, such as 70/75-ohm, can be supplied.

STANDING WAVE RATIOS: At 550 MC, SWR (voltage) is below 1.03; at 1000 MC, below 1.1; and at 3000 MC, it 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. Can be supplied for remote operation.

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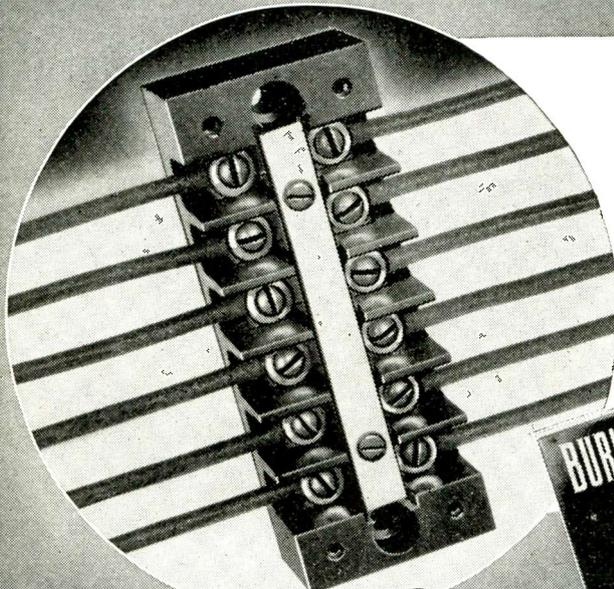
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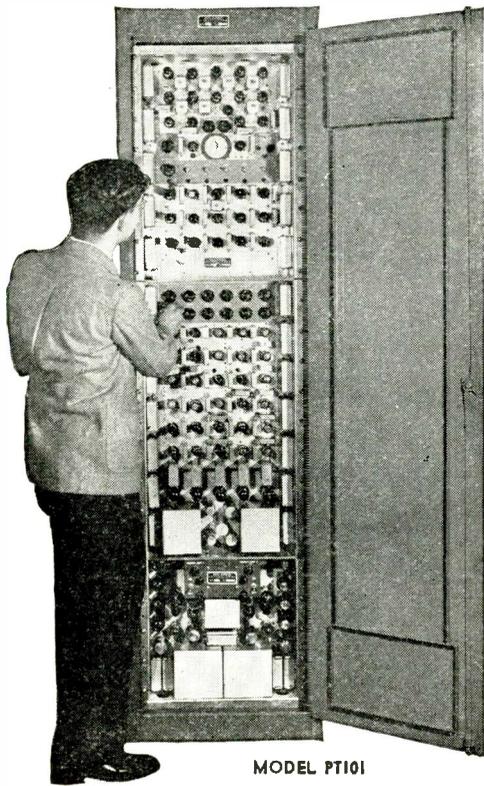
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Built in 3" oscilloscope with synchronized sweeps for viewing important pulse wave forms.

Synchronized marker system for checking pulse width and rise time.

Fast lock-in action for motion picture applications.

Extreme stability, insured by deriving all pulses from leading edge of master oscillator pulse.

Wide band delay line for adjusting delay times without distorting pulse wave forms.

Dish-pan construction to allow for maximum accessibility for maintenance.

SPECIFICATIONS

525 line, interlaced, 60 fields, 30 frames, RMA synchronizing pulses held to tolerance specified in the NRTPB report of 1945.

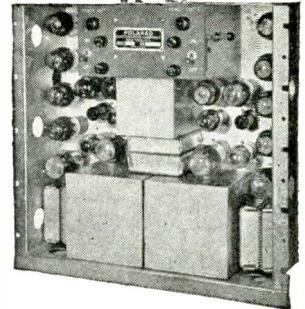
Dual Regulated D. C. POWER UNIT

This unit consists of two independently regulated d-c power units which are designed to meet the operational requirements of television equipment or other apparatus where close regulation and low ripple content are important. The unit mounts in a standard type relay rack. Dish-pan Construction is used, thereby permitting equal accessibility to front and rear components.

Each Power Unit has its own power switch, fuses, pilot light and voltage control.

SPECIFICATIONS

A. C. Line.....115 Volts, 50/60 cps.
 D. C. Voltage.....250-300 Ripple less than 0.001%
 D. C. Current.....400 MA Each Unit.
 Impedance less than 1.50 ohms.



MODEL PT11ID

Wide Band VIDEO AMPLIFIER

Designed for use as an oscilloscope deflection amplifier for the measurement and viewing of pulses of extremely short duration and rise time. Supplied in a portable cabinet, 19-1/4" x 22" x 14-3/4", and consists of an amplifier unit, a low capacity probe, and a power unit. Amplifier gain is 41.5 DB.

The amplifier is supplied with a frequency compensated high impedance attenuator calibrated in 10 DB steps from 0 to 50 DB. A fine attenuator control is also provided to cover a range of 10 DB.

Frequency Range. Flat within $\pm 1\frac{1}{2}$ db from 100 cps to 20 MC.*

Input Impedance. a) Probe: 12 MMF + 470000 ohms.

b) Input Jack: 30 MMF + 470000 ohms.

Output Impedance. 18 MMF + 5000 ohms each side push pull.

Max. Input Voltage. 500 Volts peak to peak with probe.

Max. Output Voltage. 56 Volts peak to peak (push pull).

*Low frequency range extended per specifications.



100 cps to 20 MC
MODEL V



Television Camera CHANNEL AMPLIFIER

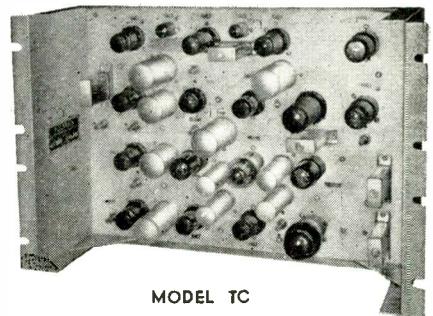
Designed for black and white or color television camera chains. Can be used with either orthicons or iconoscopes.

The features incorporated into this amplifier provide maximum operating flexibility.

Frequency Response: ± 1.5 db. to 9 megacycles. Less than 2% tilt for 60 cps square wave.

Gain: Voltage gain = 50. Input level = .02 volts across 75 ohms. Output = 1.0 volts across 75 ohms

Features: Dual output tubes. Streaking correction for Iconoscopes. Remote gain and black level control. Gamma correction. Video black level automatically held constant with respect to blanking black reference regardless of average scene brightness.



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Results? No shopping around, no wasted time. Instead, better design, uniform control and lower costs with Printloid engineering supervision at every step of the job.

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Radio Dial windows are a Printloid specialty, and we have made millions for the country's largest radio manufacturers. Printloid has worked for every industry, producing finished products as well as sub-assemblies.



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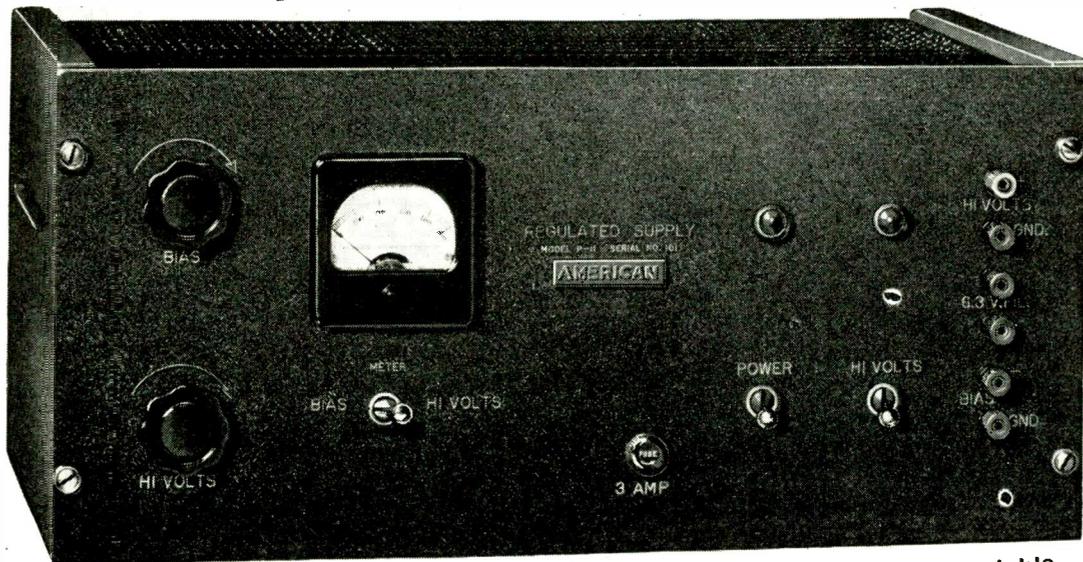
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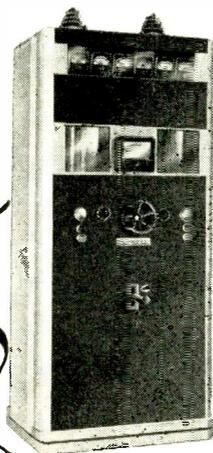
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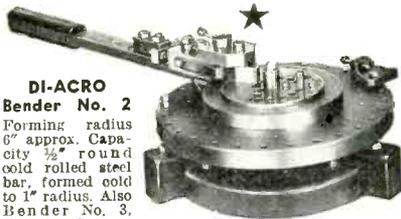
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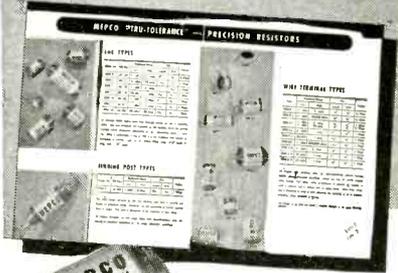
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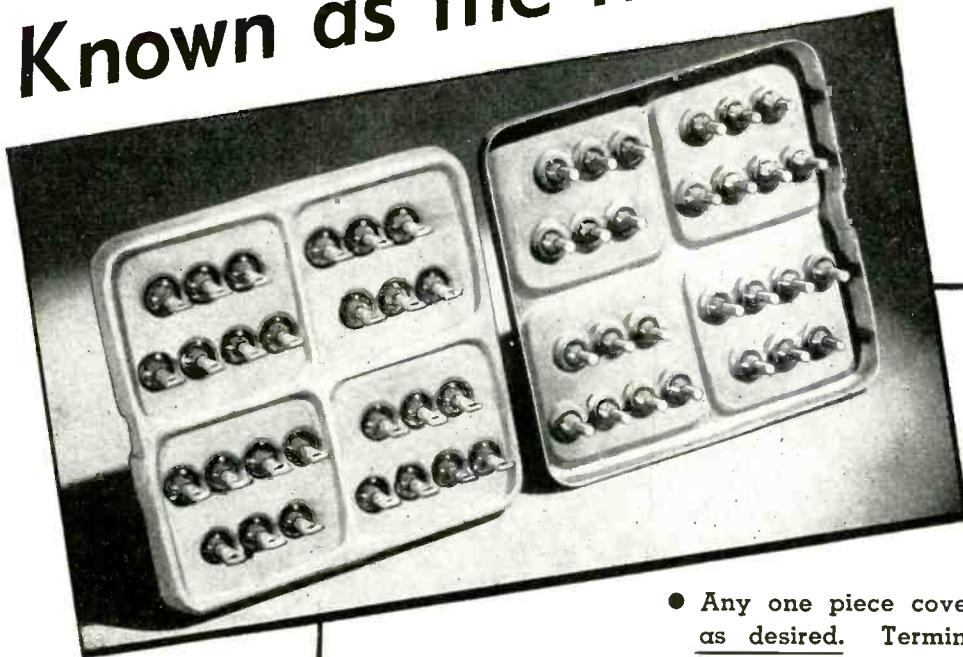
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Explains the theory upon which the functioning of the different types of v-t voltmeters is based, and also the practical applications of these instruments. Includes a bibliography consisting of 145 international references. 180 Pages—111 Illustrations—\$2.50.

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Discusses series and parallel combinations of resistances and the distribution of currents and voltages, providing the basis underlying the circuit arrangements used in various types of radio receivers. Also discusses application of resistance measurement to radio servicing. 203 Pages—94 Illustrations—\$2.00.

AUTOMATIC FREQUENCY CONTROL SYSTEMS

The basic operation of the discriminator and Automatic Frequency control circuits is explained in great detail in the first part of the book. Descriptions of systems used in commercial receivers are fully described in the second part of the book. 144 Pages—102 Illustrations—\$1.75.

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INDUSTRIAL TRANSFORMER CORP.



SHOCK PROOF INSULATION BREAKDOWN TEST SETS

The new IT-630 Industrial AC Breakdown Test Sets afford a convenient, compact and accurate means of testing for insulation breakdowns. Model IT-25 gives an accurate indication of grounds, shorts, or opens. Provide for actual testing and checking of apparatus at approved standard testing voltages.



Model IT - 630 has two operating ranges, one from 0-3000 V-RMS and the other from 0-6000 V-RMS, with continuous variation possible over each range. Changing from one range to the other is accomplished by means of a heavy duty switch.

ITC Variable Voltage "Vollstat" provides smooth control of test voltage. A Voltmeter, graduated in 50 volt steps from 0-3000 volts and in 100 volt steps

from 0-6000 volts is provided for easy accurate reading of the test voltage. Test Leads consist of one set of rubber covered High Voltage Cords equipped with Bakelite Shockproof Test Handles having disappearing points. Test Handles must both be grasped by operator in order to extend live electrodes for testing. When released, electrodes automatically withdraw into handles, assuring complete protection to operator.

An instantaneous trip Circuit Breaker is provided in the transformer primary circuit to indicate breakdown. Calibrated "Vollstat" escutcheon plate affords convenient reference for adjusting test voltage. Jumbo Pilot Lamp is mounted on front panel giving visual indication that unit is in operation. Standard Mazda S6 Lamp is used which is removable from front of panel. Positive grounding of unit is accomplished by the use of a 3-wire cord, with the third wire terminating in a clip. All the equipment is enclosed in a steel cabinet finished in Gray Crackle.

**INPUT 115 Volts — 60 Cycles
RATING 1 KVA**

**OUTPUT 0-3000 Volts and 0-6000 Volts
NET PRICE \$125.00**

SHOCK PROOF TEST LEAD ASSEMBLY

The assemblies are supplied with 6 ft. lengths of extremely flexible synthetic rubber cords. Full protection is given operator when using ITC Shock Proof Prods. Both handles must be grasped by operator in order to extend live electrodes for testing. When released, electrodes automatically withdraw into handles.

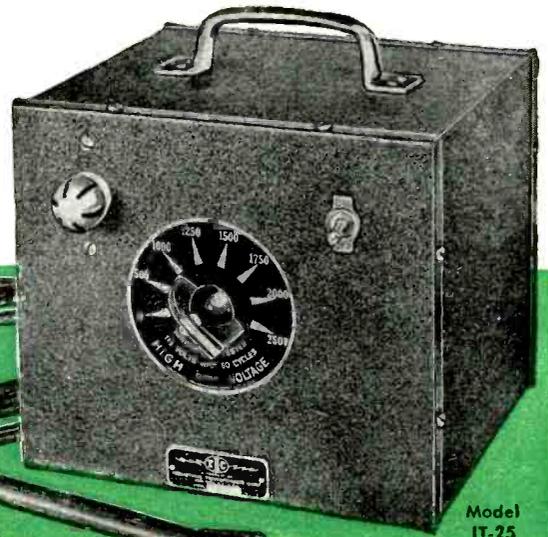
Model IT - 25 designed for accurate testing of apparatus at fixed voltages. Provides ample voltage variation for testing apparatus or insulation at approved standard testing voltages. High Reactance Power Transformer is Burn-out Proof. Short circuit current is limited to a safe value, protecting the Transformer even under sustained short circuit of the secondary. Standard 1/2 watt Neon Lamp, lights up immediately when unit is in operation and gives accurate indication of the condition of circuit under test. Lamp is protected with a removable slotted metal cover. One set of Shock Proof Test Handles having disappearing points are supplied with each unit. Secondary voltage is varied by means of an eight point switch. Escutcheon plate is marked to correspond to the R.M.S. voltage applied to test Prods:

HIGH VOLTAGE OUTPUT AND SHORT CIRCUIT CURRENT

500 Volts 1 Amp	1000 Volts 500 Ma	1250 Volts 420 Ma
1500 Volts 360 Ma	1750 Volts 310 Ma	2000 Volts 270 Ma

INPUT 115 Volts 60 Cycle **RATING 500 Va**

NET PRICE \$40.00



Model
IT-25

**INDUSTRIAL
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ELECTRONICS DIVISION

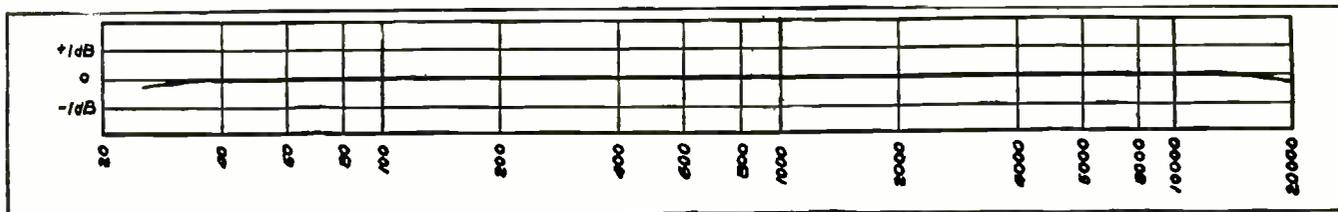
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High permeance iron core with low hysteresis loss provides efficient path for magnetic flux, thus I.T.C. transformers have high coupling coefficients between their windings and both transformers and chokes have high winding inductance per unit volume and weight of core iron. Low reluctance of cores keep flux within transformers or chokes thereby minimizing stray fields. Rigid mountings provide for ease and reliability in building equipment that requires high electrical performance and mechanical strength.

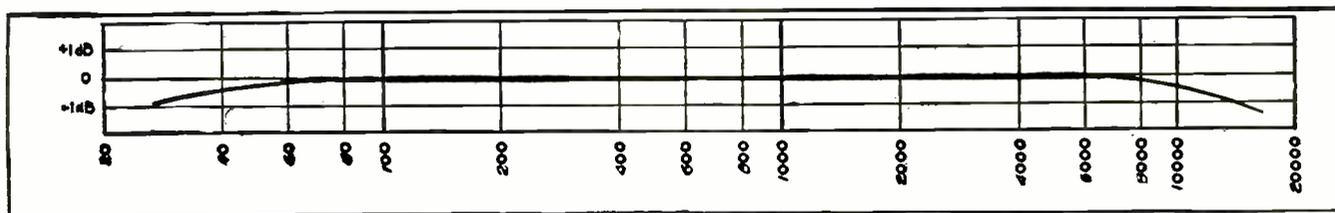
LABORATORY OUTPUT TRANSFORMERS

Type No.	Impedance		Max. D.C. per side M.A.	Max. Watts	Mounting Centers		Height	Fig.	Price
	Primary	Secondaries							
V40C30	3000	2/3/4/6/8/16/125/166/250/500	80	90	4 1/2"	3 5/8"	5 1/4"	2C	32.00
V100C38	3800	2/3/4/6/8/16/125/166/250/500	200	60	5 1/2"	5 1/2"	7 1/8"	2C	48.50
V75C50	5000	2/3/4/6/8/16/125/166/250/500	150	30	4 1/2"	3 3/8"	5 1/4"	2C	32.00
V70C60	6000	2/3/4/6/8/16/125/166/250/500	150	45	5 1/2"	5 1/2"	7 1/8"	2C	48.50
V70C66	6600	2/3/4/6/8/16/125/166/250/500	150	35	5 1/2"	5 1/2"	7 1/8"	2C	43.50
V50ML10	3000	2/3/4/6/8/16/125/166/250/500	200	75	5 1/2"	5 1/2"	7 1/8"	2C	54.50
	3300								
	3800								
	5000								
	6000								
	6600								
8000									
9000									
10000									



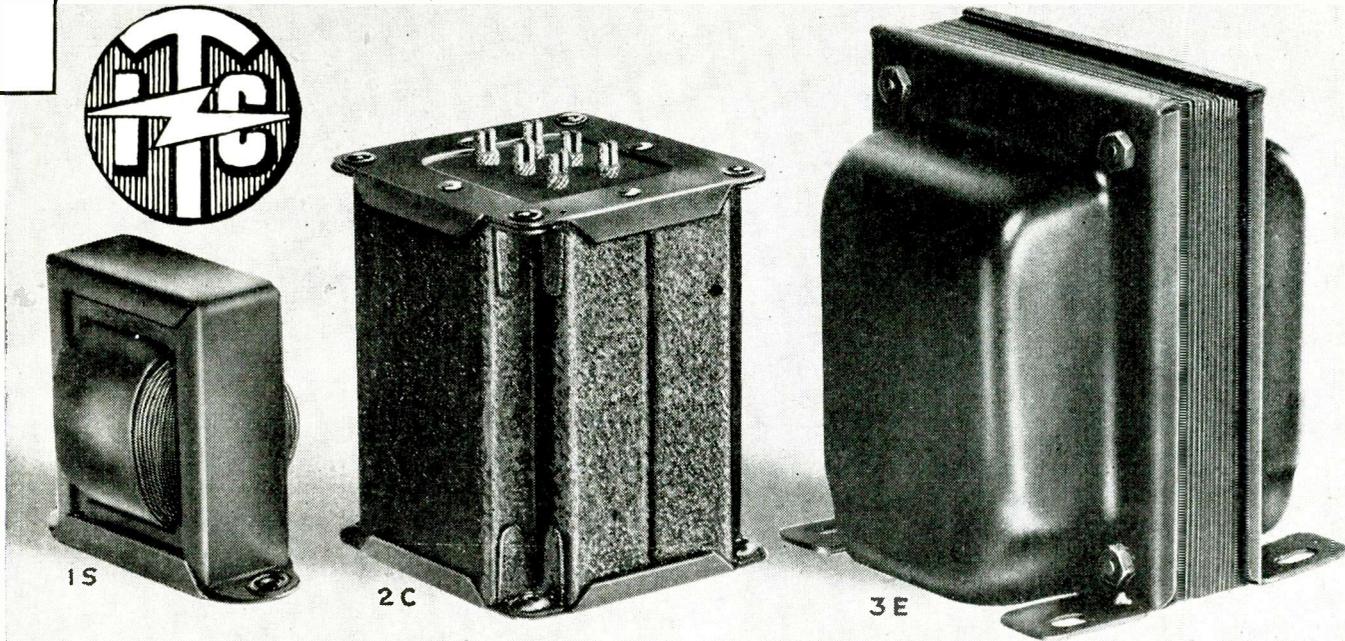
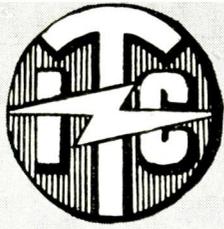
HIGH FIDELITY OUTPUT TRANSFORMERS

Type No.	Impedance		Max. D.C. per side M.A.	Max. Watts	Tubes	Mounting Centers	Height	Fig.	Price
	Primary	Secondaries							
V40LS15	1500	2/3/4/6/8/16/166/250/500	100	40	P.P.Par 2A3-6B4-45 AB 48-25L6-A	4 1/2" 3 5/8"	5 1/4"	2C	18.00
V10LS25	2500	3.2/5/6/8	80	15	6L6 Single	4 1/2" 3 1/2"	4 1/2"	2C	14.00
V30LS30	3000	2/3/4/6/8/16/250/500	75	30	2A3-6B4-45 AB 48-25L6-PP-A 6-A3	4 1/2" 3 5/8"	5 1/4"	2C	21.00
V30LS9	3800	2/3/4/6/8/16/125/166/250/500	125	60	6L6 AB:	4 1/2" 3 3/8"	5 1/4"	2C	34.00
V75LS10	3300	2/3/4/6/8/16/125/166/250/500	160	75	6L6 P.P.Par	4 1/2" 3 3/8"	5 1/4"	2C	34.00
V25LS43	4300	2/3/4/6/8/16	100	25	6L6 P.P.	4 1/2" 3 3/8"	5 1/4"	2C	20.00
V30LS50	5000	2/3/4/6/8/16	100	30	6L6 PP	4 1/2" 3 1/2"	4 3/8"	2C	23.00
V40LS55	5500/5800	2/3/4/6/8/16/250/500	120	40	46-59 PP B 6N7-6A6-53 P.P.Par 6F6-42-2A5-AB:	4 1/2" 3 5/8"	5 1/4"	2C	34.00
V40LS66	6600	2/3/4/6/8/16/250/500	100	40	6L6 P.P. -AB:	4 1/2" 3 3/8"	5 1/4"	2C	34.00
V15LS80	8000	3/4/5/6/8/16	50	15	6F6-6V6	4 1/2" 3 1/2"	4 1/2"	2C	16.00
V40LS100	10000	3/4/5/6/8/16/166/250/500	80	40	6F6-42-2A5-AB: 6N6-6AC5-A-6V6	4 1/2" 3 5/8"	5 1/4"	2C	31.00



HIGH FIDELITY DRIVER TRANSFORMERS

Driver Impedance	Ratio Pri to 1/2 sec	Pri. M.A.	Mounting Centers	Height	Fig.	Price
10000	1.4-1.8-2.2-2.6:1	50	4 1/2" 3 1/2"	4 1/2"	2C	12.00
10000	3.0-3.5-4.0-4.5:1	50	4 1/2" 3 1/2"	4 1/2"	2C	12.00
8000	1-1.5-2.0:1	50	4 1/2" 3 1/2"	4 1/2"	2C	12.00



P O W E R T R A N S F O R M E R S

Type No.	Pri. V.A.	High Voltage Secondary	D.C. M.A.	Filaments		Fig.	Price	Fig.	Price
IT500	55	300-0-300	65	5V-2A	6.3V-3A.C.T.	2C	6.00	3E	4.50
IT500A	55	300-0-300 40V bias tap	65	5V-2A	6.3V-3A.C.T.	2C	6.50	3E	5.00
IT650	115	350-0-350	110	5V-3A	6.3V-5A.C.T.	2C	8.50	3E	5.75
IT650A	115	350-0-350 40V bias tap	110	5V-3A	6.3V-5A.C.T.	2C	9.00	3E	6.25
IT800	155	425-0-425	180	5V-4A	6.3V-5A.C.T.	2C	12.00	3E	8.25
IT800A	155	425-0-425 60V bias tap	180	5V-4A	6.3V-5A.C.T.	2C	12.50	3E	8.75
IT850	215	425-0-425	250	5V-4A	6.3V-6A.C.T.	2C	14.50	3E	10.50
IT850A	215	425-0-425 80V bias tap	250	5V-4A	6.3V-6A.C.T.	2C	15.00	3E	11.00

O U T P U T T R A N S F O R M E R S

Type No.	Impedance		Max. D.C. per side M.A.	Max. Watts	Tubes	Mounting Centers	Height	Fig.	Price
	Primary	Secondary							
L543	3800	6 ohms	60	15	6L6 P.P.	2 1/8"	2 5/8"	1S	3.20
L536	10000	6 ohms	60	10	6F6-6V6 P.P.	2 5/8"	2 5/8"	1S	3.20
L532	10000 10% Feed back	6 ohms	60	15	6F6-6V6 P.P.	2 5/8"	2 5/8"	1S	4.00
L537	2300	3.2 ohms	60	3	50L6	2 3/8"	1 5/8"	1S	1.75
N540	2000	3.2 ohms	60	2	50L6	2"	1 5/8"	1S	1.00
N540A	2500	3.2 ohms	60	2	35L6	2"	1 5/8"	1S	1.00
N541	10000	3.2 ohms	10	2	1-Q5-1S4 1-3Q4-3S4	2"	1 5/8"	1S	1.25
N542	16000	3.2 ohms	10	2	1Q5-1S4 3Q4-3S4 P.P.	2"	1 5/8"	1S	1.40

F I L T E R R E A C T O R S

Type No.	D.C. M.A.	Inductance Henrys	Fig.	Price	Fig.	Price
C400	65	10	2C	3.00	3E	1.90
C550	110	10	2C	5.00	3E	3.40
C700	180	8	2C	8.25	3E	5.50
C750	250	8	2C	9.75	3E	6.90

I-T-C- INCREMENTAL INDUCTANCE BRIDGE

INCREMENTAL INDUCTANCE MEASUREMENTS

Model 226

1 MILLIHENRY — 2000 HENRYS

D.C. SATURATION — 0-1000 M. A.

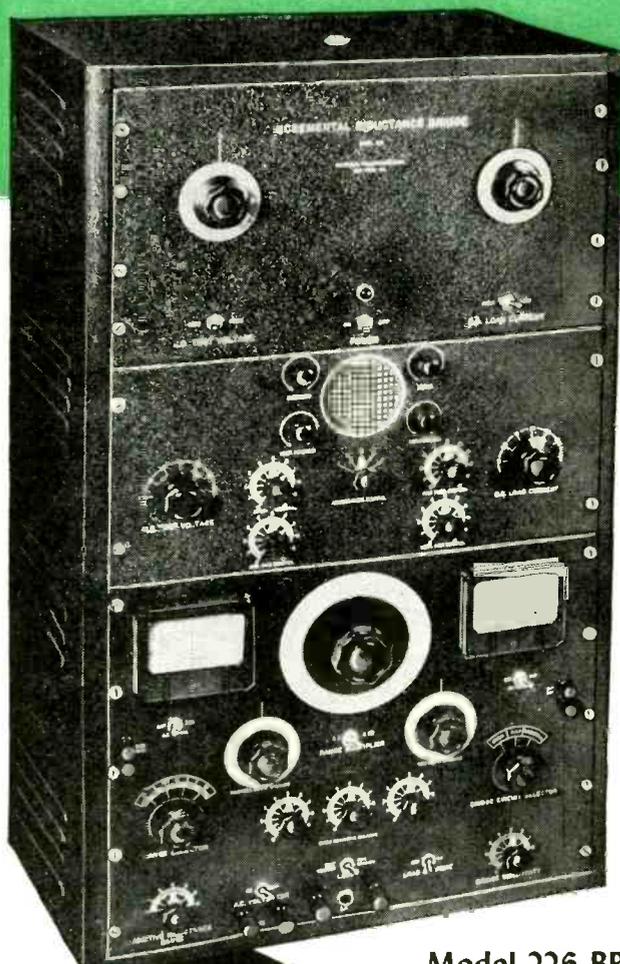
A.C. TEST VOLTAGE .01 — 300 VOLT RMS.

Q — .02-500

MEASURES INCREMENTAL INDUCTANCE
MEASURES LEAKAGE INDUCTANCE
DIRECT READING IN HENRYS
MEASURES Q DIRECTLY WITH HAY CIRCUIT
VISUAL BALANCE

SELF CONTAINED

D. C. SUPPLY • OSCILLOSCOPE
• A. C. VACUUM TUBE VOLTMETER



THREE
BRIDGE CIRCUITS
**HAY-OWEN-
MAXWELL**
ALL IN ONE
INSTRUMENT

Model 226 BRIDGE consists of 3 separate units:

- 1 The D.C. Supply and A.C. Test Voltage Control
2. The Oscilloscope and A.C. Vacuum Tube Voltmeter
- 3 The Bridge proper —
Any one of these units can be purchased separately.

WRITE FOR BULLETIN "ITC 226" ...

Detailed information on the above will be sent upon request. Price and delivery information will be forwarded at the same time.

**MODEL 500
INCREMENTAL
INDUCTANCE
BRIDGE**
has a
Range—50 MH-1000 H
•
A.C. Test Voltage 3v-100v
•
Superimposed D.C.
0-500 MA
•
Q. — 5-200
Price Complete \$650.00

ENGINEERING SERVICE

The carefully trained, long experienced engineering staff at I.T.C. is unusually well qualified to aid industry in solving its transformer and inductance problems. If your particular problem presents unusual requirements, we shall cooperate gladly in designing special equipment to meet those requirements. There is no charge for our consultation service.



MODELS AVAILABLE

There are five I.T.C. models available. Three of these have auxiliary equipment and two do not. These models have a range of 1 m H — 2000 H. The Model 220 bridge has no auxiliary equipment and is priced at \$380.00. The other I.T.C. models are priced proportionately. Requests, made on company letterhead, for further information on any of these models will be answered promptly.

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Macmillan Co., 212 p., \$1.32.

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SHOP JOB SHEETS IN RADIO by R. N. Auble;
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HANDBOOKS

THE A. R. R. L. Antenna Book
American Radio Relay League, 50 cents.

ELECTRONIC ENGINEERING MASTER INDEX, A SUBJECT INDEX TO ELECTRONIC ENGINEERING PERIODICALS edited by F. A. Petraglia
Electronic Research Publ. Co., 318 p., \$17.50.

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Chemical Rubber Publishing Co., \$3.50, revised annually.

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John Wiley & Sons, 1098 p, \$5.00, 1936.

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McGraw-Hill Book Co., \$4.00.

CONTROL OF ELECTRIC MOTORS, P. B. Harwood
John Wiley and Sons, \$5.00.

CONTROLLERS FOR ELECTRIC MOTORS by H. D. James and L. E. Markle
McGraw-Hill, \$3.50.

ELECTRONIC CONTROL OF RESISTANCE WELDING by G. M. Chute
McGraw-Hill Book Co., 389 p, \$4.00.

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D. Van Nostrand Co., \$2.25.

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John Wiley & Sons, \$3.50.

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John Wiley & Sons, 473 p, \$4.00.

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FOURIER SERIES by G. H. Hardy and W. W. Rogosinski
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John Wiley & Sons, Vol. I, 314 p, \$3.50, Vol. II, 309 p, \$4.00.

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MODERN OPERATIONAL MATHEMATICS IN ENGINEERING by R. V. Churchill
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THE NOMOGRAM by H. J. Allcock and J. R. Jones
Pitman Publishing Co., 220 p, \$3.50.

OPERATIONAL CIRCUIT ANALYSIS by V. Bush
John Wiley and Sons, 392 p, \$4.50, 1929.

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A SHORT COURSE IN TENSOR ANALYSIS FOR ELECTRICAL ENGINEERS by G. Kron
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John Wiley and Sons, 236 p, \$2.50, 1933.

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John Wiley & Sons, 275 p, \$4.00.

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Harper & Bros., 360 p, \$2.80, 1943.

ELEMENTARY MATHEMATICS FOR RADIO STUDENTS by W. E. Flood
Longmans, Green & Co., 96 p, \$6.00, 1944.

MATHEMATICS ESSENTIAL TO ELECTRICITY AND RADIO by N. M. Cooke, and J. B. Orleans
McGraw-Hill Book Co., \$3.00.

MATHEMATICS FOR ELECTRICIANS by M. H. Kuehn
McGraw-Hill Book Co., 254 p, \$1.75, 2nd ed., 1941.

MATHEMATICS FOR ELECTRICIANS AND RADIO-MEN by N. M. Cooke
McGraw-Hill Book Co., \$4.00, 1942.

MATHEMATICS FOR ENGINEERS by R. W. Dull
McGraw-Hill Book Co., 760 p, \$5.00, 2nd ed., 1940.

MATHEMATICS FOR TECHNICAL STUDENTS by M. S. Corrington
Harper and Brothers.

THE MATHEMATICS OF RADIO by S. W. Amos and F. W. Kellaway
Chapman & Hall.

MATHEMATICS OF RADIO COMMUNICATIONS by T. J. Wang
D. Van Nostrand Co., Inc., \$3.00.

MATHEMATICS OF WIRELESS by R. Stranger
Chemical Publishing Co., \$3.00.

MEASUREMENTS

(See also Experiments and Servicing)

ADVANCED ELECTRICAL MEASUREMENT by W. C. Michels
D. Van Nostrand Co., 347 p, \$3.50, 2nd ed., 1941.

ALTERNATING CURRENT BRIDGE METHODS by B. Hague
Pitman Pub. Corp., 587 p, \$8.50, 4th ed., 1938.

CATHODE RAY OSCILLOGRAPH by J. H. Reyner
Pitman Publishing Corp., 177 p, \$3.40, 1940.

THE CATHODE RAY OSCILLOGRAPH IN INDUSTRY by W. Wilson
Chapman & Hall, 164 p, 12s. 6d.

CATHODE RAY OSCILLOGRAPHY by Morris and Henley
Instruments Publishing Co., Pittsburgh, 249 p, \$6.00, 1936.

CATHODE RAY TUBE AT WORK by J. F. Rider
Rider Publishing Co., New York, 338 p, \$4.00, 1935.

THE CATHODE-RAY TUBE AND ITS APPLICATIONS by G. Parr
Chapman & Hall, 180 p, 13s. 6d., 1942.

COMMERCIAL A-C MEASUREMENTS by G. W. Stubbings
D. Van Nostrand Co., 348 p, \$6.00, 2nd ed., rev., 1937.

ELECTRICAL MEASUREMENTS by F. A. Laws
McGraw-Hill Book Co., 739 p, \$6.00, 2nd ed., 1938.

ELECTRICAL MEASUREMENTS AND MEASURING INSTRUMENTS by E. W. Golding
Pitman Publishing Corp., 828 p, \$7.50, 1940.

THE ELECTRON MICROSCOPE by E. F. Burton and W. H. Kohl
Reinhold Publishing Co., New York, 233 p, \$3.85, 1942.

GUIDE TO CATHODE RAY TUBE PATTERNS by M. Bly
John Wiley and Sons, 30 p, \$1.50, 1943.

HIGH FREQUENCY MEASUREMENTS by A. Hund
McGraw-Hill Book Co., 491 p, \$5.00, 1933.

THE MEASUREMENT OF INDUCTANCE, CAPACITANCE AND FREQUENCY by A. Campbell and E. C. Child
D. Van Nostrand Co., 488 p, \$12.00, 1935.

TIME BASES (SCANNING GENERATORS) THEIR DESIGN AND DEVELOPMENT; WITH NOTES ON THE CATHODE RAY TUBE by O. S. Puckle
Chapman & Hall, 216 p, 16s also John Wiley & Sons, 224 p, \$2.75.

MEASUREMENTS IN RADIO ENGINEERING by F. E. Terman
McGraw-Hill Book Co., 400 p, \$4.00, 2nd ed., 1945.

THE METER AT WORK by J. F. Rider
John F. Rider, Publisher, 152 p, \$2.00, 1940.

PRACTICAL ELECTRON MICROSCOPY by P. C. Smith and R. G. Picard
Reinhold Publishing Corp.

PRINCIPLES OF ELECTRIC AND MAGNETIC MEASUREMENTS by P. Vigoreaux and C. E. Webb
Prentice-Hall, 392 p, \$5.00, 1936.

RADIO FREQUENCY ELECTRICAL MEASUREMENTS by H. A. Brown
McGraw-Hill Book Co., 385 p, \$4.00, 1938.

RADIO-FREQUENCY MEASUREMENTS BY BRIDGE & RESONANCE METHODS by L. Hartshorn
John Wiley & Sons, 265 p, \$4.50.

THEORY AND PRACTICE OF RADIO FREQUENCY MEASUREMENTS by E. B. Moullin
Lippincott, 487 p, \$12.50, 1931.

VACUUM TUBE VOLTMETERS by J. F. Rider
John F. Rider, Publisher, 180 p, \$2.50, 1941.

MISCELLANEOUS

DYNAMICAL ANALOGIES by H. F. Olson
D. Van Nostrand Co., \$2.75.

ELECTRIC DISCHARGE LAMPS by H. Cotton
Chapman & Hall, 416 p.

ELECTRICAL DRAFTING by W. Van Gieson
McGraw-Hill, \$1.50.

ELECTRICAL OCCUPATIONS FOR BOYS by L. M. Klinefelter
E. P. Dutton & Co., 227 p, \$2.00.

ELECTRODYNAMICS by L. Page and N. I. Adams
D. Van Nostrand, 506 p, \$6.50, 1940.

ELECTROLYTIC CONDUCTION by F. H. Newman
Chapman & Hall, 453 p, 28s.

ENGINEERING CONTRACTS AND SPECIFICATIONS by R. W. Abbott
John Wiley & Sons, 188 p, \$2.25.

FOUNDATIONS OF SHORT WAVE THERAPY by Wolfgang, Holzer, and E. Weissenberg
Chemical Pub. Co., \$4.00.

HIGH FREQUENCY INDUCTION HEATING by F. W. Curtis
McGraw-Hill Book Co., \$2.75.

HOW TO PASS RADIO LICENSE EXAMINATIONS by C. E. Drew
John Wiley & Sons, 201 p, \$2.00, 1938.

INFRARED SPECTROSCOPY by Barnes, Gore, Liddel, and Williams
Reinhold Publishing Co., \$2.25.

MAKING PATENT DRAWINGS by H. Radzinsky
The Macmillan Co., 96 p., \$3.00, 1945.

MOLECULAR FILMS, THE CYCLOTRON AND THE NEW BIOLOGY by H. F. Taylor, E. O. Lawrence, and I. Langmuir
Rutgers University Press, \$1.25.

PATENT LAW by C. H. Biesterfeld
John Wiley & Sons, \$2.75.

PRODUCTION AND DIRECTION OF RADIO PROGRAMS by J. S. Carlike
Prentice-Hall, 937 p., \$3.75.

THE RADIO AMATEUR'S LICENSE MANUAL
American Radio Relay League, 25 cents.

RADIO NETWORKS AND THE FEDERAL GOVERNMENT by T. P. Robinson
Columbia University Press, \$3.50.

RHOMBIC ANTENNA DESIGN by A. E. Harper
D. Van Nostrand Co., 111 p., \$4.00, 1941.

TECHNIC OF ELECTROTHERAPY AND ITS PHYSICAL AND PHYSIOLOGICAL BASIS by S. L. Osborn, and H. J. Holmquest
Charles C. Thomas, \$7.50.

THE TECHNIQUE OF MOTION PICTURE PRODUCTION
Interscience Publishing, 158 p., \$3.50.

WHAT YOU SHOULD KNOW ABOUT THE SIGNAL CORPS by H. M. Davis and F. G. Gasset, Jr.
W. W. Norton & Co., Inc., \$2.50.

NETWORKS

(See Waves)

PHYSICS

A COURSE IN RADIO FUNDAMENTALS
American Radio Relay League, Inc., 50 cents

ANALYTICAL EXPERIMENTAL PHYSICS by H. B. Lemon and M. Ference, Jr.
The University of Chicago Press, 584 p., \$5.75, 1943.

ATOMIC THEORY by A. Haas
D. Van Nostrand Co., 272 p., \$6.00.

CONDUCTION OF ELECTRICITY THROUGH GASES by J. J. and G. P. Thomson
Macmillan Co., Vol. I 491 p., \$6.00, 1929. Vol. II 608 p., \$7.00, 1933.

THE CYCLOTRON by W. B. Mann
Blackie & Sons Ltd., 92 p., \$1.50.

ELECTRICAL COUNTING; WITH SPECIAL REFERENCE TO COUNTING ALPHA AND BETA PARTICLES by W. B. Lewis
Macmillan Co., 144 p., \$2.50.

ELECTRON AND NUCLEAR PHYSICS by J. B. Hoag
D. Van Nostrand Co., 502 p., \$4.00, 1938.

ELECTRON EMISSION AND ADSORPTION PHENOMENON by J. H. DeBoer
Macmillan Co., 398 p., \$5.50, 1935.

ELECTRON INERTIA EFFECTS by F. B. Llewellyn
Macmillan Co., 104 p., \$2.00, paper, 1941.

ELECTRONIC STRUCTURE & CHEMICAL BINDING by O. K. Rice
McGraw-Hill Book Co., 1940, 511 p., \$5.00.

ELEMENTARY WAVE MECHANICS by W. Heitler
Oxford University Press, 150 p., \$2.25.

EMISSION OF ELECTRICITY FROM HOT BODIES by O. W. Richardson
Longmans, Green & Co., 304 p., \$7.50, 1916.

EXPERIMENTAL ATOMIC PHYSICS by G. P. Harnwell and J. L. Livingood
McGraw-Hill Book Co., 472 p., \$5.00, 1938.

INTRODUCTION TO ATOMIC PHYSICS by S. Tolansky
Longmans, Green & Co., 343 p., \$4.50, 1942.

INTRODUCTION TO CHEMICAL PHYSICS by J. C. Slater
McGraw-Hill Book Co., \$5.00.

INTRODUCTION TO CONTEMPORARY PHYSICS by K. K. Darrow
D. Van Nostrand Co., 648 p., \$7.00, 2nd ed., 1939.

INTRODUCTION TO MODERN PHYSICS, 3rd ed., by F. K. Richtmyer and E. H. Kennard
McGraw-Hill Book Co., 718 p., \$5.00.

INTRODUCTION TO PHYSICS by H. Howe
McGraw-Hill Book Co., 559 p., \$3.75, 1942.

INTRODUCTION TO THEORETICAL PHYSICS by A. Haas
D. Van Nostrand Co., Vol. I, 346 p., \$7.50, Vol. II, 492 p., \$7.50.

INTRODUCTION TO THEORETICAL PHYSICS by L. Page
D. Van Nostrand Co., 661 p., \$6.50, 1928.

INTRODUCTION TO THEORETICAL PHYSICS by J. C. Slater and N. H. Frank
McGraw-Hill Book Co., 576 p., \$5.00, 1933.

IONS, ELECTRONS AND IONIZING RADIATIONS by J. A. Crowther, 7th ed.
Longmans, Green & Co., 348 p., \$4.00, 1939.

KINETIC THEORY OF GASES by E. H. Kennard
McGraw-Hill Book Co., 483 p., \$5.00, 1938.

KINETIC THEORY OF GASES by L. B. Loeb
McGraw-Hill Book Co., 687 p., \$6.00, 1934.

MATTER, ELECTRICITY, ENERGY by W. Gertch
D. Van Nostrand Co., 422 p., \$6.00, 1928.

NATURE OF THE ATOM by G. K. T. Conn
Blackie & Sons or Chemical Publishing Co., 115 p., \$1.50.

NATURE OF CRYSTALS by A. G. Ward
Blackie & Sons or Chemical Publishing Co., 114 p., \$1.50.

PROCEDURES IN EXPERIMENTAL PHYSICS by Strong, et al
Prentice-Hall, \$6.70.

SUPERCONDUCTIVITY by D. Shoenberg
The Macmillan Co., 112 p., \$1.75, 1939.

THE PARTICLES OF MODERN PHYSICS by J. D. Strathan
The Blackiston Co., 571 p., \$4.00, 1942.

WAVE NATURE OF THE ELECTRON by G. K. T. Conn
Blackie & Sons or Chemical Publishing Co., \$1.50.

PICTURE TRANSMISSION

THE FIRST PRINCIPLES OF TELEVISION by A. Dinsdale
Chapman and Hall, 260 p., 14s.

PRACTICAL RADIO INCLUDING TELEVISION by J. A. Moyer and J. F. Wostrat
McGraw-Hill Book Co., 410 p., \$2.50, 4th ed., 1931.

PRACTICAL TELEVISION by E. T. Lerner
D. Van Nostrand Co., 223 p., \$4.50, 2nd ed.

PRINCIPLES OF TELEVISION ENGINEERING by D. G. Fink
McGraw-Hill Book Co., 540 p., \$5.00, 1940.

RADIO FACSIMILE
RCA Institutes Technical Press, 368 p., \$3.00, 1938.

TELEVISION BROADCASTING by L. R. Lohr
McGraw-Hill Book Co., 274 p., \$3.00, 1940.

TELEVISION ENGINEERING by J. C. Wilson
Pitman Pub. Co., 492 p., \$10.00, 1937.

TELEVISION OPTICS by L. M. Myers
Pitman Pub. Co., 364 p., \$12.00, 2nd ed., 1938.

TELEVISION PROGRAMMING AND PRODUCTION by R. Hubbell
Murray Hill Books, 207 p., \$3.00.

TELEVISION RECEIVING EQUIPMENT by W. T. Cocking
Interscience Publ., 306 p., \$2.80, 1940.

TELEVISION STANDARDS AND PRACTICE edited by D. G. Fink
McGraw-Hill Book Co., 405 p., \$5.00, 1943.

TELEVISION: THEORY AND PRACTICE by J. H. Reyner
Chapman & Hall, 235 p., 14s.

TELEVISION: TODAY AND TOMORROW, S. A. Moseley and H. J. Barton
Pitman Publishing Co., 187 p., \$3.00.

TELEVISION, THE ELECTRONICS OF IMAGE TRANSMISSION by V. K. Zworykin and G. A. Morton
John Wiley & Sons, 646 p., \$6.00, 1940.

TELEVISION TODAY AND TOMORROW by L. de Forest
Dial Press, \$3.75.

WIRELESS PICTURES & TELEVISION by T. T. Baker
D. Van Nostrand Co., 188 p., \$2.50.

RADIATION

(See Waves)

RADIO

(See also Communication)

ALTERNATING CURRENTS IN RADIO RECEIVERS
J. F. Rider, Publisher, 96 p., \$1.25.

AUTOMATIC FREQUENCY CONTROL SYSTEMS by J. F. Rider
John F. Rider, Publisher, 144 p., \$1.75, 1937.

AUTOMATIC RECORD CHANGERS AND RECORDERS by J. F. Rider
John F. Rider, Publisher, 744 p., \$9.00.

AUTOMATIC VOLUME CONTROLS by J. F. Rider
John F. Rider, Publisher, 96 p., \$1.25.

BASIC PRINCIPLES OF RADIO by M. G. Sufferm
McGraw-Hill Book Co., \$3.00.

BASIC RADIO, THE ESSENTIALS OF ELECTRON TUBES AND THEIR CIRCUITS by J. B. Hoag
Chapman & Hall, 388 p., 18s.

BASIC RADIO by J. B. Hoag
D. Van Nostrand Co., 379 p., \$3.25, 1942.

D-C VOLTAGE DISTRIBUTION IN RADIO RECEIVERS by J. F. Rider
John F. Rider, Publisher, 96 p., \$0.90.

ELECTRICAL AND RADIO NOTES FOR WIRELESS OPERATORS
Chemical Pub. Co., \$2.50.

ELECTRICAL ESSENTIALS OF RADIO by M. Slurberg and W. Osterheld
McGraw-Hill Book Co., 529 p., \$4.

ELEMENTS OF RADIO by C. I. Hellman
D. Van Nostrand Co.

ELEMENTS OF RADIO by A. Marcus and W. Horton
Prentice-Hall, 699 p., \$4.00, 1943.

THE ESSENTIALS OF ELECTRON TUBES AND THEIR CIRCUITS by J. B. Hoag
D. Van Nostrand Co., 379 p., \$3.25.

FOUNDATIONS OF RADIO by R. L. Duncan
John Wiley and Sons, 247 p., \$2.50, 1931.

FOUNDATIONS OF WIRELESS, 4th ed. revised, by M. G. Scroggie
Liffe & Sons.

FUNDAMENTALS OF RADIO by W. L. Everitt, editor, and E. C. Jordan, P. H. Nelson and W. C. Osterbrock, F. H. Pumphrey, and L. C. Smeby
Prentice-Hall, 400 p., \$5.00, 1942.

FUNDAMENTALS OF RADIO, F. E. Terman with the collaboration of F. W. MacDonald
McGraw-Hill Book Co., 458 p., \$3.75.

GETTING ACQUAINTED WITH RADIO by A. Morgan
Appleton-Century Co., 285 p., \$2.50.

AN HOUR A DAY WITH RIDER ON AUTOMATIC VOLUME CONTROL by J. F. Rider
John F. Rider, Pub., 96 p., \$1.25, 1936.

INTRODUCTION TO FREQUENCY MODULATION by J. F. Rider
John F. Rider, Publisher, 136 p., \$2.00.

AN INTRODUCTION TO PRACTICAL RADIO by D. J. Tucker
The Macmillan Co., 322 p., \$3.00, 1945.

PHYSICS AND RADIO by M. Nelson
Longmans, Green & Co., 388 p., \$2.50, 1944.

PRACTICAL RADIO COMMUNICATION by A. R. Nilson and J. L. Hornung
McGraw-Hill Book Co., 754 p., \$6.00, 1935.

PRINCIPLES OF RADIO by K. Henney, 5th ed.
John Wiley and Sons, 533 p., \$3.75, 1945.

PRINCIPLES OF RADIO FOR OPERATORS by R. Atherton
The Macmillan Co., 344 p., \$3.75, 1945.

RADIO, A STUDY OF FIRST PRINCIPLES by E. E. Burns
D. Van Nostrand Co., 293 p., \$2.00, 3rd ed.

RADIO: FUNDAMENTAL PRINCIPLES AND PRACTICES by F. E. Almstead, K. E. Davis, and G. K. Stone
McGraw-Hill Book Co., Inc., 219 p., \$1.80.

RADIOTRON (Beginners Handbook) 3rd ed., edited by F. L. Smith
Wireless Press, for Amalgamated Wireless Valve Co.

SHORT WAVE RADIO, J. H. Reyner
Pitman Publishing Co., 495 p., \$3.25.

SHORT WAVE WIRELESS COMMUNICATION by A. V. Ladner and C. R. Stoner
John Wiley and Sons, 453 p., \$4.50, 4th ed., rev. 1942.

SHORT WAVE WIRELESS COMMUNICATION by A. W. Ladner and C. R. Stoner
Chapman & Hall, 573 p., 35s.

THE TECHNIQUE OF RADIO DESIGN by E. E. Zepler
Chapman & Hall, 324 p., 21s.

ULTRA-HIGH FREQUENCY RADIO ENGINEERING by W. L. Emery
Macmillan Co., 295 p., \$3.25, 1944.

UHF RADIO SIMPLIFIED by M. S. Kiver
D. Van Nostrand Co., 238 p., \$3.25.

UNDERSTANDING RADIO by Watson, Welch and Eby
McGraw-Hill Book Co., 601 p., \$2.80, 1940.

RADIOLOGY

(See also Physics)

APPLIED X-RAYS by G. L. Clark
McGraw-Hill Book Co., 674 p., \$6.00, 2nd ed., 1940.

PHYSICAL FOUNDATIONS OF RADIOLOGY by Glasser, Quimby, Taylor, and Weatherwax
Paul B. Hoeber (Harper & Bros.), \$5.00.

SYMPOSIUM ON RADIOGRAPHY
American Society for Testing Materials, \$4.00.

THE THEORY AND PRACTICE OF RADIOLOGY, WITH A SYNOPSIS OF RADIOGRAPHY AND RADIOTHERAPY by J. Leggett
Chapman & Hall, Vol. I, 250 p., 21s., Vol. II, 318 p., 28s., Vol. III, 560 p., 47s.

X-RAYS IN RESEARCH AND INDUSTRY by H. Hirst
Chemical Publishing Co.

X-RAY TECHNOLOGY, THE PRODUCTION, MEASUREMENT AND APPLICATIONS OF X-RAYS, by H. M. Terrill and C. T. Ulrey
Chapman & Hall, 264 p., 24s.

SERVICING

(See also Experiments and Measurements)

ABRIDGED MANUAL (TROUBLE SHOOTER'S MANUAL) by J. F. Rider
John F. Rider, Publisher, 2,000 p., \$17.50.

ALIGNING PHILCO RECEIVERS by J. F. Rider
John F. Rider, Publisher, Vol. I, 1929 to 1936, 176 p., \$2.00, Vol. II, 1937 to 1941, 200 p., \$2.00.

MAINTENANCE AND SERVICING OF ELECTRICAL INSTRUMENTS by J. Spencer
Instruments Publishing Co., 256 p., \$2.00.

MODERN RADIO SERVICING by A. A. Ghirardi
Radio and Technical Publishing Co., New York, 1300 p., \$5.00, 1936.

PERPETUAL TROUBLE SHOOTER'S MANUAL by J. F. Rider

John F. Rider, Publisher, Volumes I to V, abridged, 2000 p., \$17.50, Vol. VI, 1240 p., \$11.00, Vol. VII, 1600 p., Vol. VIII, 1650 p., Vol. IX, 1672 p., Vol. X, 1664 p., Vol. XI, 1652 p., Vol. XII, 1648 p., Vol. XIII, 1672 p., 1933-1942, Vol. XIV, 1376 p., \$15.00 per vol.

PRINCIPLES AND PRACTICE OF RADIO SERVICING by H. J. Hicks

McGraw-Hill Book Co., 300 p., \$3.00.

RADIO CONSTRUCTION AND REPAIRING by J. A. Moyer and J. F. Westrel

McGraw-Hill Book Co., 444 p., \$2.50, 4th ed., 1933.

RADIO INTERFERENCE AND ITS SUPPRESSION by J. H. Reyner

Chapman & Hall.

RADIO MAINTENANCE AND REPAIR by R. Muniz and S. D. Prensly

D. Van Nostrand Co.

RADIO SERVICE ENCYCLOPEDIA

P. R. Mallory Co., 415 p., \$1.50, 4th ed., 1943.

RADIO SERVICE TRADE KINKS by L. S. Simon

McGraw-Hill Book Co., 254 p., \$3.00, 1939.

RADIO TROUBLESHOOTER'S HANDBOOK by A. A. Ghirardi

Radio & Technical Publishing Co., New York, 710 p., \$5.00, 2nd ed., 1941.

RESONANCE AND ALIGNMENT

John F. Rider, Publisher, 96 p., \$1.25.

SERVICING BY SIGNAL TRACING by J. F. Rider

John F. Rider, Publisher, 360 p., \$2.00 (Spanish edition, \$3.50), 1939.

SERVICING RECEIVERS BY MEANS OF RESISTANCE MEASUREMENT by J. F. Rider

John F. Rider, Publisher, 203 p., \$2.00, 1932.

SERVICING SUPERHETERODYNES

John F. Rider, Pub., 307 p., \$2.00, 1934.

SUPERHET MANUAL, edited by F. J. Camm

Chemical Publishing Co., \$2.50.

TESTING RADIO SETS by J. H. Reyner

Chapman & Hall, 228 p., about 12/6.

SOUND

(See also Acoustics)

THE AMPLIFICATION AND DISTRIBUTION OF SOUND by A. E. Greenless

Chapman and Hall, 254 p., 12s.

DYNAMICAL THEORY OF SOUND by H. Lamb

Longmans, Green and Co., 303 p., \$6.50, 2nd ed., 1925.

MOTION PICTURE AND SOUND ENGINEERING by F. Albin, L. E. Clark, A. P. Hill, J. K. Hillard, H. Kembell, K. Lambert, and W. Miller

D. Van Nostrand Co., 547 p., \$6.50, 1938.

MOTION PICTURE SOUND ENGINEERING by Research Council of the Academy of Motion Picture Arts & Sciences

D. Van Nostrand Co., 550 p., \$6.00.

MUSIC AND SOUND SYSTEMS IN INDUSTRY by B. E. Benson

McGraw-Hill Book Co., \$5.00.

RADIO SOUND EFFECTS by J. Creamer and W. B. Hoffman

Ziff-Davis Publishing Co., \$1.50.

SCIENCE AND MUSIC by J. Jeans

Macmillan Co., 258 p., \$2.75, 1937.

SOUND by A. T. Jones

Chapman & Hall, 462 p., 22s.

SOUND, A TEXTBOOK by A. T. Jones

D. Van Nostrand, 450 p., \$3.75, 1937.

SOUND by F. R. Watson

John Wiley and Sons, 219 p., \$2.50, 1935.

SPEECH AND HEARING by H. Fletcher

D. Van Nostrand Co., 331 p., \$5.50, 1929.

TEXTBOOK OF SOUND by A. B. Wood

Macmillan Co., 519 p., \$5.00, 1930.

THEORY OF SOUND by LORD RAYLEIGH edited by R. W. Strutt

Macmillan Co., Vol. I, 480 p., \$5.00, Vol. II, 504 p., \$5.00.

THEORY OF SOUND, 2nd ed. by J. W. Strutt, Baron Rayleigh

Dover Publ., 984 p., \$4.95.

THEORY OF VIBRATING SYSTEMS AND SOUND by I. B. Crandall

D. Van Nostrand Co., 282 p., \$5.00, 1926.

VIBRATION AND SOUND by P. M. Morse

McGraw-Hill Book Co., 350 p., \$4.00, 1936.

TABLES

(See Handbooks)

TELEPHONY AND TELEGRAPHY

THE DIRECTOR SYSTEM OF AUTOMATIC TELEPHONY by W. E. Hudson

Pitman Pub. Co., 156 p., \$1.50, 1927.

FUNDAMENTALS OF TELEPHONY, A. L. Albert

McGraw-Hill Book Co., Inc., 374 p., \$3.25.

HISTORY OF RADIO TELEGRAPHY AND TELEPHONY by G. G. Blake

Chapman and Hall, 447 p., 29s.

INTRODUCTORY STUDY OF ELECTRICAL CHARACTERISTICS OF POWER AND TELEPHONE TRANSMISSION LINES by F. W. Norris and L. A. Bingham

International Textbook Co., 272 p., \$2.50, 1937.

LEARNING THE RADIO TELEGRAPH CODE by J. Huntoon

American Radio Relay League, 534 p., \$0.25.

PRINCIPLES OF TRANSMISSION IN TELEPHONY by M. P. Weinbach

Macmillan Co., 303 p., \$4.00, 1924.

PRINTING TELEGRAPH SYSTEMS AND MECHANISMS by H. H. Harrison

Longmans Green & Co., \$7.00, 1923.

RADIO CODE MANUAL by A. R. Nilson

McGraw-Hill Book Co., 174 p., \$2.00, 1942.

RADIO OPERATING QUESTIONS AND ANSWERS by A. R. Nilson and J. L. Hornung

McGraw-Hill Book Co., 415 p., \$2.50, 7th ed., 1940.

RADIO TELEGRAPHY AND TELEPHONY by R. L. Duncan and C. E. Drew

John Wiley and Sons, 1046 p., \$7.50, 1931.

SUBMARINE TELEGRAPHY by Italo de Guilo

Pitman Publishing Co.

TELEGRAPHY AND TELEPHONY by C. S. Rhoads

Simmons-Boardman, 518 p., \$3.00, 1924.

TELEGRAPH ENGINEERING by E. Hausman

D. Van Nostrand Co., 2nd ed., \$3.00, 1922.

TELEGRAPHY AND TELEPHONY, INCLUDING WIRELESS COMMUNICATION by E. Mallett

Chapman & Hall, 416 p., 21s.

TELEPHONE COMMUNICATION by Wright and Puchstein

McGraw-Hill Book Co., 515 p., \$5.00, 1925.

TELEPHONE COMMUNICATION SYSTEMS by R. G. Kloeffler

Macmillan Co., 284 p., \$4.00, 1925.

TELEPHONY INCLUDING AUTOMATIC SWITCHING by A. B. Smith

Frederick Drake & Co., 450 p., \$2.50, 1924.

TELEPHONE THEORY AND PRACTICE by K. B. Miller

McGraw-Hill Book Co., Vol. I, 492 p., \$5.00, Theory and Elements, 1930, Vol. II, 439 p., \$5.00, Manual Switching, 1933, Vol. III, 490 p., \$5.00, Automatic Switching, 1943.

THEORY OF THE SUBMARINE TELEGRAPH AND TELEPHONE CABLE by H. W. Malcolm

Been Brothers.

TRANSMISSION CIRCUITS FOR TELEPHONE COMMUNICATION by K. S. Johnson

D. Van Nostrand Co., 333 p., \$5.00, 1927.

TELEVISION

(See Picture Transmission)

TUBES

(See Electronics)

WAVES, NETWORKS, RADIATION

ELECTRIC CIRCUITS AND WAVE FILTERS by A. T. Starr

Pitman Publishing Co., 476 p., \$8.50.

ELECTRIC LINES AND NETS by A. E. Kennelly

McGraw-Hill Book Co., 426 p., \$5.00, 1928, 2nd ed.

ELECTRIC OSCILLATIONS AND WAVES by G. W. Pierce

McGraw-Hill Book Co., 515 p., \$5.00, 1920.

ELECTROMAGNETIC ENGINEERING, Vol. I, Fundamentals, by W. P. King

McGraw-Hill Book Co., Inc., 580 p., \$6.

ELECTROMAGNETIC THEORY by J. A. Stratton

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ELECTROMAGNETIC WAVES by S. A. Schelkunoff

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ELECTROMECHANICAL TRANSDUCERS AND WAVE FILTERS by W. P. Mason

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ELEMENTS OF ELECTRO-MAGNETIC THEORY by A. W. Duff and S. J. Plimpton

The Blakiston Co., 173 p., \$2.75, 1940.

FIELDS AND WAVES IN MODERN RADIO by S. Ramo and J. R. Whinnery

John Wiley and Sons, \$5.00.

FUNDAMENTALS OF ELECTRIC WAVES by H. H. Skilling

John Wiley & Sons, 186 p., \$2.75, 1942.

MICROWAVE TRANSMISSION by J. C. Slater

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NETWORK ANALYSIS AND FEEDBACK AMPLIFIER DESIGN by H. W. Bode

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TRANSMISSION NETWORKS AND WAVE FILTERS by T. E. Shea

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UNDERSTANDING MICROWAVES by V. J. Young

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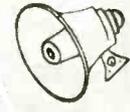
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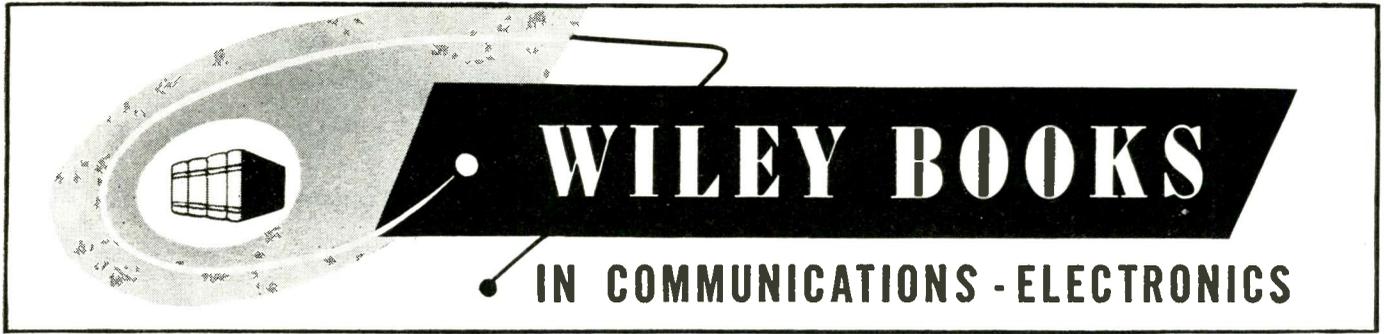
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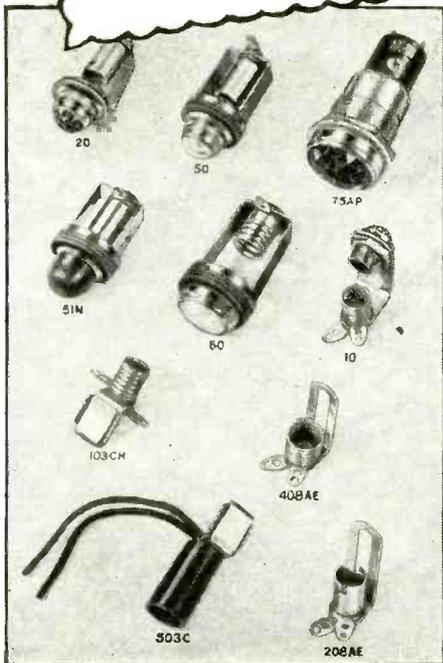
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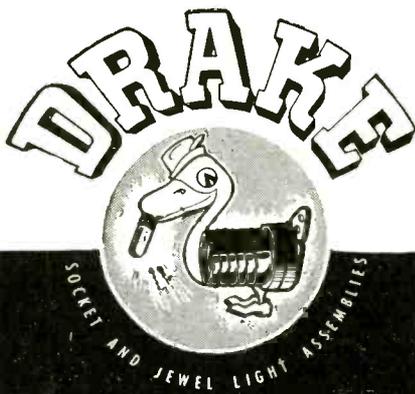
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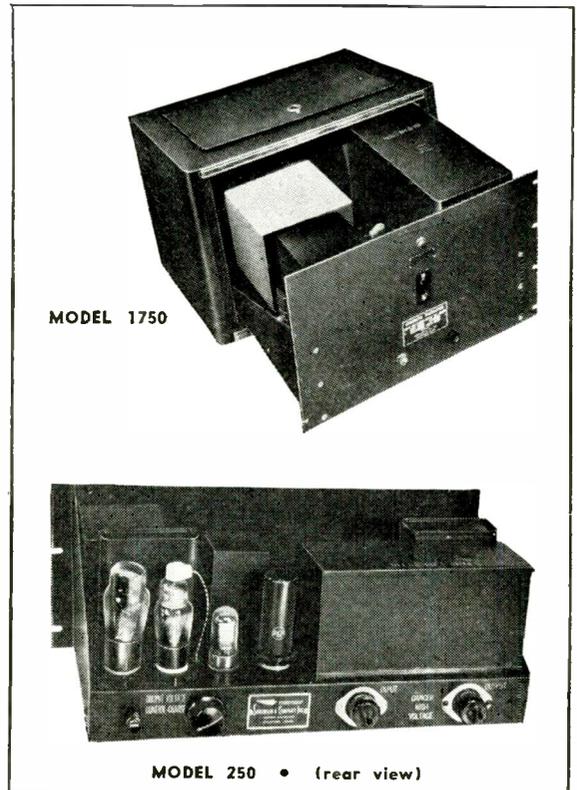
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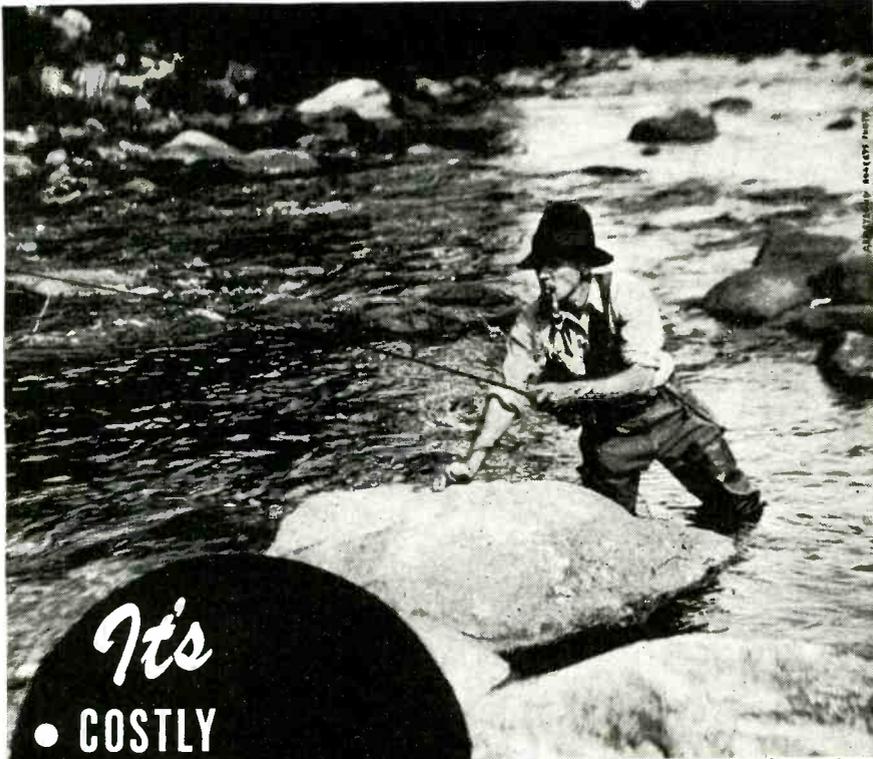
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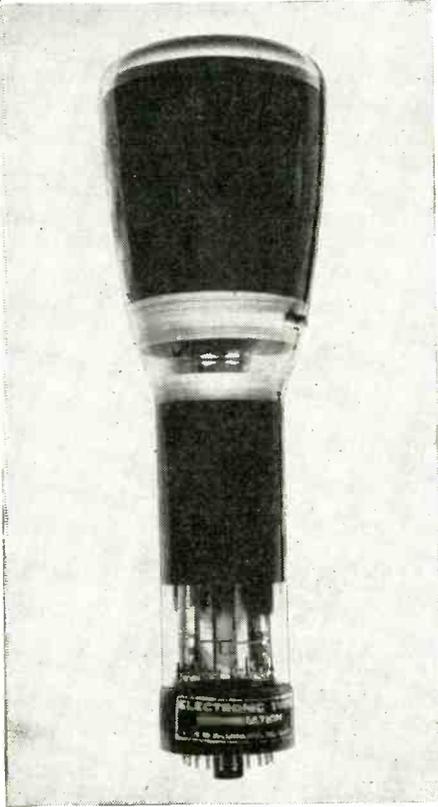
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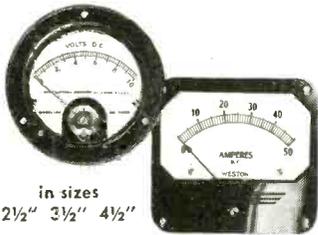
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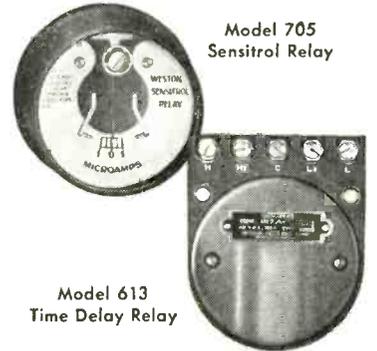
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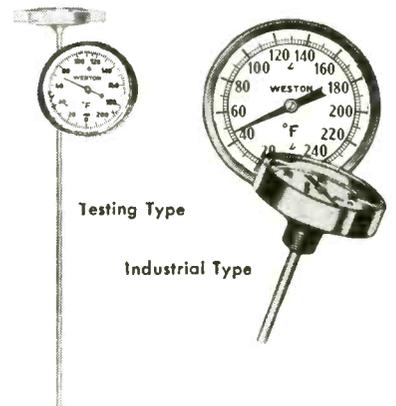


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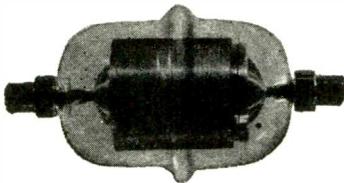
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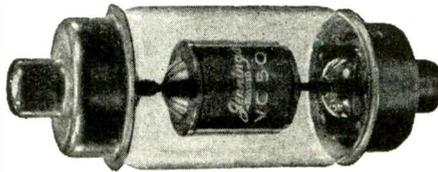
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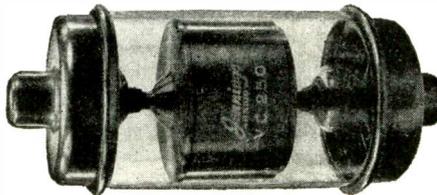
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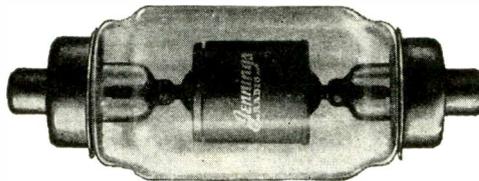
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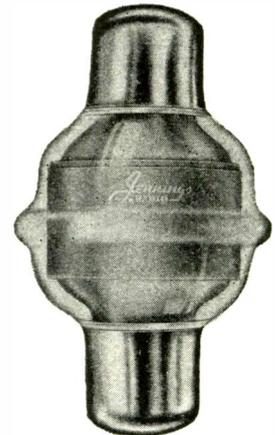
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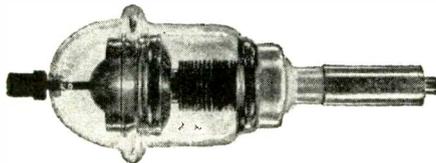


TYPE K, 50 mmfd.,
50,000 Peak Volts, 60 Amps.
Length $8\frac{1}{2}''$, Diameter $3''$

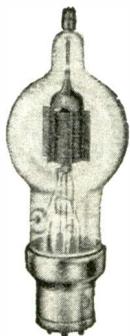


TYPE M—COCONUT,
500 mmfd., 750 mmfd.,
1,000 mmfd., 10,000 peak volts;
Length $7\frac{7}{8}''$, Diameter $4\frac{1}{2}''$

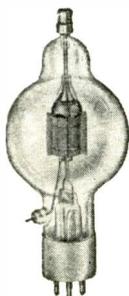
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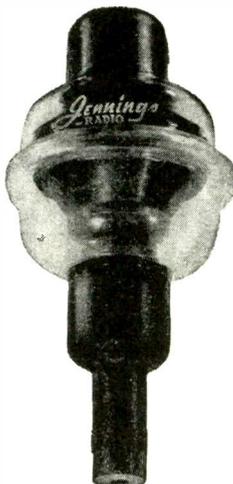


TYPE 250th



TYPE 100th

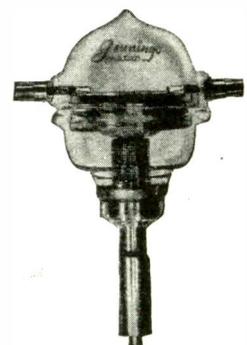
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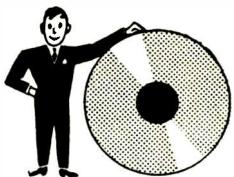
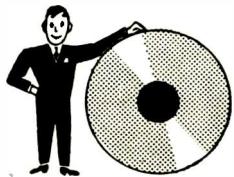
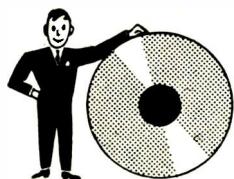
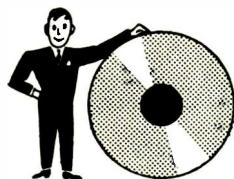
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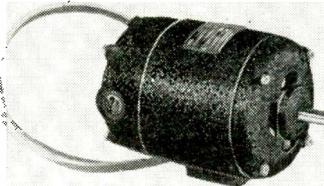
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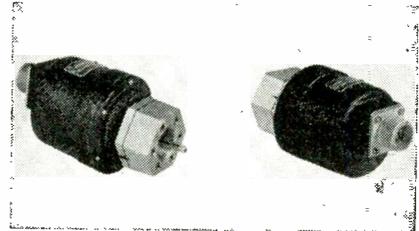
MOTORS AND GENERATORS



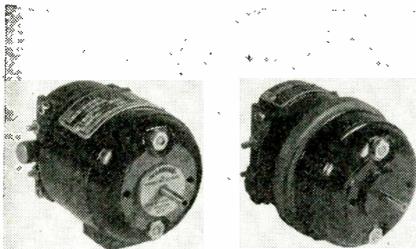
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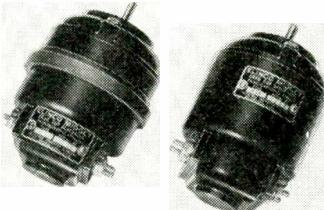
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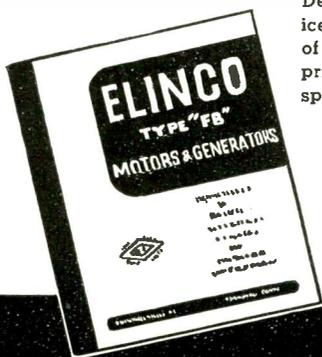
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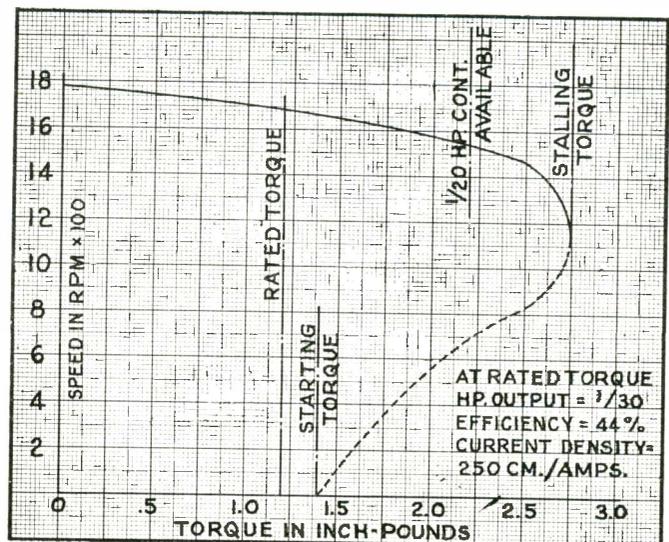
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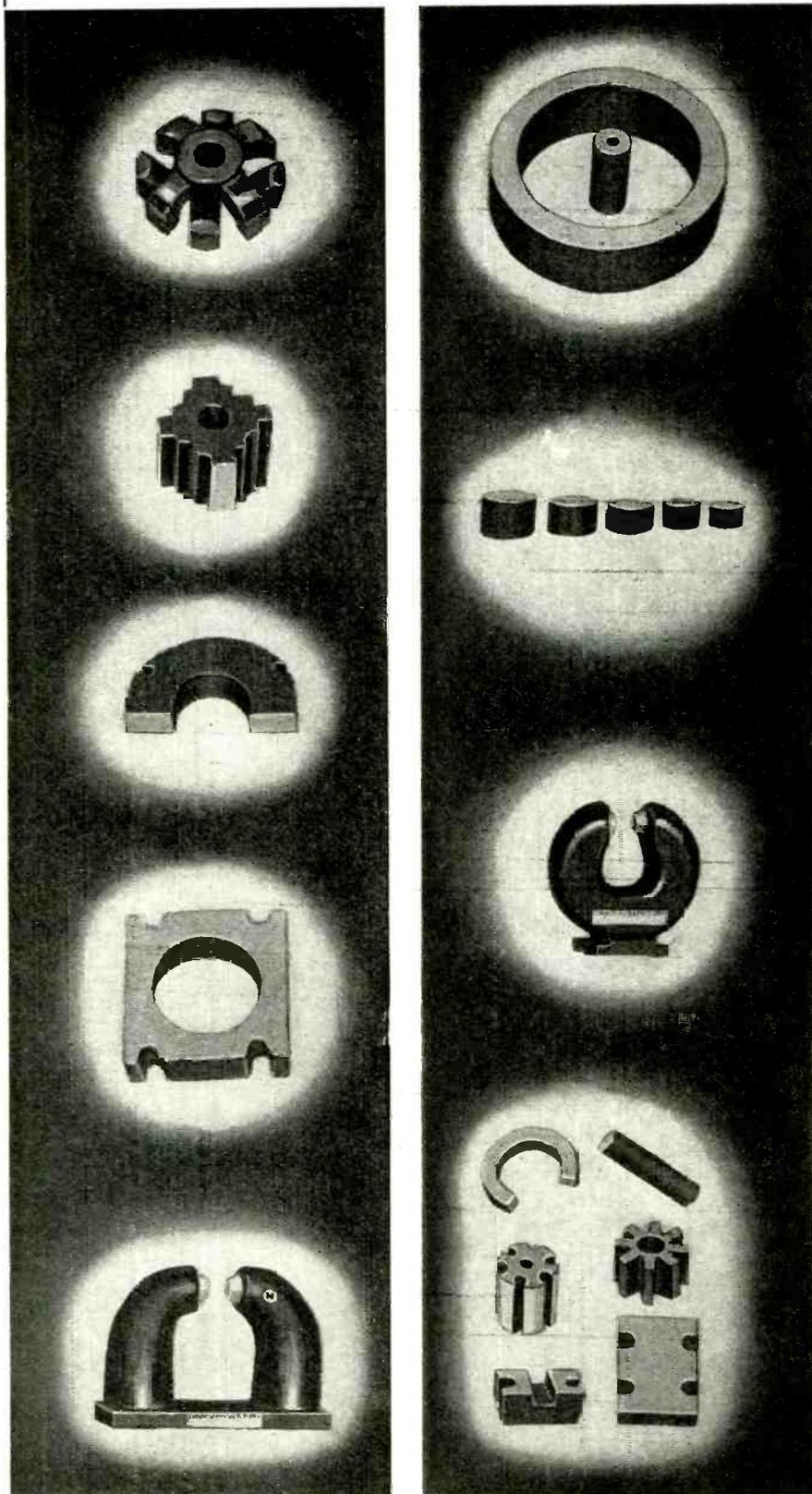


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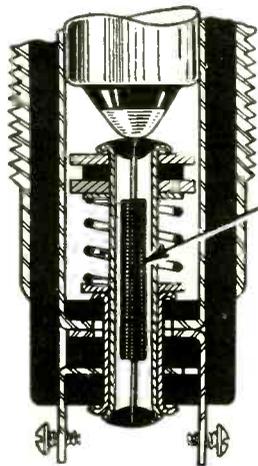
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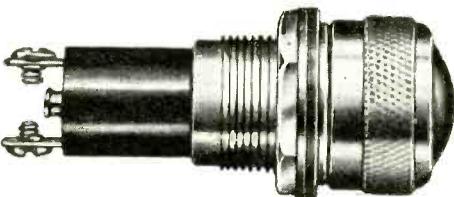
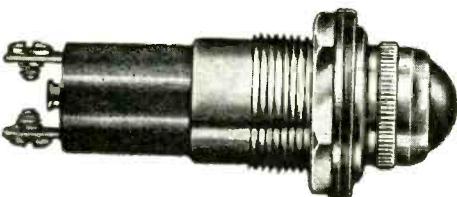
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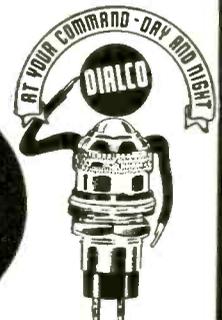
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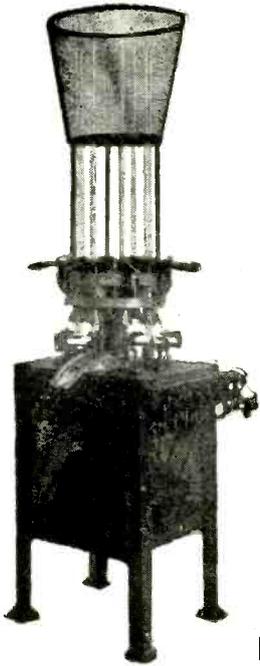
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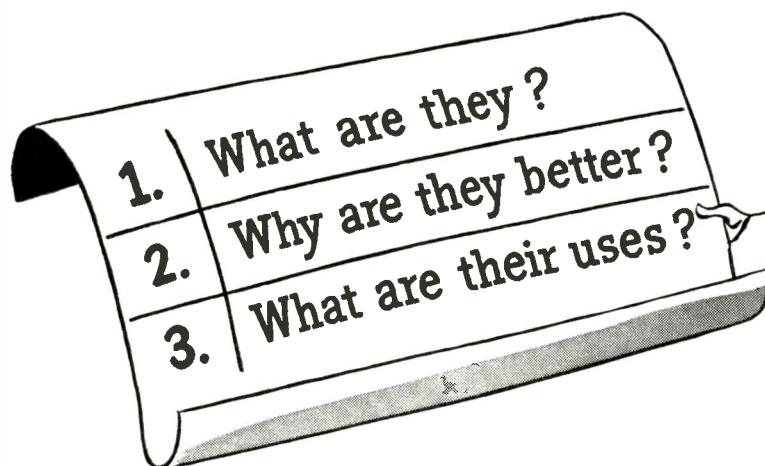
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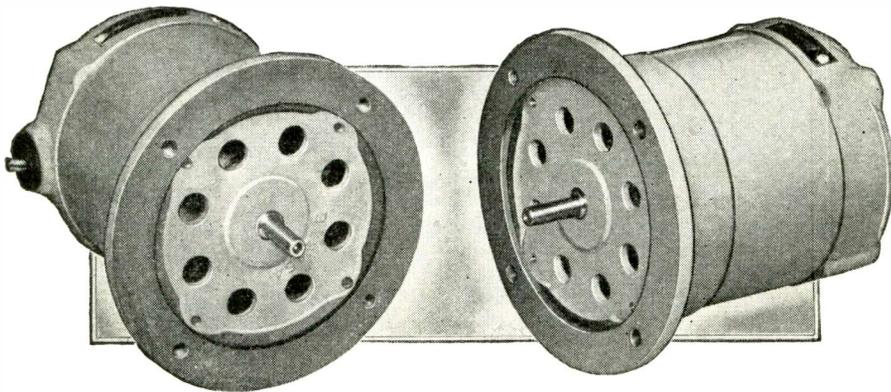
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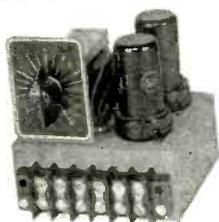
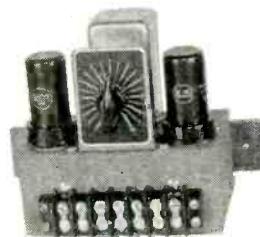
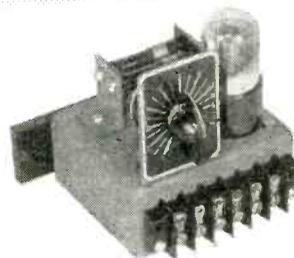
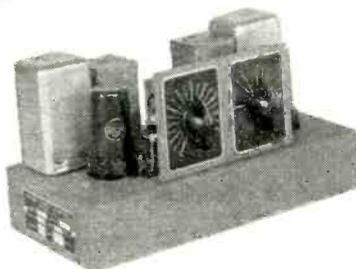
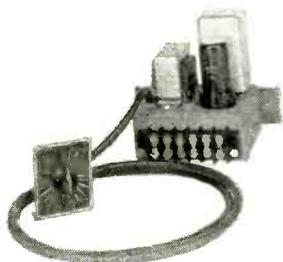
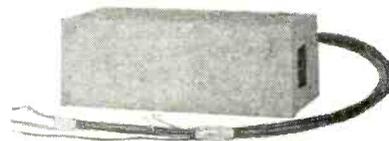
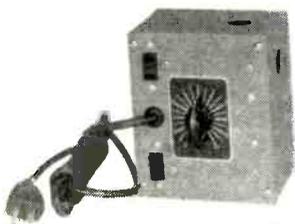
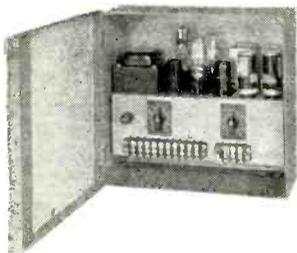
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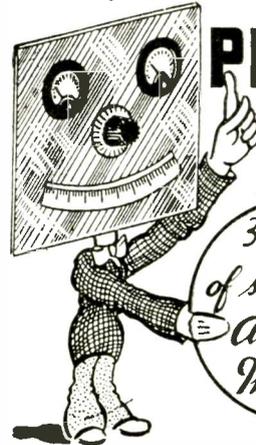
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The Intex Company acts as direct factory export representatives for a number of allied but non-competitive manufacturers in the Radio, Electronic, Electrical and allied fields. Intex Company handles all details of Financing, Sales Promotion, Foreign Correspondence, Permits, Shipping and Export Packing.

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looking for a certain electronic component with special electrical characteristics?

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BUYERS' GUIDE

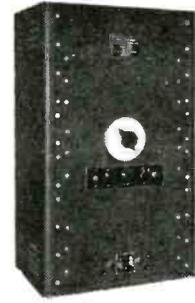
THE REFERENCE BOOK OF THE ELECTRONIC DESIGN ENGINEER



CML 1100 VOLTAGE REGULATED POWER SUPPLY
Table model; continuous operation, excellent regulation, extremely low noise level.



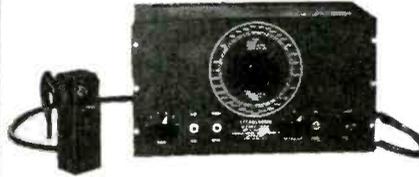
CML 1500 MEGOHM METER
Portable; offers range from 400,000 ohms to 100,000 megohms in five ranges on single scale 4-inch meter.



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Offers frequency stability better than 2% after initial warm-up.



CML 1115 DUAL POWER SUPPLY
Provides independent "B" and "C" voltages. "B" from 150 to 300 V. "C" from 0 to 65V.



CML 1200 STROBOSCOPE
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CML 1110 POWER SUPPLY
Designed for rack mounting. Can be used as source of "B" or "C" voltage.

C M L ELECTRONIC DEVELOPMENTS ...for Laboratory and Production Line

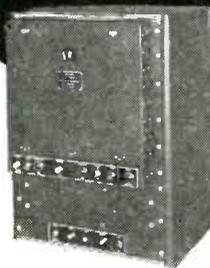
From the famous Rotobridge to the more recently developed Dual Power Supply, the products created by CML offer invaluable aid—on the production line, safeguarding the working efficiency of your electronic instruments—in the laboratory, assisting in the development of new products and technics.

DESCRIPTIVE BULLETINS AVAILABLE

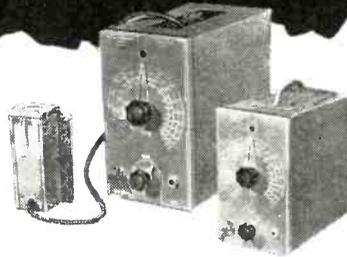
COMMUNICATION MEASUREMENTS LABORATORY

120 GREENWICH STREET, NEW YORK 6, N. Y.

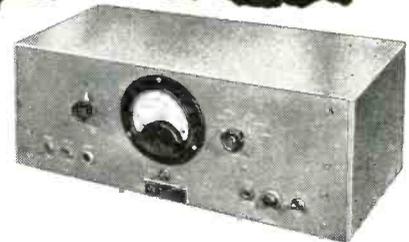
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CML 1210 PORTABLE STROBOSCOPE
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CML 1800 A-F FREQUENCY Meter and Tachometer—Accurately measures speeds of rotating or reciprocal mechanisms.

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portable

Radiotone

HOLLYWOOD

"America's
Finest Portable Recorder"
illustrated—Model RA-116



Here's the answer to your recording problems in a single, compact, portable unit! Radiotone, a pioneer in instantaneous recording, with over 10-years experience backed by thousands of units in service is now manufactured by Ellinwood Industries, famous for Design Simplicity—Dependability. Check these features—note the improvements—then send for name of local representative and complete, illustrated catalog describing the RA-116 and other portable models.

FEATURES

THE RA-116—Produces acetate recordings of professional quality from 6" up to 16". Accommodates 17½" masters for 16" pressings.

DIAL SPEED—78 or 33½ r.p.m. instantly selected by an improved lever shift which locks into position.

LEAD SCREW—Positive feed overhead lead screw insures perfect grooves and dependable operation. Direction of cut can be changed instantly from outside-in to inside-out. Run-in grooves may be made when desired.

VARIABLE LINES—The number of lines per inch on the disc may be varied from 90 to 130.

DEPTH OF CUT ADJUSTMENT—Accurate regulation of pressure at the cutting stylus is obtained by turning a calibrated knob.

DRIVE SYSTEM—Radiotone has perfected a positive silent drive insuring perfect motion, correct pitch, and stability. Moving parts have been reduced to a minimum. Speed accuracy is maintained within .3% at 78 rpm. and .4% at 33½ rpm. Single revolution accuracy is maintained within .1%.

TURNTABLE—A 16" dynamically balanced cast aluminum turntable is used. The hardened steel driving shaft revolves on a single steel ball at the bottom of a 6" cast bearing well which contains two bronze "oilite type" bearings.

DUO-CHROMATIC EQUALIZERS—Two controls allow continuously variable response over both high and low registers.

MULTIPLE INPUT CHANNELS—Two high impedance input channels are provided. (Low impedance also available.) Two jacks are for

microphone use and have an overall gain of 130 DB. The other two have an overall gain of 80 DB, which is suitable for most any crystal, magnetic or dynamic pickup as well as a zero level line.

MIXERS—Two independent volume controls are provided and may be operated simultaneously.

VOLUME INDICATOR—A volume indicator meter is provided for accurate monitoring of recording level.

OUTPUTS—All output impedances are 8 ohms.

AMPLIFICATION STAGES—The amplifier has four stages. The first one is a dual pre-amplifier utilizing one 7F7 tube which provides the two microphone inputs. The second is the duoharmonic equalizer stage also utilizing one 7F7 tube. The third uses two 7F7 tubes in push-pull as phase inverted degenerative resistance coupled drivers. The fourth is the power output stage using two 7C5 tubes in push-pull class "A" feeding an extra heavy duty output transformer. Inverse feedback is employed to insure stability. Power output is 14 Watts. Harmonic distortion at cutting level is less than 1%.

RADIO—A radio receiver designed for recording is available as an accessory to the RA-116 and space is provided by removing the panel at the left side of the amplifier.

POWER REQUIREMENTS—110-120 Volts. 50 or 60 cycles AC. 150 Watts. May be used on DC by addition of converter.

SPEAKER—Heavy duty 12-inch high fidelity, permanent magnet dynamic type.

FINISH—Handsome leatherette case with chromium hardware. Exterior metal parts finished in baked crackle lacquer with chrome trim.

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MICROPHONE PLUGS AND JACKS**
eliminate noise, shorts, leakage

M-140 Y connector—2 male and 1 female—for use where more than one mike or speaker from single circuit.***

***Any combination can be made when used in conjunction with M-191 or M-192.

M-151 Female connector. Solid silver-plated contact. Coupling can be removed completely for soldering.

M-161 Chassis mounting. Solid silver-plated contact. Milled flat, prevents turning in chassis.

M-162 Shorting male with solid silver-plated contact and milled flat to prevent turning in chassis. Circuit closes when female connector removed—eliminating open circuit grid howls.

M-180 Phono plug. Mates M-150 or M-151 for insertion in standard phono jack.

M-190 Solid silver-plated contacts; double male. Mates M-151 or M-150.

M-192 Double Female with two coupling nuts. Ideal for extra cable connections. Mates all male connectors.

M-163 Standard chassis mount male solder contact with milled flat preventing turning in chassis.

M-164 Standard shorting mount male with eyelet and milled flat to prevent turning in chassis. Circuit closes when female connector removed—eliminating open circuit grid howls.

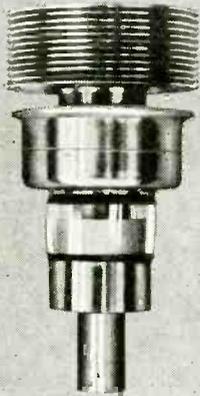
M-171 Male connector solid silver-plated contact mates with M-151, M-192, M-191, M-150 and all standard female connectors.

M-181 Stubby Phone plug with nickel plated brass shell for shielding purposes. Especially suitable for Public Address Systems, Portable Radios, Telephone work, etc. Special sure grip connecting lugs.

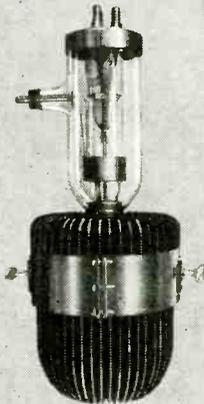
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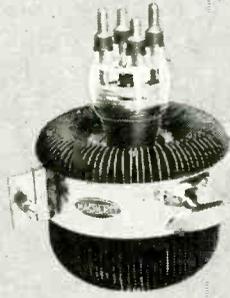
2C-39



ML-891R



ML-893A



ML-889RA



ML-889A

MACHLETT LABORATORIES, Inc., the world's largest manufacturer of X-ray tubes, brings to radio and industrial uses its 49 years of electron tube experience.

The production techniques required for the successful manufacture of X-ray tubes are very similar to those used in producing high-power oscillators, amplifiers, and rectifiers. The chief differences in X-ray tube production are those due to the exceptionally stringent electrical and mechanical requirements. X-ray plate voltages may go as high as one million volts dc, while the necessity of controlling the electron stream within narrow limits requires the maintenance of the closest dimensional tolerances. The skills and techniques necessary to meet these conditions are both new and valuable in transmitting and industrial tubes. Some of the techniques are:

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High-voltage exhaust to give complete outgassing and freedom from arc-over

Surgically-clean internal parts, assembled in air-conditioned departments to prevent introduction into the tube of particles that would shorten its life

During the war, Machlett employed these and other techniques in producing large quantities of highly-specialized electron tubes for radar, communication, and for the atomic bomb project. Thus this organization is well-versed in the requirements of modern high-frequency, high-power tubes.

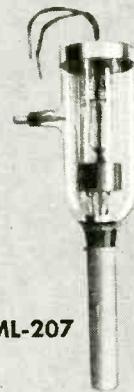
The Machlett background of almost 50 years of continuous electron tube production, modern, laboratory-like manufacturing facilities, and up-to-the-minute experience assures the user that he will receive tubes thoroughly engineered, mechanically rugged, and characterized by trouble-free operation and long life.

For complete information, write our nearest representative, or to the factory at Springdale, Connecticut.

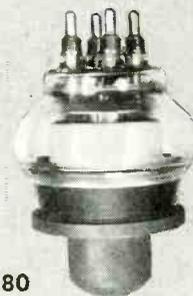
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ML-892



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ALL SYNKOTE WIRE IS THERMOPLASTIC INSULATED PERMITTING EXTREMELY SMALL OVERALL DIAMETER.

In addition to having unusually tough, practically age-proof insulation, all Synkote wire is designed to meet specific electronic needs.

"Synkote" RADIO HOOK-UP WIRES...

TYPE SRIR: Approved by the Army-Navy Electronics Standards Bureau (under Spec. JAN-C-76) for Radio Hook-up use where the voltage does not exceed 1,000 V. Sizes: 24 Solid to 6 Stranded.

TYPE SRHV: Designed for Radio Hook-up use where voltage does not exceed 2,500 V. Has the same Army-Navy approval as TYPE SRIR. Sizes: 24 Solid to 6 Stranded.

These two types of Radio Hook-up wire are recommended for communications and industrial electronic control applications. They have proved superior to push-back and rubber insulated types because the Synkote insulation is almost totally impervious to water, oils, acids, alkalis, sunlight, cold, and fungus growths. It is vermin-proof, unusually resistant to abrasion, flexing, and tearing, and will not support combustion. In addition, it has extremely high dielectric breakdown strength and low dielectric leakage. In tests performed by the Bureau of Ships, TYPE SRIR did not break down under 12,000 V., and TYPE SRHV under 18,000 V. Both types can be shielded to any specifications (see "SHIELDING" below), and both are available in two heat ranges: to 60°C. (140°F.) and to 80°C. (176°F.).

TYPE WL: Also approved by Army-Navy E. S. B. (under Spec. JAN-C-76) for voltages up to 600 V. Nylon jacketed, unusually resistant to abrasion, flexing, tearing, and heat. TYPE WL is available in sizes from 24 Solid to 6 Stranded, and can be shielded to any specifications. Ideally suited for lead-in wire where coils are subjected to high temperatures before installation, it is unaffected by temperatures up to 120°C. (248°F.).

TYPE TF: Approved by the Underwriters' Laboratories as Radio Hook-up wire under the category of Appliance Wiring Material. Sizes 26, 24, 22, and 20 (Solid and Stranded) are manufactured with either 1/64 or 2/64 insulation for 300 volt use. Sizes 18 and 16 (Solid and Stranded) have 2/64 insulation for 600 volt use. All sizes can be had for both 60°C. and 80°C. work—and can be shielded to any specifications.

Many other types of Hook-up Wire, to meet special requirements, can be manufactured on short notice—in practically any quantity desired. For complete information, consult our Engineering Department.

"Synkote" ANTENNA WIRE...

Specifically designed for use in the radio industry, this low voltage wire comes in Sizes 24 and 22 Solid, with an extremely thin wall of insulation (approx. 10 mils). It is used in tremendous quantities by some of the foremost manufacturers of small table-top radios as antennae leads.

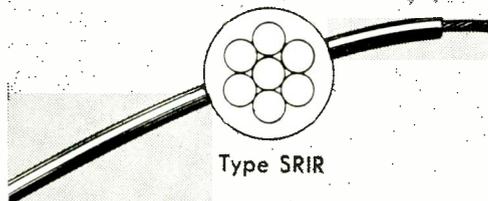
"Synkote" TWO-CONDUCTOR PARALLEL CORD...

This wire has Underwriters' approval for lead-in purposes, plug or cord sets and patch cords. It has numerous applications in the communications, appliance, and electronics fields. Manufactured in 15 distinctive, lasting colors, these extremely tough, yet light and flexible cords will not collect dust and will remain shiny and clean.

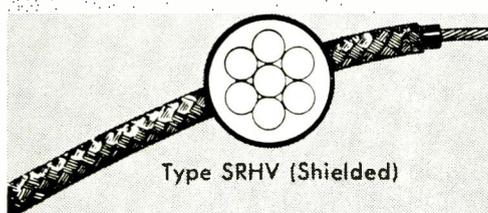
PLASTOID PLUGS...

Molded in one solid piece, an integral part of the above Two-Conductor Cord—these plugs cannot be broken or detached. They are made of a tough, resilient, polyvinyl chloride compound similar to the cord insulation.

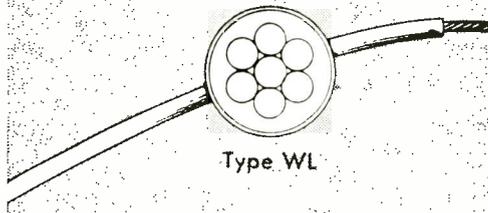
SHIELDING: A braid of tinned or bare copper—to cut out interfering fields. Can be woven loose or tight, to any specified degree of coverage. Gauge of strands varies according to individual requirements.



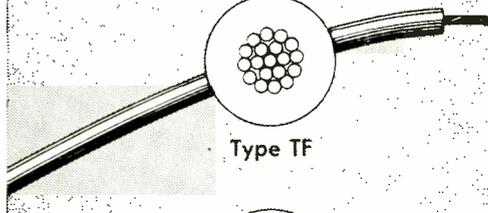
Type SRIR



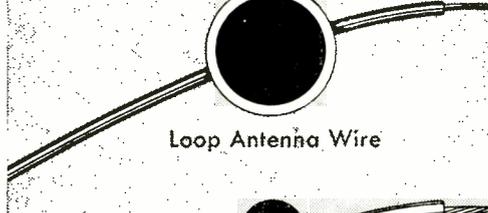
Type SRHV (Shielded)



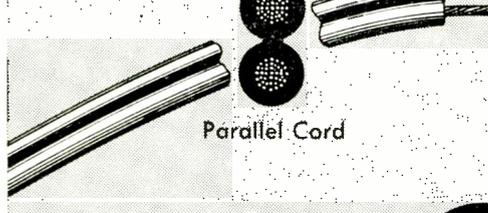
Type WL



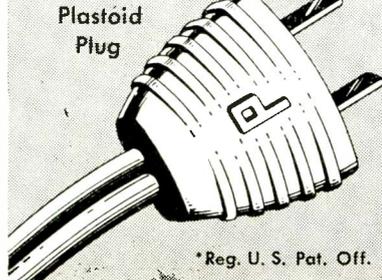
Type TF



Loop Antenna Wire



Parallel Cord



Plastoid Plug



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*Reg. U. S. Pat. Off.

MASTER-PRO

"MASTER-PRO" overhead RECORDING MECHANISM

MODELS M5 ILLUSTRATED • with Magnetic Cutter and 120 line feedscrew

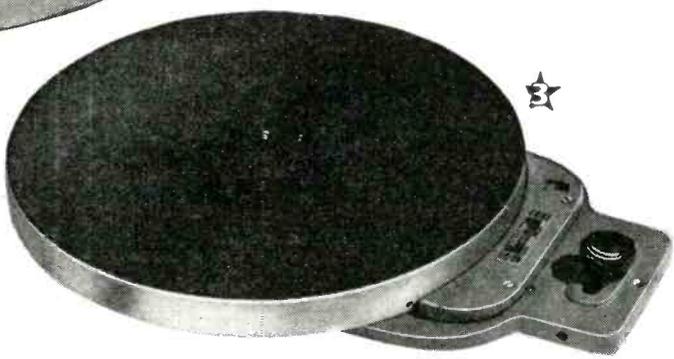
The "MASTER-PRO" M5-overhead cutting mechanism is a universal machine that can be readily attached not only to the REK-O-KUT RKD-16 Recording Turntable, but to any other make of turntable that has the standard center pin. It is rugged, 15 pounds of steel and bronze, chrome plated. Will stand rough treatment and will give long service. Patented universal and support allows operator to instantaneously level the mechanism. Twisting and shimming completely eliminated.



★ RKD-16 Dual Speed 16" Recording Table, mounting base and motor . . . a precision-constructed instrument. unsurpassed in quality and performance.

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Quality Sound Recording Equipment

REK-O-KUT COMPANY

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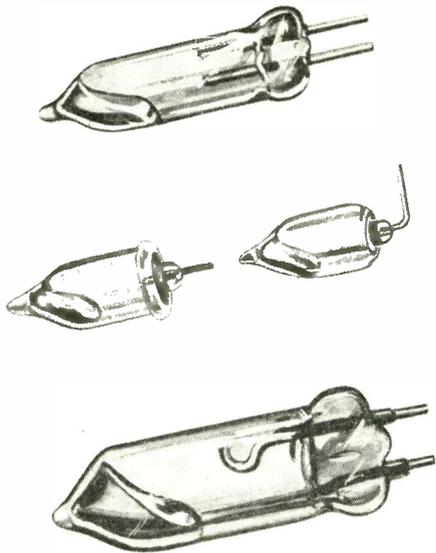
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For particulars write to Dept. E

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Canadian Distributors: W. J. Addison Industries, Ltd., Toronto

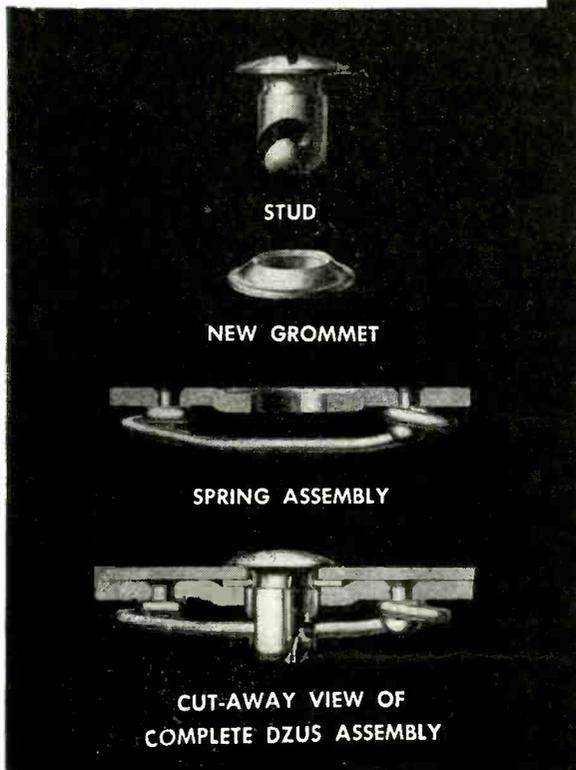
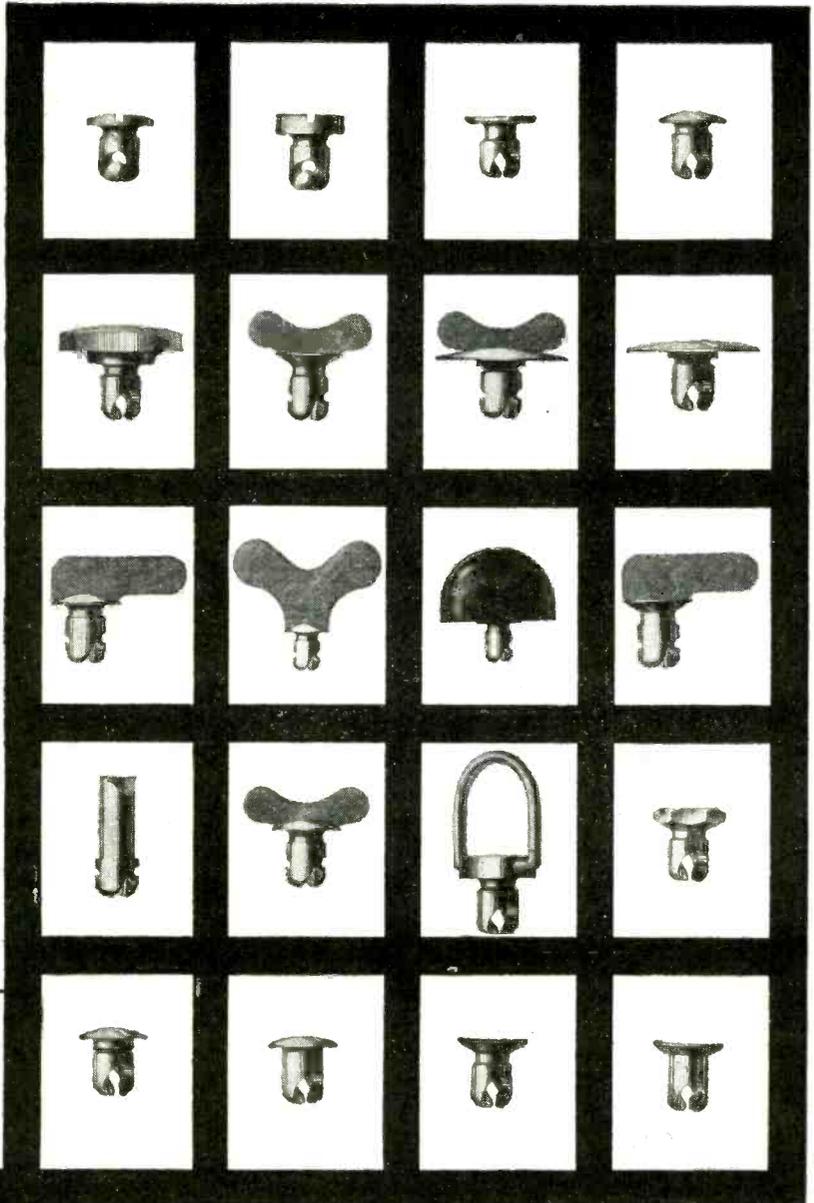
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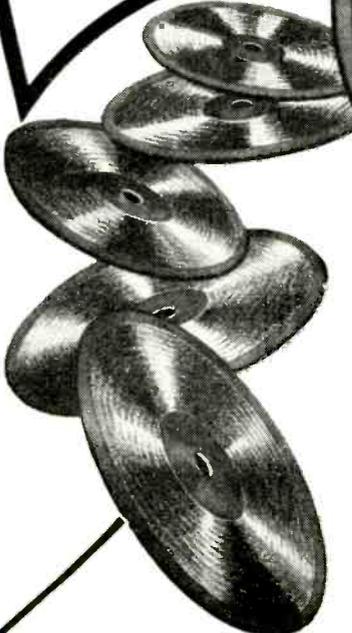
Dzus engineers have helped industry solve many intricate fastening problems by knowing just the right type of fastener head to fit a given application. Shown here are just a few of the many different styles available to meet practically any requirement.

Simple, light, durable — these Dzus spiral cam fasteners can be installed in any solid or laminated materials — wood, metal, fiber, canvas, plastics, etc., regardless of thickness. Look to Dzus for the answer to your fastening problem. Dzus Fastener Co., Inc., Babylon, New York. In Canada: Railway and Power Engineering Corp., Ltd.

SEND to Dept. E1 for a copy of the new Dzus catalog. More and more manufacturers in all fields of industry are finding that Dzus spiral cam fasteners squarely meet all the requirements for a dependable fastener.

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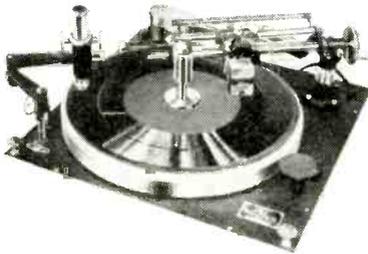
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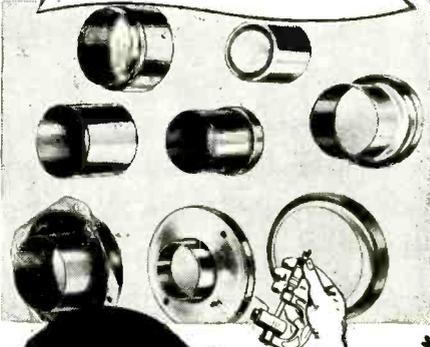
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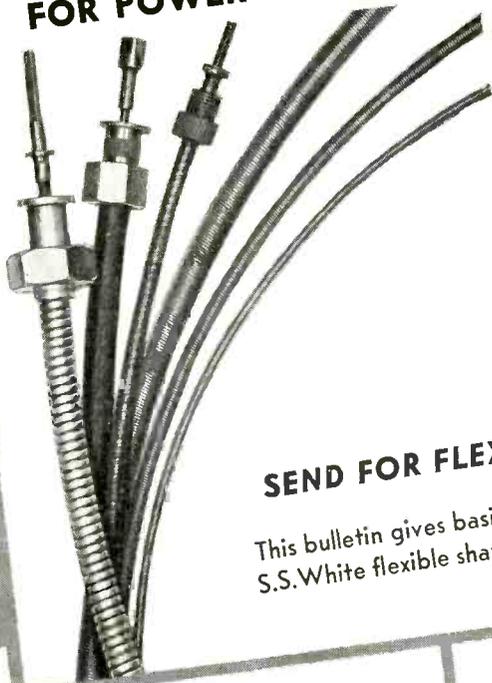
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The Richardson Company—to our knowledge—is the only plastics manufacturer fully equipped to do both laminating and molding of plastics . . . the molding of rubber and bituminous plastics and the manufacturing of rubber-plastic combinations. Facilities are at hand for all fabricating and finishing operations. Thus, Richardson is free to recommend the operation and material best suited to your requirements.

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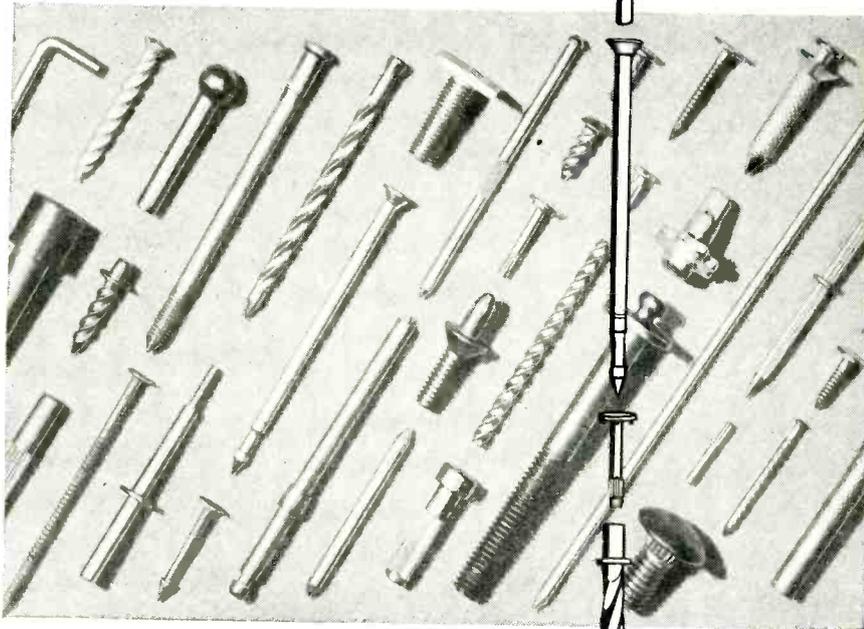
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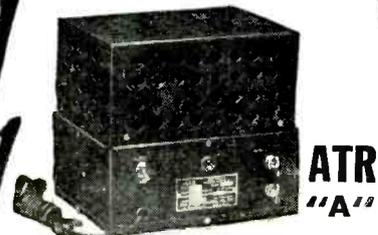
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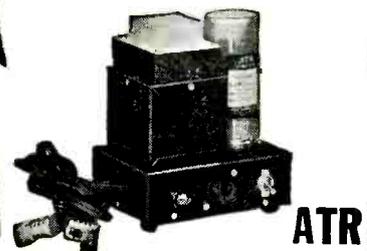
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We, at Kenyon, take a good deal of pride in our famous T-LINE TRANSFORMERS. Similar units are now produced and advertised by many of our competitors who long ago realized that the T-LINE Housing was a superior Housing in many respects—outdating by years the unpotted open-type Transformers produced by other Transformer Manufacturers.

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Mounting centers remain exact because they are die-punched all at the same moment in a single operation.

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Kenyon engineering intends to maintain its place as a pioneer in the continued development of outstanding Transformer Equipment.

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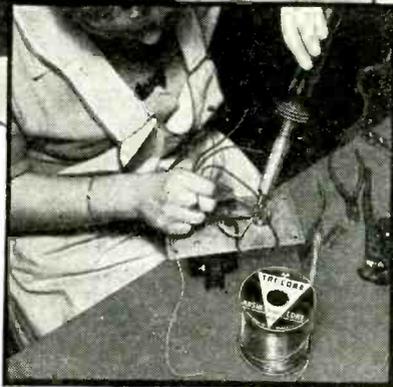
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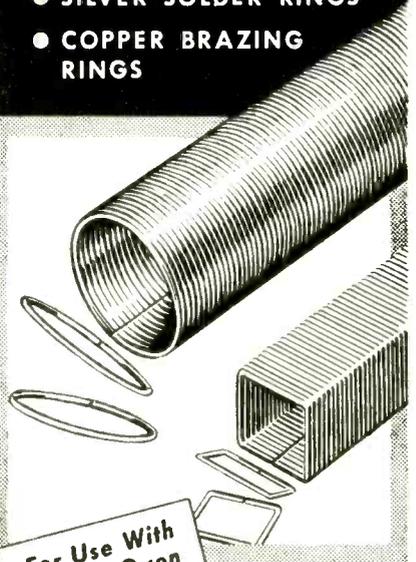
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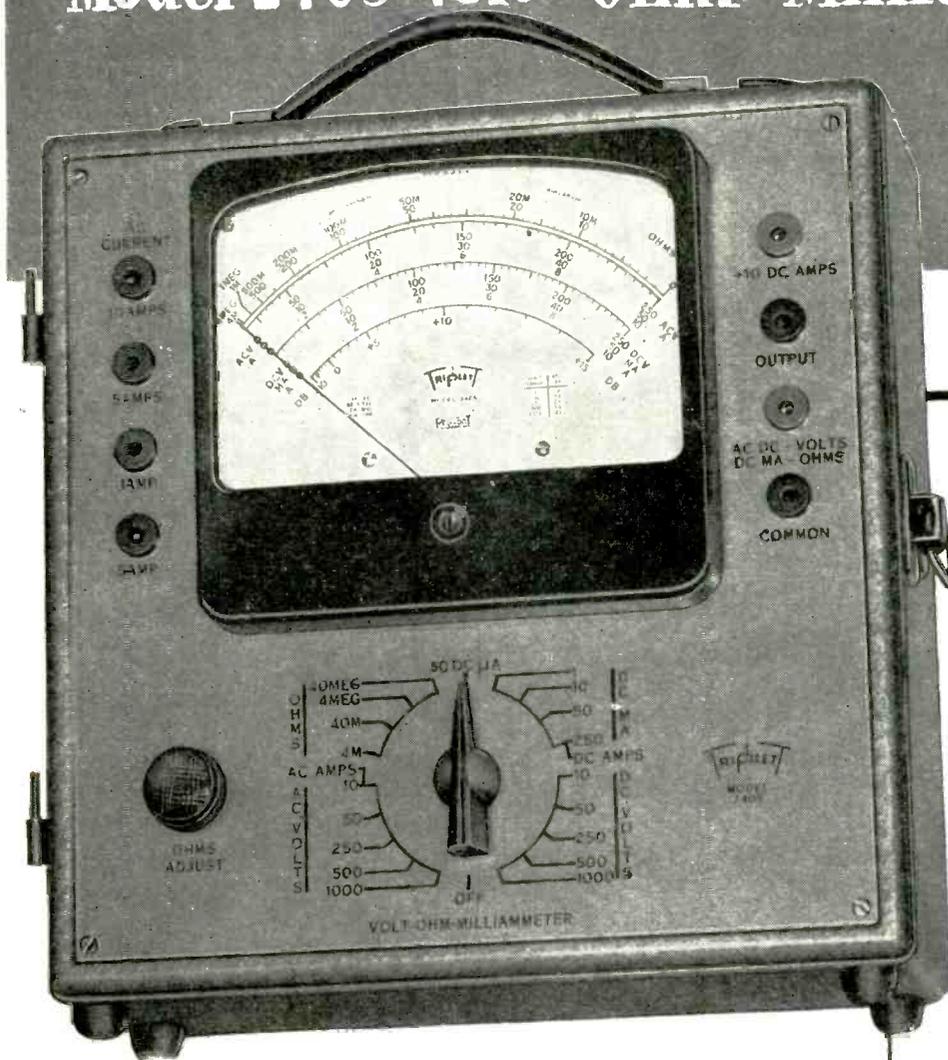
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25,000 Ohms
per volt D.C.



Specifications

NEW "SQUARE LINE" metal case, attractive tan "hammered" baked-on enamel, brown trim.

✓ **PLUG-IN RECTIFIER**
Replacement in case of overloading is as simple as changing radio tube.

✓ **READABILITY**
The most readable of all Volt-Ohm-Milliammeter scales—5.6 inches long at top arc.

✓ **RED • DOT LIFE-TIME GUARANTEE**
on 6" instrument protects against defects in workmanship and material.

New **ENGINEERING** • New **DESIGN** New **RANGES** •

(50 RANGES)

Voltage:	5 D.C. 0-10-50-250-500-1000 at 25000 ohms per volt. 5 A.C. 0-10-50-250-500-1000 at 1000 ohms per volt.
Current:	4 A.C. 0-.5-1-5-10 amp. 6 D.C. 0-50 microamperes—0-1-10-50-250 milliamperes—0-10 amperes
4 Resistance	0-4000-40,000 ohms—4-40 megohms.
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Output	Condenser in series with A.C. volt ranges.

Model 2400 is similar but has D.C. volts

Ranges at 5000 ohms per volt.

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REGULATED D. C. UP TO 1000 VOLTS AT 500 M. A.

*Featuring continuously variable
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Listed below are four power supplies especially designed to cover a wide range of applications in development and production. These instruments feature continuously variable output voltage, good regulation, low hum level, good stability and overload protection. Models 200-B, 204-A 205-A and 207-B will operate from line input of 105 to 125 volts A.C. 50-60 cycles and provide rated regulation within this change. Examine the specifications carefully and you may find that one or more of these units has an application in your research or production program.



MODEL 204-A 0-500v D. C. at 300 MA.

Output Voltage:
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6.3v A.C. at 6 Amps. unregulated
Regulation: Within 1% from 30-500 v
Hum: Within 10 millivolts at full load
Meters: 0-500v D.C.
0-300 Ma. D.C.
Negative or positive side of high voltage output may be grounded.

MODEL 207-B 200-1000v D. C. at 500 MA.

Output Voltage
200-1000v D.C. at 500 Ma. regulated
Regulation: Within 1% from 200-1000 Volts
Hum: Within 20 millivolts at full load
Meters: 0-1000v D.C.
0-500 Ma. D.C.
Negative side of high voltage grounded.

MODEL 205-A 100-325v D. C. at 150 MA.

Output Voltage:
100-325v D.C. at 150 Ma. regulated
0-150v D.C. at 5 Ma. regulated by VR tube
6.3v A.C. at 6 Amps. unregulated
Regulation: Within 1% from 100-325v D.C.
Hum: Within 10 millivolts at full load
Meters: None
Negative or positive side of high voltage output may be grounded.

MODEL 200-B 0-325v D. C. at 125 MA.

Output Voltage:
0-325v D.C. at 125 Ma. regulated
6.3v A.C. at 6 Amps. unregulated
Regulation: Within 1% from 20-325 V
Hum: Within 10 millivolts at full load
Meters: 0-500v D.C.
0-150 Ma. D.C.
Negative side of high voltage grounded.



Detailed information on any or all of the instruments above will be sent upon request. Price and delivery information will also be forwarded at the time of your request.

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6 TIP STYLES

Interchangeable



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protect with NITROGEN

LINDE Nitrogen provides an ideal means of protection against oxidation and corrosion by air. For packaging dehydrated foods; for deaerating, processing, storing and packaging fats and oils of all kinds; or for providing an inert atmosphere, free of impurities, for the complete protection of practically any material susceptible to oxidation, use LINDE Nitrogen.

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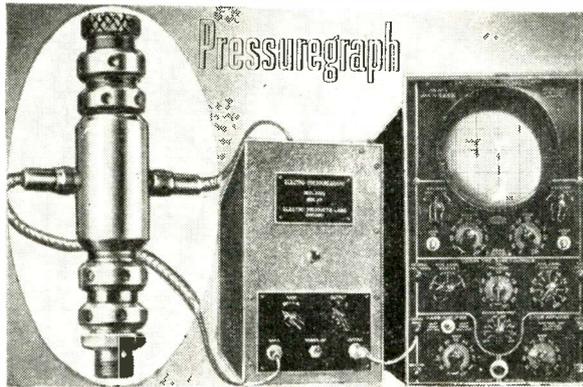
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Indicates in linear response, on screen of cathode ray oscillograph, the pressure - time - curve of any internal combustion engine, pump, airline, or other pressure system where pressure measurements are desired.



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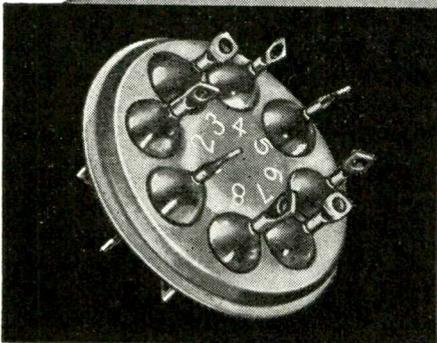
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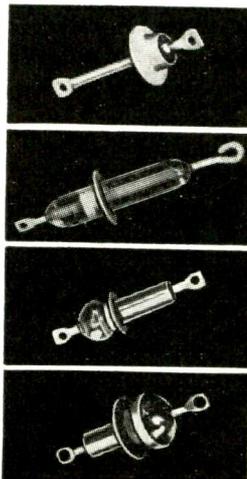
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- ★ MANY STANDARD TYPES
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A complete and diversified line of E-I 4, 5, 6, 7 and 8 electrode hermetically sealed Multiple Headers are now available as standard stock items. All are supplied at mass production prices—no special tool or die costs involved. Individual sealed terminals are also included in a wide variety of standardized types. All special shapes or forms can be supplied to exact specifications at slightly higher cost.

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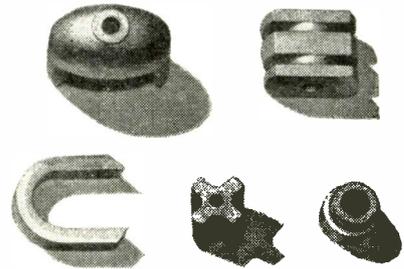


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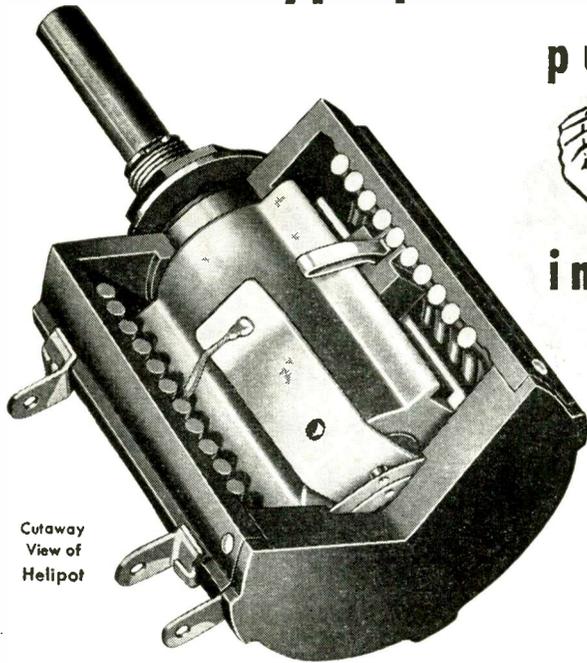
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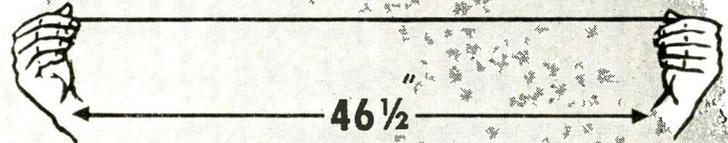
THE REFERENCE BOOK OF THE ELECTRONIC DESIGN ENGINEER

This new type potentiometer-rheostat...

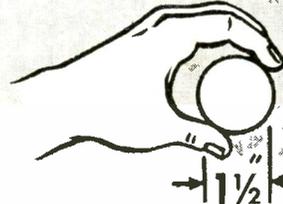


Cutaway
View of
Helipot

puts this much slide wire



into this much panel space



It's the BECKMAN

Helipot

(Trade mark for the HELlical POTentiometer)

No matter what type quality electronic instrument you may be manufacturing or preparing to manufacture, be sure to investigate the **multiple advantages** you can build into your product by using Beckman Helipots for resistance control. War-perfected on such ultra-precision electronic equipment as radar, flight control instruments, depth sounding devices, etc., the Beckman Helipot makes possible entirely new standards of accuracy, convenience and compactness in resistance controls.

Unlike conventional potentiometers which consist of a single turn of slide wire, the Helipot has *many* turns of slide wire *helically* coiled into a compact case that occupies no more panel space than a conventional single-turn potentiometer. The slider contact is rotated by a knob in the usual manner and a simple device guides the slider contact as the knob is rotated so that the entire helical length of resistance winding can be contacted.

Its advantages are many. Heretofore circuits requiring precise control coupled with wide range have generally required at least two potentiometer units—one for coarse adjustment and the other for fine adjustment. This means two knobs to operate... two controls to waste panel space... two units to complicate installation and wiring. In the

Beckman Helipot *both* wide range and fine adjustment are combined in the *one* unit. There is only one knob to operate... *one* unit to take up panel space... *one* control to install and wire. You not only save

valuable panel space and assembly time, but you greatly increase the convenience, utility, simplicity and operating efficiency of your electronic instruments. Note these outstanding Helipot features...

High Linearity—As a result of fulfilling wartime requirements for ultra-precision circuit controls, Helipots are mass-produced with linearity tolerances of *one tenth of one per cent*—and even less!

Precise Settings—Because of the many times longer slide wire, settings can be made with an accuracy impossible with single turn units.

Wide Range—By coiling a long potentiometer slide wire into a helix, the Helipot provides *many times* the range possible with a single turn unit of comparable diameter and panel space.

Low Torque—Of special interest for power-driven applications—the Helipot has unusually low torque characteristics. The 1½" Helipot—for example—has a torque of *only one inch/ounce*.

Wide Range of Sizes—Current Helipot production is in two basic sizes, each available in a wide range of ratings. The Type A Helipot is 1½" in diameter and is available in ten or fewer turns of slide wire. The ten turns provide a slide wire 46½" long.

The Type B Helipot is 3" in diameter with 15 turns of slide wire as standard, but is available with either fewer or more turns on order. The 15 turns give a slide wire 140½" long.

Resistance windings can be supplied in virtually any commercially available type of resistance wire for both Type A and Type B so that total resistance values for Type A range from 100 to 30,000 ohms... for Type B from 650 to 100,000 ohms.

SEND US YOUR POTENTIOMETER PROBLEM and our engineering staff will be glad to work with you in applying Helipot advantages to increase the efficiency, accuracy and convenience of your quality electronic instruments.

THE HELIPOT CORPORATION, 1011 MISSION STREET, SOUTH PASADENA 2, CALIFORNIA

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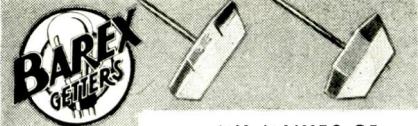
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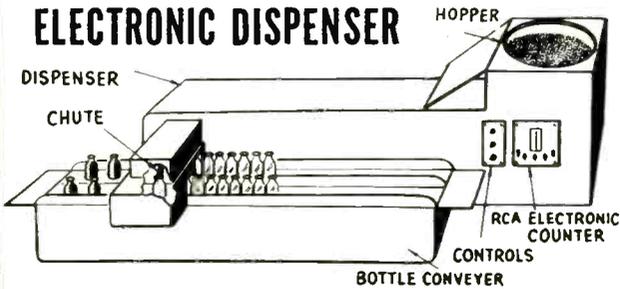
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5 Industrial Electronic Devices for Production Economy

WILMOTTE HIGH SPEED ELECTRONIC DISPENSER

Model P 71



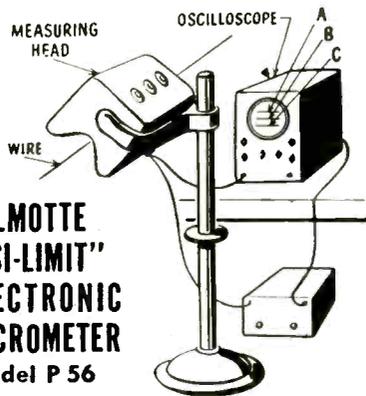
Designed for handling, counting, and packaging small parts. Now being produced for manufacturers of such diversified products as pharmaceuticals, plastic parts, metal stampings, caps, confectionery.

Parts are fed into a hopper, counted electronically and dispensed in any desired lot sizes to packaging positions at a rate of 6000 units per minute. Simple adjustments permit rapid changing of lot size, and allow items of various sizes to be counted.

Unit furnished either with or without automatic packaging equipment.

WILMOTTE "VISI-LIMIT" ELECTRONIC MICROMETER

Model P 56



An important advance in the field of measurement. Manufactured for direct installation on the production line for continuous indication of outside diameter of wire, tubing or rod, edge-to-edge dimensions on machined or extruded parts, strip stock, thickness of sheets.

Size range of standard unit is .005" to .600" in diameter. Items of other sizes can be accepted through special design. Tolerance limits are + or - .0001" without

physical contact with the part being measured. No limitations of speed of operation are imposed, nor are there any inaccuracies due to deformation of the part.

The "scope" screen presents, as three parallel lines, the desired tolerance requirements (A and C) with the measured quantity (B). No error is introduced by line voltage fluctuations or circuit changes since all three traces maintain their relative positions.

WILMOTTE "VISI-LIMIT" CURVE TRACER

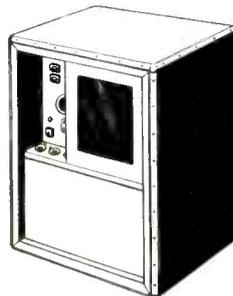
Model P 52



For rapid alignment of I.F. coils of frequencies from 85 kc to 11 mc. Operator adjusts test trace (B) to fall between traces of limit coils (A and C), set up to production specifications. Defective coils immediately detected. All error is eliminated as circuit changes or line voltage variations affect all three traces equally.

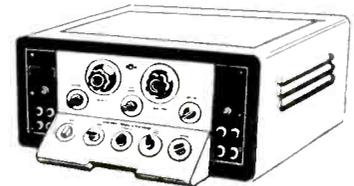
Standard equipment includes one plug-in oscillator assembly at frequency specified by purchaser, and jigs for limit and test coils having "pig tail" leads. Jigs for special applications furnished to purchaser's specifications.

WILMOTTE HIGH FREQUENCY GENERATORS Model P 8



For laboratory and production operations, wherever high frequency heating is required, Wilmotte provides complete working systems, including generator, fixtures, work coils, and electrodes. Illustration is a Model P 8 generator having power output of 5 kw and frequency continuously variable from 50 to 150 mc. Other units also continuously variable up to 1000 mc.

WILMOTTE PULSE GENERATOR Model P 54



Intended for use as the "heart" of control equipment where wide flexibility in pulse width, amplitude and polarity is required. Combines in a single unit all of the outstanding features of conventional equipment of this type. May be triggered from either an external or internal source. Continuously variable delay control provided. Supplies pulses of voltage of variable frequency, width, amplitude, and of either polarity simultaneously.

Prices and detailed information furnished upon request



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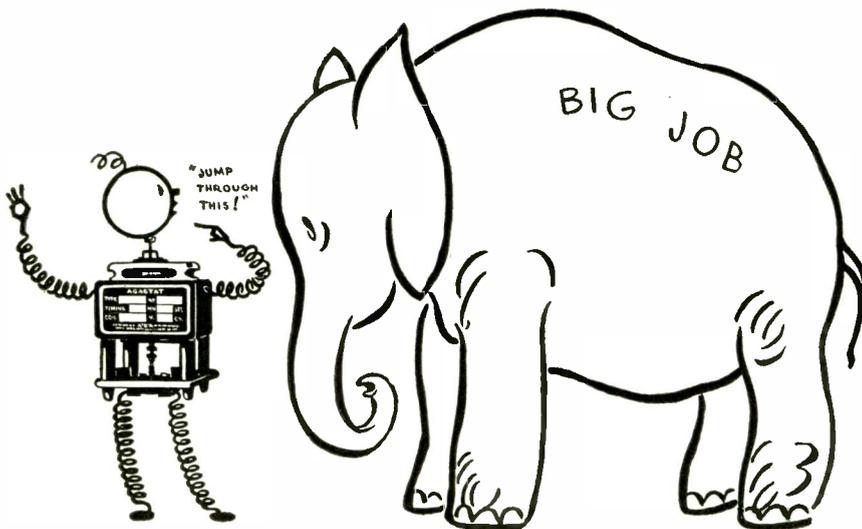
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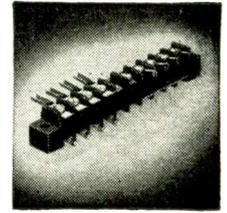
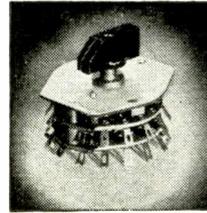
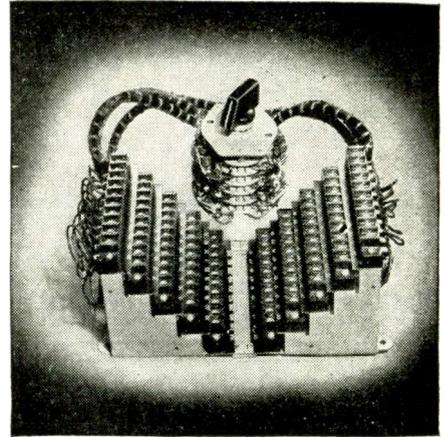
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RMA Standard Lines — Copper — at 100 MC									
7/8	78	.4570	90.0	3.0	2120	5.610	59.0	51.5	93.3
1-5/8	158	.2305	94.7	10.0	2042	5.375	117.0	51.5	96.4
3-1/8	318	.1455	96.7	42.0	2120	5.610	230.0	51.5	93.3
6-1/8	618	.0557	98.6	166.0	1999	5.425	905.0	51.5	98.6
Aluminum FM Transmission Lines at 100 MC									
7/8	78A	.5270	88.6	1.0	2120	5.610	19.0	51.5	93.1
1-5/8	158A	.2770	93.9	3.6	2050	5.430	39.0	51.5	96.1
2-5/8	258A	.1850	95.8	8.2	2110	5.580	86.0	51.5	93.8
3-1/8	318A	.1630	96.4	11.4	2110	5.640	93.0	51.5	93.1
4-1/8	418A	.1000	97.8	26.2	1970	5.300	119.0	51.5	99.1
6-1/8	618A	.0685	98.5	60.0	2010	5.300	210.0	51.5	98.4
Aluminum AM Transmission Line — at 1000 KC									
3/8	254A	.118	97.4	.55	1730	8.21	6.0	68.9	85.3
7/8	354AL	.0471	98.9	3.0	1600	6.95	18.0	65.9	96.2
1-5/8	854AL	.0243	99.4	12.0	1580	7.62	38.0	69.5	93.1
2-5/8	1054AL	.0149	99.6	33.0	1480	7.86	80.0	72.8	94.5
3-1/8	2554AL	.0122	99.7	50.0	1490	7.34	82.0	70.0	97.0
4-1/8	3354AL	.0091	99.8	87.0	1470	7.13	114.0	69.6	99.1
6-1/8	4954AL	.0061	99.9	195.0	1490	7.13	204.0	69.2	98.4

ISOLANTITE, INC.

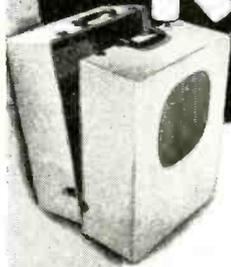
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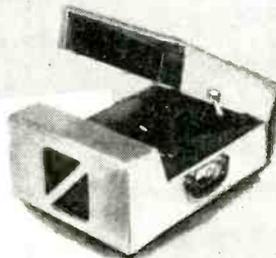
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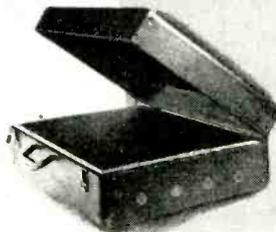
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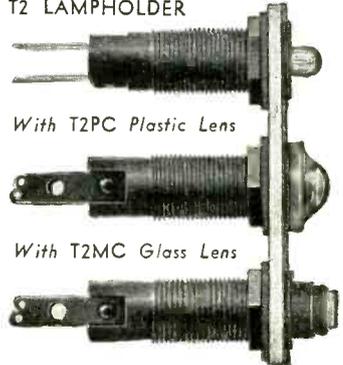


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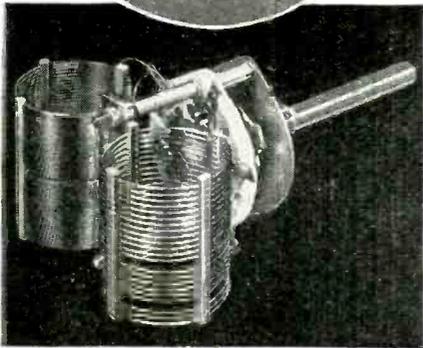
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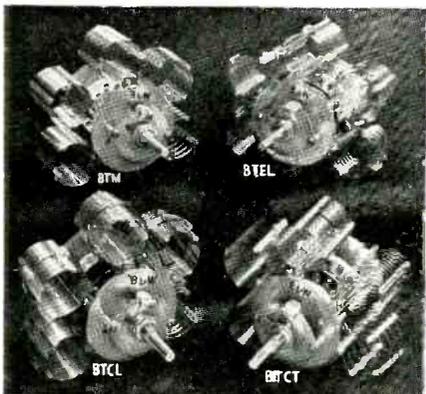
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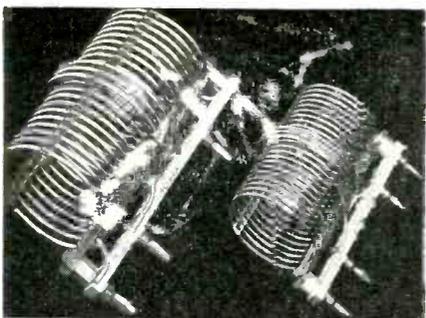
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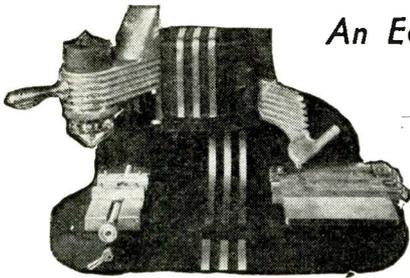
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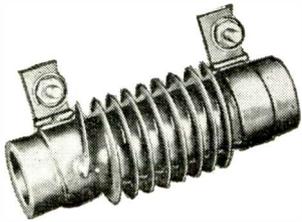
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If you want a resistor—

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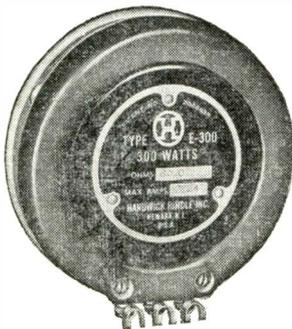
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If you want a rheostat with ample overload capacity, with no organic parts to burn or char, compact and reliable—

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Straight cut for application to 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 A.S.T.M. Specifications with ample safety factor.

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For use where greater mechanical protection is required. High strength fabrics coated with same high grade varnishes as VC.

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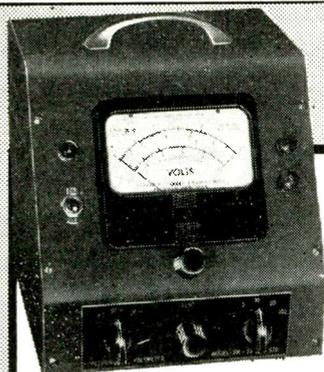
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ACCURACY: 2 percent of full scale on all ranges, on sinusoidal voltages.
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ACCURACY: 5 per cent of full scale on all ranges, on sinusoidal voltages.
FREQUENCY RANGE: 500 kilocycles to 500 megacycles.
INPUT IMPEDANCE: 0.5 to 1 micromicrofarad at a Q of about 200.
POWER SUPPLY: 115 volts 60 cycles at 30 watts.
TUBES: One 6AL5 in probe, two matched 6J5GT and one 6X5GT rectifier.
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WEIGHT: 8 lbs.
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PRICE: \$155.00 net, F.O.B. Flushing, N. Y.

High Voltage Electronic Voltmeter Model 31
RANGE: 10 to 10,000 volts r-f in five ranges (100, 500, 1000, 3000 and 10,000 volts full scale).
ACCURACY: 5 percent of full scale on all ranges, on sinusoidal voltages.
FREQUENCY RANGE: 100 kilocycles to 100 megacycles.
INPUT IMPEDANCE: Approximately 1 micromicrofarad at a Q of over 500.
POWER SUPPLY: 115 volts 60 cycles at 30 watts.
TUBES: One 6AL5 in probe, two matched 6J5GT and one 6X5GT rectifier.
DIMENSIONS: 5½x9½x9½.
WEIGHT: 8 lbs.
PRICE: \$99.50 net, F.O.B. Flushing, N. Y.

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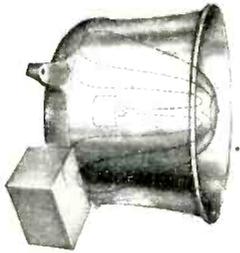
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RADIAL HORN SPEAKER; a 3 1/2' re-entrant type horn. Projects sound over 360° area. Storm-proof. Made of RACON Acoustic Material to prevent resonant effects.



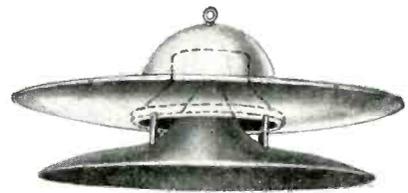
AEROPLANE HORNS; super-powerful and efficient P. A. horns for extreme range projection. For 9-unit, 4-unit and 2-unit operation available.



RE-ENTRANT TRUMPET. Available in 2 1/2 - 3 1/2 - 4 1/2 - 6 ft. sizes, compact. Delivers highly concentrated sound with greater efficiency over long distances.



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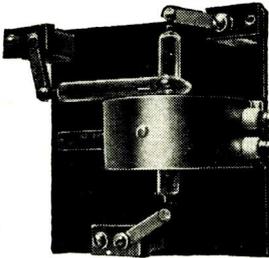
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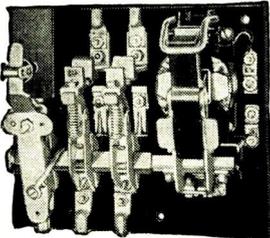
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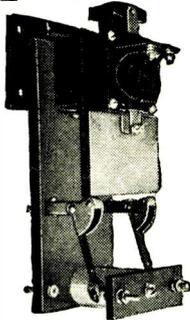
CONTACTOR TIMERS...



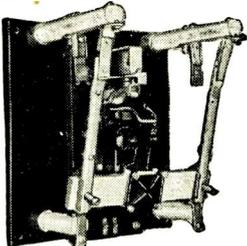
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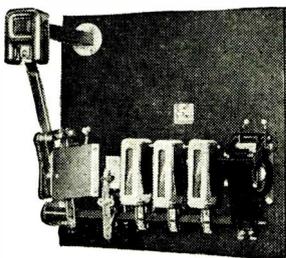


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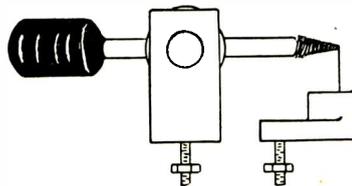
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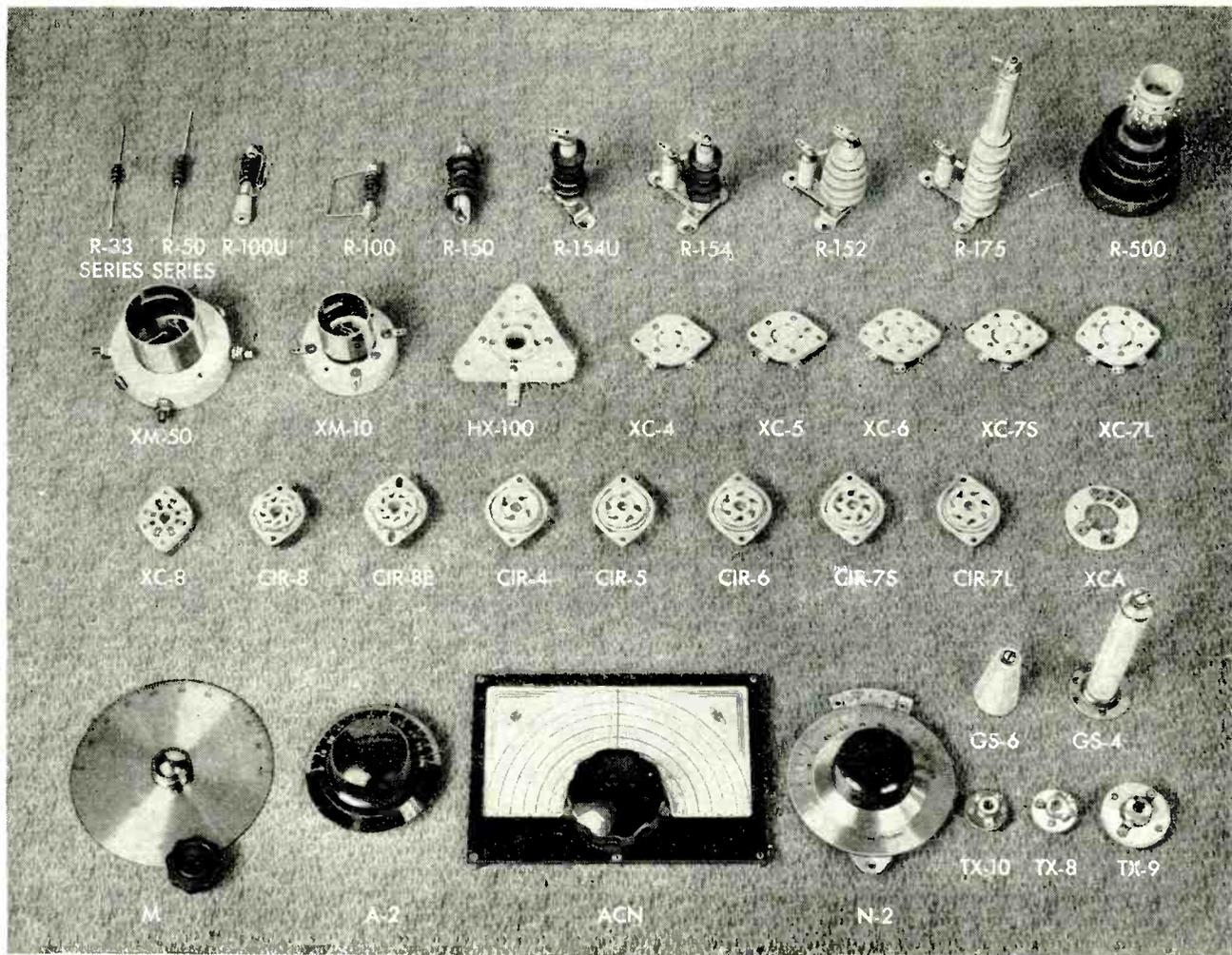


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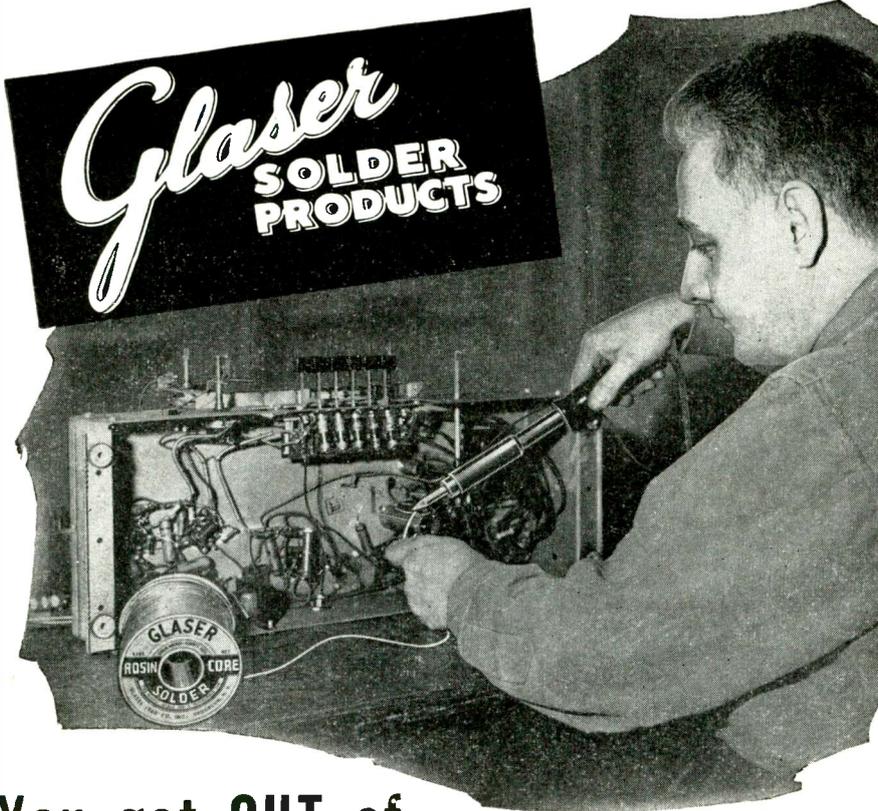
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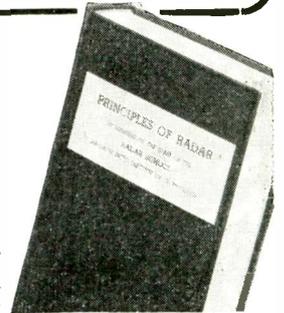
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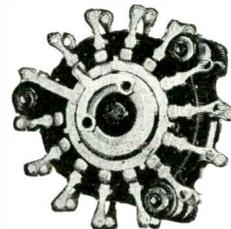
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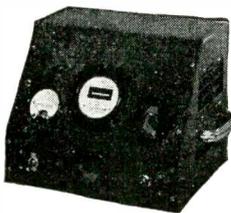
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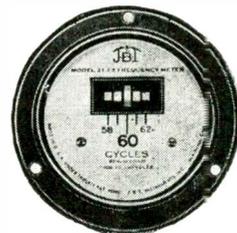
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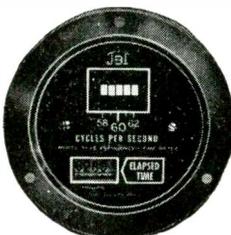
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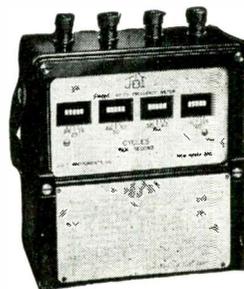
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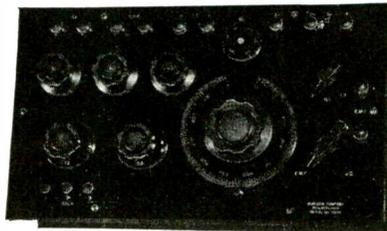


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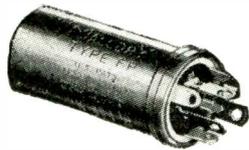
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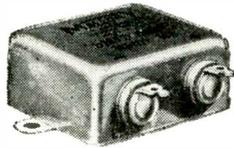
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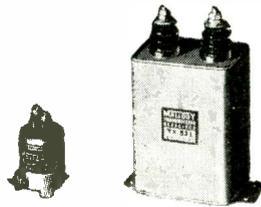
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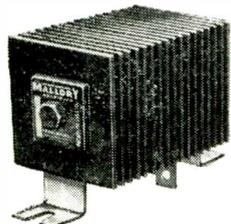


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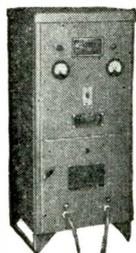
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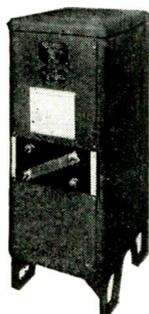
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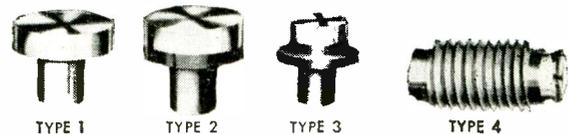
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TYPE 4



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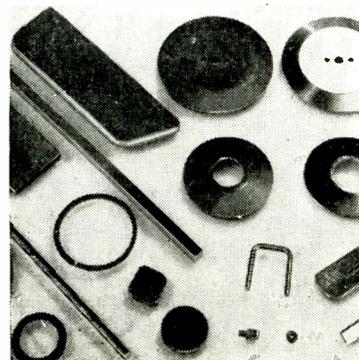
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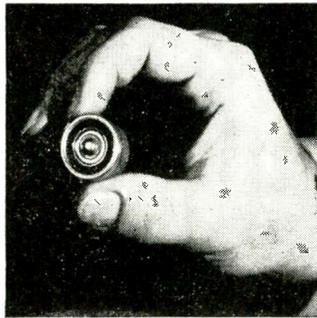
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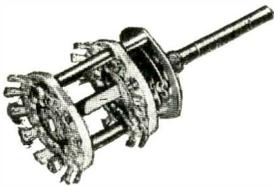
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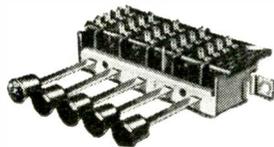
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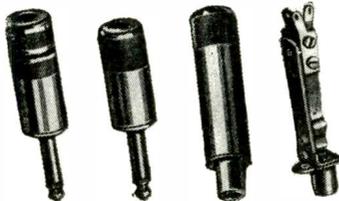
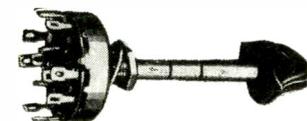
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Three sizes—long frame, junior, and midget types with 13 different circuit combinations. Catalog M-773.



PUSH BUTTON SWITCHES

Locking and momentary types in eight circuit combinations. Silver contacts, sturdily constructed. Multiple styles also available. Catalog M-773.

All Standard Mallory Switches, Plugs and Jacks are available from Mallory Distributors

MALLORY VIBRATORS



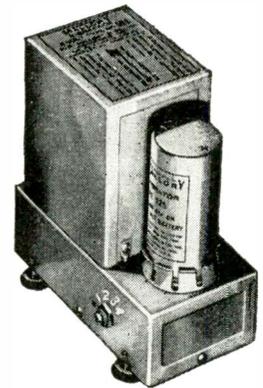
Mallory precision vibrators bear undisputed leadership in the radio and electronic fields. Wherever high voltage is required from a low voltage DC source Mallory vibrators assure dependable and efficient electric power conversion. Replacement types for all automobile radios. Catalog M-773.

VIBRAPACK*

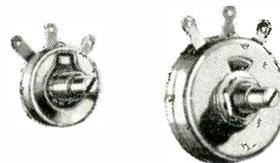
(Vibrator Power Supply)

The Mallory Vibrapak is a dependable source of high voltage when—and where—commercial AC power is not available. Designed to operate radio receivers, transmitters, direction finders, public address systems, and other electronic apparatus on automobiles, boats, and aircraft. Especially suited to police and military applications. Catalog E-555-D.

*Reg. U. S. Pat. Off.



Industrial and Equipment Type Potentiometers and Rheostats

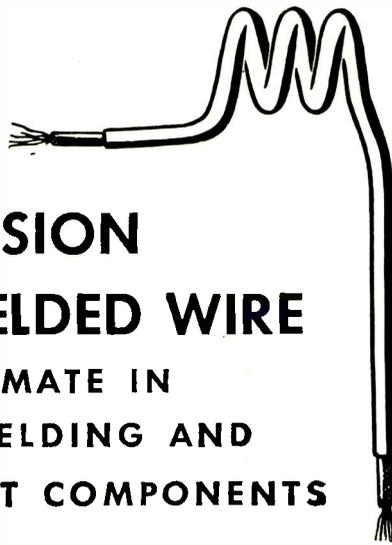
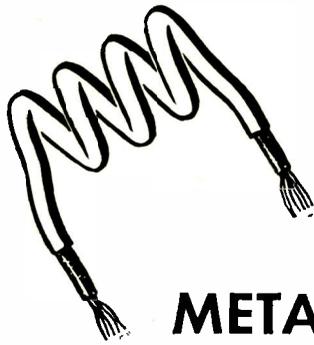


Mallory wire-wound and carbon variable resistors are particularly suited for use in light dimming applications, small motor controls, temperature controls, and many other types of industrial electronic equipment. Rated capacities in wire-wound types from 2 to 7 watts, resistances from 1 to 150,000 ohms. Types available with various tapers, taps, and AC switches, can be furnished also in tandem up to 6 units. Carbon types available from .05 to 1 watt and from 5,000 to 15,000,000 ohms and with taps, various tapers and AC switches. Available in single, dual and quadruple construction.

Fixed and Adjustable POWER RESISTORS

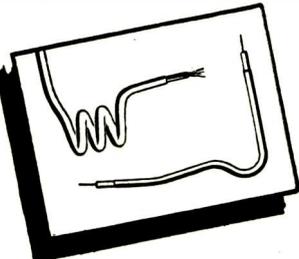
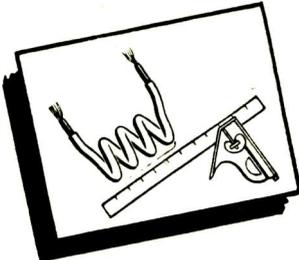
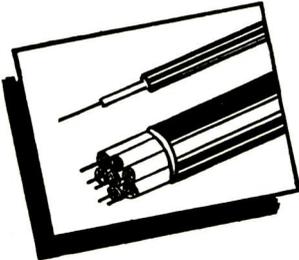
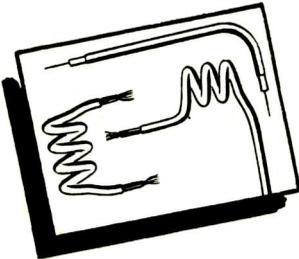
Mallory precision power resistors are designed to the highest quality standards, providing maximum efficiency and long life in operation with excellent temperature and humidity characteristics. Available in rated capacities from 10 to 200 watts, resistances from 1 to 100,000 ohms. Supplied with mounting brackets—small sizes with terminal leads for ease in installation.





**PRECISION
METAL SHIELDED WIRE**
THE ULTIMATE IN
PERFECT SHIELDING AND
COAXIAL CIRCUIT COMPONENTS

***Better because it is Shielded with
Seamless Metal Tubing***



QUALITY PERFORMANCE

Precision metal shielded wire is especially suited for closely coupled air core transformers, shielded grid, filament, and antenna leads, and wherever low-loss transmission is required.

VARIETY

A single inner conductor or number of conductors can be shielded with seamless copper, brass, aluminum, or nickel tubing, plated if desired, in random or cut lengths, or formed to customers' specifications. Outside diameters range from 0.018" to 0.375", with any desired wall thickness.

STABILITY

Formed parts are self-supporting. This simplifies assembly and enhances appearance. Rapid changes in barometric pressure, temperature, and humidity do not cause injurious moisture condensation. Dirt is excluded. Since tube is seamless and dielectric is continuous, conductor and shield remain coaxial even when formed into coils or other intricate components.

EASY TO HANDLE

Tubing is easily stripped and formed right on the job, or can be furnished cut to exact length, stripped and formed, ready for instant application.

PRECISION METAL SHIELDED WIRE offers many advantages. It is an absolute method of shielding insulated wire or wires with seamless aluminum, copper, brass, or nickel tubing to provide the most perfect shielding yet devised against electrical interference, noise, moisture, or mechanical damage. As a coaxial line, it provides low loss over a range of frequencies and uniform capacity. Unlimited combinations of desirable electrical characteristics are available to meet your most exacting requirements.

We will be glad to cooperate on engineering problems. Write for further information.

PRECISION TUBE COMPANY

3826 Terrace Street, Philadelphia 28, Pa.

**CONSULTING
&
MANUFACTURING
ENGINEERS**

Industrial
Electronic
Controls and
Communication
Equipment

Rhein

ENGINEERING

120 West North Street
Parkside Industries Building
Springfield, Ohio

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**BUYERS'
GUIDE**

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N. Y. 18, will be taken
care of promptly.

Federal Telephone and Radio Corporation



NEWARK 1, NEW JERSEY

In Canada—Federal Telephone and Radio Corporation, Ltd., Montreal
Export Distributor—International Standard Electric Corporation, 67 Broad St., N. Y.



FEDERAL BROADCAST EQUIPMENT "IN A PACKAGE"

... FM and AM ... Complete from Microphone to Antenna

Federal can provide your new station with the finest transmission equipment available—complete in every detail, from microphone to antenna. This outstanding "one-source" service means completely matched components for the entire system—all precision engineered, all of highest quality, all designed to work together as

a single, perfected and coordinated broadcast system. Federal's responsibility does not rest here. It also provides you with a service that includes factory-trained engineers to supervise installation, tune the equipment and instruct in its operation and maintenance. Federal has the reputation for seeing it through.

FM BROADCAST TRANSMITTERS . . . 1-3-10-20-50 KW with the "FREQUEMATIC" Modulator

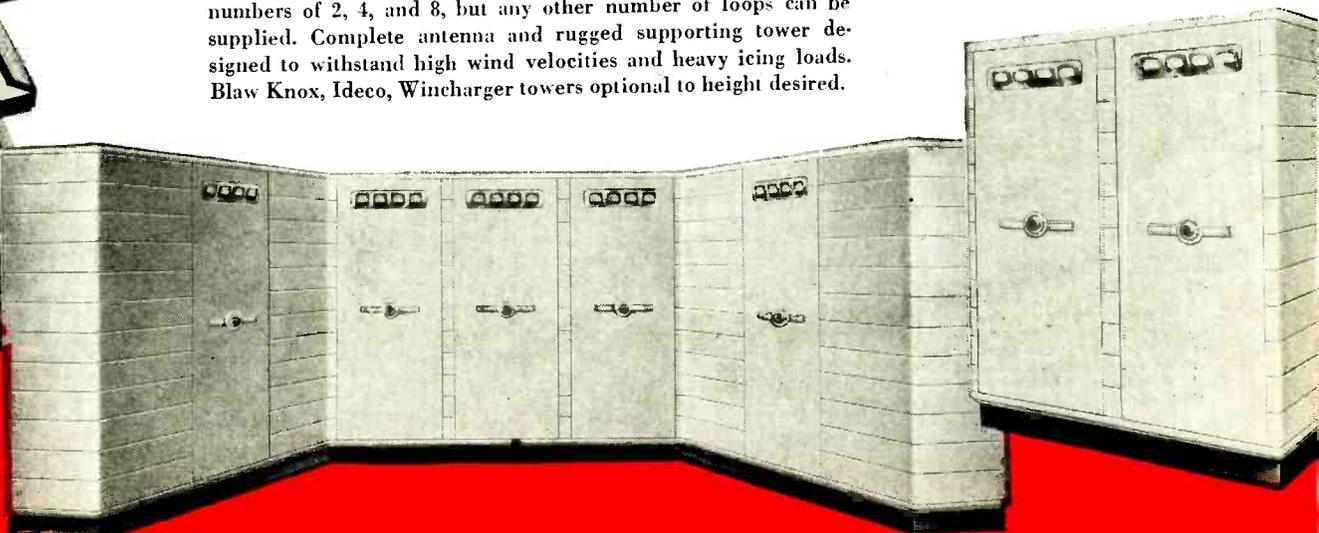
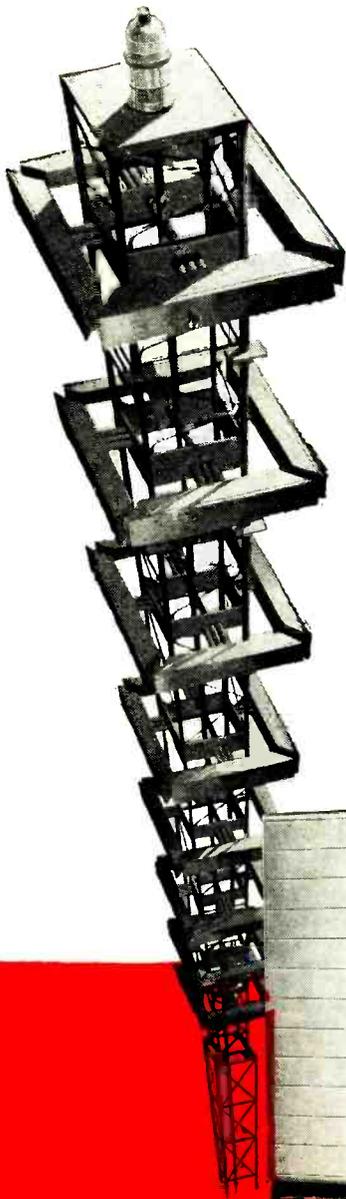
The new "FREQUEMATIC" modulator — an exclusive feature of Federal's complete line of FM transmitters — affords outstanding fidelity and carrier stability. It exceeds the exacting requirements of the FCC Standards of Good Engineering Practice on every technical point.

- Maintains center-frequency stability within .001%
- Noise Level (FM) 70db below ± 75 KC swing.
- Linear modulation of all signals between 50 and 15,000 cycles
- Uses simple electronic circuits with standard receiver tubes
- Extreme ease of initial alignment and minimum maintenance.

* Trademark

FM 8 - ELEMENT SQUARE - LOOP ANTENNA with Nominal Power Gain of 9!

Antenna is built for use over entire FM range. A single adjustment per loop tunes to any frequency from 88 to 108 megacycles. It provides effective radiated power outputs of 90KW, 180KW and 450KW from 10KW, 20KW and 50KW transmitters respectively. Coaxially-fed loops radiate power in every direction of the horizontal plane, with minimum reflection loss in the main beam. Loops are available in standard numbers of 2, 4, and 8, but any other number of loops can be supplied. Complete antenna and rugged supporting tower designed to withstand high wind velocities and heavy icing loads. Blaw Knox, Ideco, Wincharger towers optional to height desired.

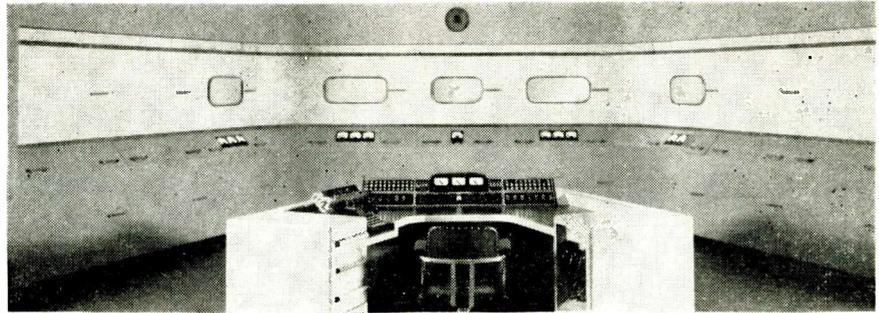




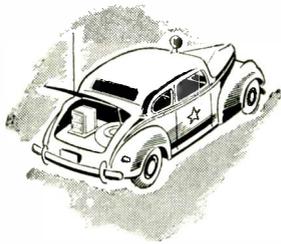
AM

STANDARD BROADCAST TRANSMITTERS 5-10-50 KW

Federal's vast engineering and manufacturing facilities make available to you, in a complete "package", standard AM broadcast station equipment . . . from microphone to antenna . . . with 5, 10 or 50 KW transmitters.



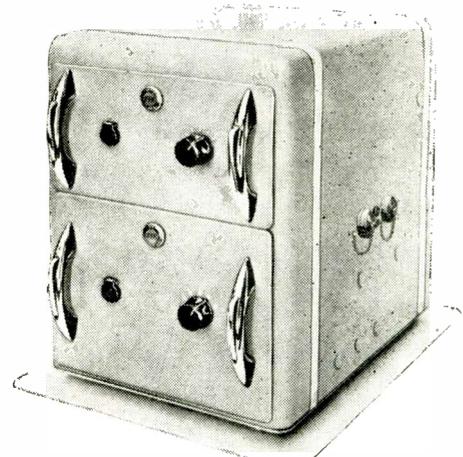
Federal's pre-war model 50-KW Transmitter Type 162, installed at WABC. Current type installations built to your order.



FEDERAL'S 2-WAY F M RADIO-TELEPHONE SYSTEM with

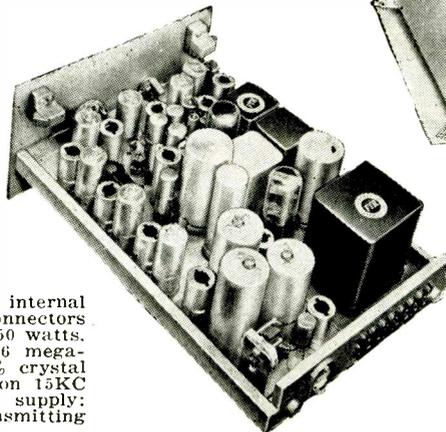
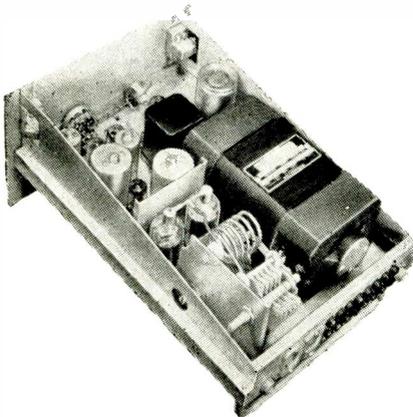
"Selecto-Call"

Here's mobile equipment that works like a private telephone. The receiver unit remains silent until its "number" is called, no matter how many radio transmitters may be operating in the same area, even on the same frequency. With "Selecto-Call", it's possible to talk to any one car, or to all of them, at the flick of a switch. Employing a new type of squelch circuit, it eliminates responses to unwanted signals and interferences. Available in vertical or horizontal housings.

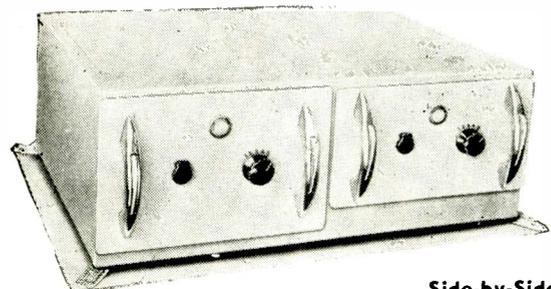


Stacked Model

- **SELECTO-CALL SYSTEM**—receiver output muted until called by associated station
- **LOWEST CURRENT DRAIN**—receiver standby 4.8 amperes; transmitter standby 1.6 amperes
- **SMALLEST SIZE**—housing approximately 9 $\frac{3}{4}$ " wide; 11 $\frac{3}{4}$ " high, 13 $\frac{1}{2}$ " long
- **EASY INSTALLATION AND SERVICING**—both transmitter and receiver may be removed and standby units "plugged in" in less than one minute
- **FEWEST TUBES**—only five types assuring economy and low maintenance
- **HIGH SENSITIVITY**—0.3 microvolt operates the "Selecto-Call" System



Above: **TRANSMITTER CHASSIS**—all internal and external wiring brought to plug-in connectors at the rear. Power output: 25 watts and 50 watts. Frequency range: 30-44 megacycles; 72-76 megacycles; 152-162 megacycles—tolerance .01% crystal controlled. Frequency modulation: deviation 15KC each side of carrier frequency. Power supply: standby 1.6 amperes at 6 volts DC—transmitting 30 amperes at 6 volts.



Side-by-Side Model

Left: **RECEIVER CHASSIS**—with Selecto-Call relay mounted in tubular housing. Audio output: 2 watts with either AC or DC power supply. Frequency range: 30-44 megacycles, 72-76 megacycles, 152-162 megacycles. Sensitivity: 0.3 microvolt signal operates Selecto-Call and substantially saturates limiter tubes. Power supply: non-synchronous vibrator and rectifier. Low standby current.

FEDERAL TRANSMITTING, RECTIFIER and INDUSTRIAL TUBES

... five typical examples of advanced design

Tube research, design and building has been going on for 37 years at Federal. In every one of the wide variety of tubes manufactured—UHF and FM transmitting, industrial, rectifying—you can be sure of these results: long tube life and hard-to-beat electrical performance.



6C22

UHF Transmitting Tube 6C22

Maximum Ratings for Frequency of 600 Mc	
DC Plate Voltage	2500 volts
DC Plate Current	0.75 amp.
DC Grid Current	0.75 amp.
Plate Input	1875 watts
Plate Dissipation	1000 watt.
Filament Voltage	6.5 volts
Filament Current	18.5 amperes
Overall Height	4 1/4 inches
Maximum diameter	2 1/4 inches
Type of Cooling	Water

Maximum overall Height	4 1/4 inches
Maximum overall Diameter	2 1/4 inches
Type of Cooling	Forced air

Mercury Vapor Tube F-857-B

Filament voltage	5 volts
Filament current	30 amps.
Maximum Peak Current	40 amps.
Maximum Peak Inverse Voltage*	22,000 volts
* For plate potentials in excess of 10,000 V, peak inverse, temperature-regulated forced air cooling must be employed.	

FM Transmitting Tube 621

Maximum Output up to 150 Mc	
Filament voltage	16.0 volts
Filament current	28.5 amps.
Maximum plate dissipation	3000 watts
Amplification factor	21
Mutual conductance	20,000 Umhos
Maximum overall height	8 inches
Maximum overall diameter	3 1/2 inches
Type of Cooling	Forced-air

Industrial Tube 7C25

Maximum Ratings for Maximum Frequency of 50 Mc	
DC Plate Voltage	4500 volts
DC Plate Current	1.25 amp.
Plate Dissipation	2500 watts
Filament Voltage	11.0 volts
Filament Current	27.5 amps.
Overall Height	App. 7 inches
Maximum Diameter	3 1/2 inches
Supplied with	6" flexible copper leads, 2 on each terminal.
Type of Cooling	Forced-air

FM Transmitting Tube 7C26

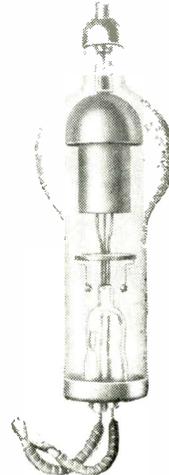
Maximum Output up to 150 Mc	
Filament voltage	109.0 volts
Filament current	29.0 amps.
Maximum plate dissipation	1000 watts
Mutual conductance	20,000 Umhos
Amplification factor	17



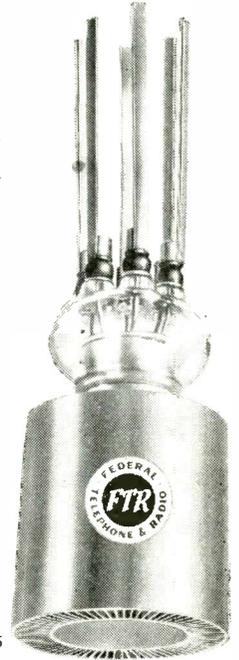
621



7C26



F-857-B



7C25



* HIGH FREQUENCY CABLES and TRANSMISSION LINES

... the greatest variety from the largest producer of HF cables

Federal's "Intelin" cables are available in coaxial and other high frequency types in a variety of sizes and electrical characteristics that can be depended upon for complete uniformity. This is the result of extensive research in the basic materials used, and constant control tests that insure highest manufacturing precision. A complete table of data is yours for the asking.

CABLE TYPES

COAXIAL cables with single inner conductor, dielectric material, one or two copper wire braids, a synthetic resin protective jacket, and in some cases, a protective armor of metal braid.

COAXIAL AIR SPACED cables designed for low capacitance. Construction is similar to that of solid dielectric types, except that air is made a portion of the dielectric.

DUAL TWINAX cables similar in design to the solid dielectric types, with two accurately spaced inner conductors used.

DUAL COAXIAL cables with two small coaxial cables, without jacket or armor, placed side by side or twisted together, and optionally covered with a third braid. A jacket with or with-

out a protective armor, is added overall.

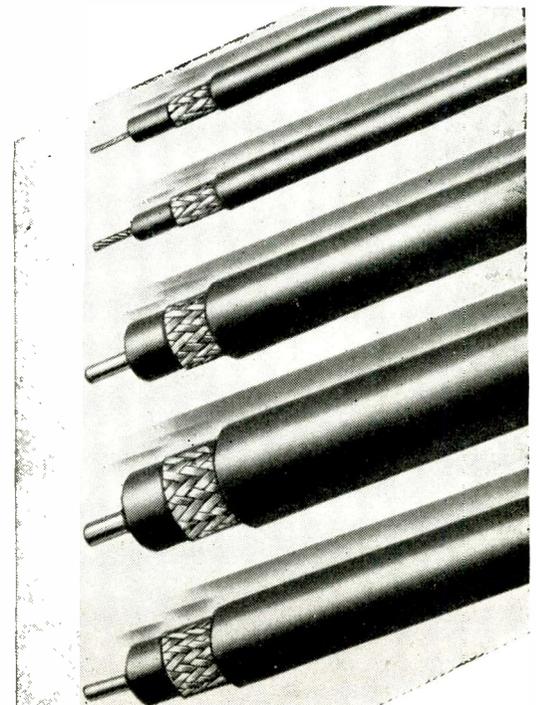
SPIRAL DELAY, HIGH IMPEDANCE LINES are constructed with an inner conductor spiraled around center dielectric core and covered with dielectric, braid and jacket.

ANTENNA LEAD-IN WIRE with two conductors accurately spaced, and extruded in dielectric of elliptical cross section, having no braid, jacket or armor. For FM and Television receiving equipment.

OTHER WIRE PRODUCTS

- Type "T" and "TW" Building Wire
- Radio Hook-up and Appliance Wire
- Inside Telephone Wire
- Distributing Frame Wire
- Telephone Drop Wire
- Radio Antenna-Loop Wire

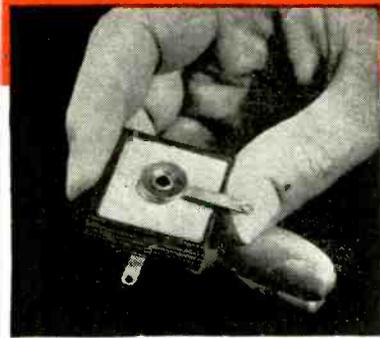
* Reg. U. S. Pat. Off.



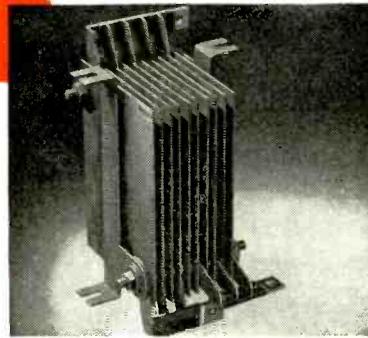
FEDERAL SELENIUM RECTIFIERS

for dependable DC power
... Milliwatts to Kilowatts

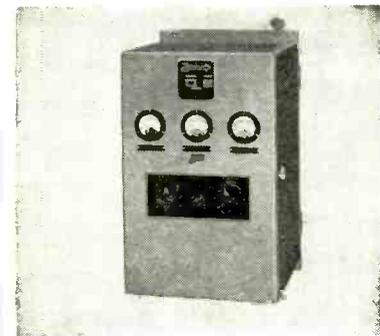
Efficient, low cost power conversion, practically unlimited life, quiet operation, and the exclusive "Center Contact" are all features of Federal Selenium Rectifiers . . . the basic element in all Federal rectifying equipment. You get their benefits whether you specify unit stacks or complete power supplies, battery chargers or cathodic protection equipment.



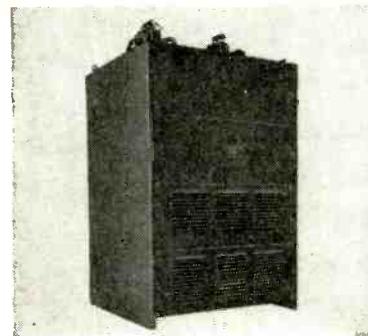
MINIATURE STACK 403D2625—for AC-DC-Battery radio receivers, can replace 29 different types of rectifier tubes . . . and it's smaller, costs less, lasts longer. Provides instant starting and reduces heating. Size: $1\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{11}{16}$ ". 380 volts max., 100 ma d-c.



NEW TYPE HEAVY-DUTY STACK, with #128 plates, two current collection points per plate double Center-Contact construction, and 26-volts RMS reverse voltage per plate — for use wherever heavy loads are required. Unusually rigid and resistant to shock and vibration.



BATTERY CHARGERS for every application, from telephone batteries to industrial truck batteries. Manual or fully automatic and noiseless in operation, with or without filtered circuits and self-contained overload protection. Provide safe, dependable charging of all types of storage batteries.



POWER SUPPLIES—from 1 to 50,000 amperes—from small, portable general-purpose units to large forced-air-cooled electroplating supplies. Available with filtered circuits and automatic or manual voltage regulation. Rugged dependability and practically maintenance-free operation assured by the basic FTR Selenium Rectifier stacks.

"FIRST IN THE FIELD—STANDARD FOR INDUSTRY"

NUMEROUS OTHER FEDERAL PRODUCTS

. . . To Serve In Communications and Electronics

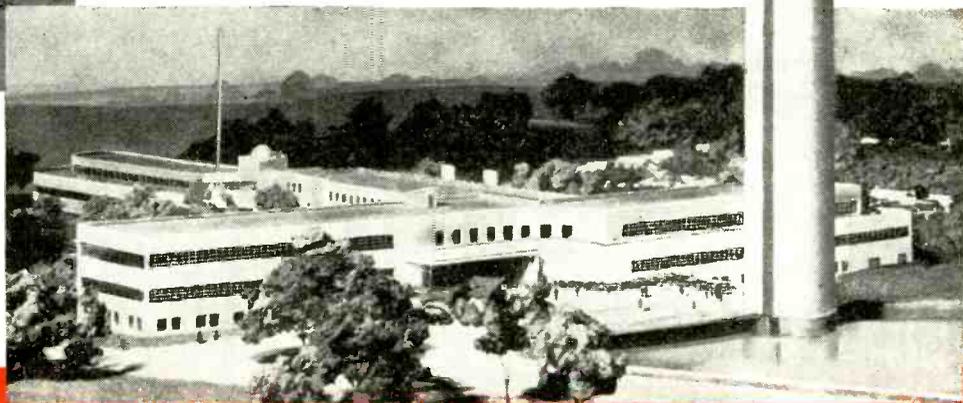
Just a fraction of what Federal research and manufacturing capacity has to offer to every field is listed here. In components or complete equipment, quality is the keynote—proved by outstanding performance the world over.

Aerial Navigation and Instrument Landing Equipment
Crystal Oscillator Plates
Marine Radio Equipment
Megatherm Electronic Heating Equipment
Telephone Sets
Telephone and Telegraph Carriers
Telephone Switchboards and Switching Systems

Repeaters and Ringers
Power Equipment
Rectifiers
Transformers
Radio Direction Finding Equipment
Radio Point-to-point Communications Equipment
Television Transmitters
Field Intensity Meters

(Left) The Federal Telephone and Radio Corporation's new factory at Clifton, N. J. Additional buildings now under construction.

(Below) Federal's new research laboratory—now under construction at Nutley, N. J.—headquarters for tomorrow's advances in electronics and communications.



FTR TECHNICAL BULLETINS

. . . and complete descriptive leaflets are available on Federal products. We'll be glad to answer any of your questions on any piece of Federal equipment with full details and literature.

Federal Telephone and Radio Corporation

NEWARK 1, NEW JERSEY

Canada, Federal Telephone and Radio Corporation, Ltd., Montreal

Export Distributor—International Standard Electric Corporation, 67 Broad Street, N. Y.



The President said:

"Probably be simple to an experienced man"

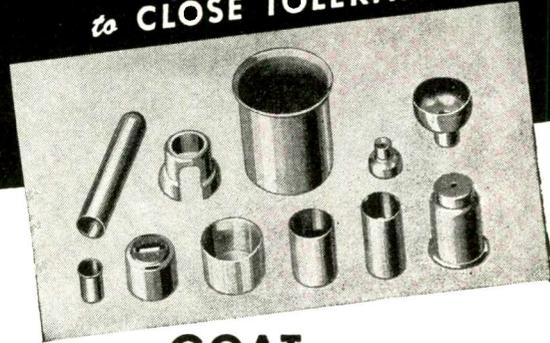
He was commenting on solving a problem—one of design—just another of many that had developed over the past year.

The comment re "an experienced man" inspired the thought: Why not get one? With the answer so obvious the question "How?" was answered by inserting a Position Vacant advertisement in the Classified columns (Searchlight Section) of **ELECTRONICS**. That was the natural and logical thing to do because the problems were associated with electronic design and readers of **ELECTRONICS** include just the type of "experienced man" wanted.

Did the advertisement accomplish the results desired? Here's what the advertiser says about it: "Discontinue this advertisement as the position has been filled. We were very pleased with the type of man we got."

When you have similar or other problems of personnel, production, management or anything associated with your operations in the field of electronics—bring them to other readers' attention through the Classified columns (Searchlight Section) of **ELECTRONICS**.

NEED SMALL BULBS and
DEEP DRAWN PARTS
to CLOSE TOLERANCES?



GOAT PRECISE-FORMED DEEP-DRAWN METAL PARTS

Improved Quality at Lower Cost!

Deep drawing, sizing and coining, in conjunction with quality control techniques devised by the Goat Company, make possible the economical production of small parts to tolerances unattainable a few years ago. The new method makes expensive annealing operations unnecessary. The use of these economically produced, precision parts reduces both material costs and assembly costs.



Send us your design prints for
engineering recommendations

GOAT METAL STAMPINGS, INC.
Affiliate of The Fred Goat Co., Inc.
314 DEAN STREET BROOKLYN, N. Y.

LET US
REDESIGN
FOR
STAMPING

WHAT MAKES A MAILING CLICK?

Advertising men agree—the list is more than half the story.

McGraw-Hill Mailing Lists, used by leading manufacturers and industrial service organizations, direct your advertising and sales promotional efforts to key purchasing power. They offer coverage of major markets, including new personnel and plants. Selections may be made to fit your own special requirements.

New names are added to every McGraw-Hill list daily. List revisions are made on a twenty-four hour basis. And all names are guaranteed accurate within two per cent.

In view of present day difficulties in maintaining your own mailing lists, this efficient personalized service is particularly important in securing the comprehensive market coverage you need and want. Ask for more detailed information today. You'll probably be surprised at the low over-all cost and the tested effectiveness of these hand-picked selections.

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Capacitor

Quality...

To Solar, "CQ" means *Capacitor Quality* because Solar lives up to its by-word, "Quality Above All."

That's the whole Solar story in one sentence.

We could show pictures of departments in our up-to-the-minute plants, depicting the modern machines and skilled workers who build outstanding quality into each Solar capacitor that comes off the lines. Or photos of our laboratories where tests insure that every Solar capacitor will live up to Solar's "Quality Above All" standards.

We could quote unsolicited letters of praise from hundreds of manufacturers who've used Solar "Quality Above All" capacitors . . . letters which verify Solar's claim to the most dependable line of capacitors on the market!

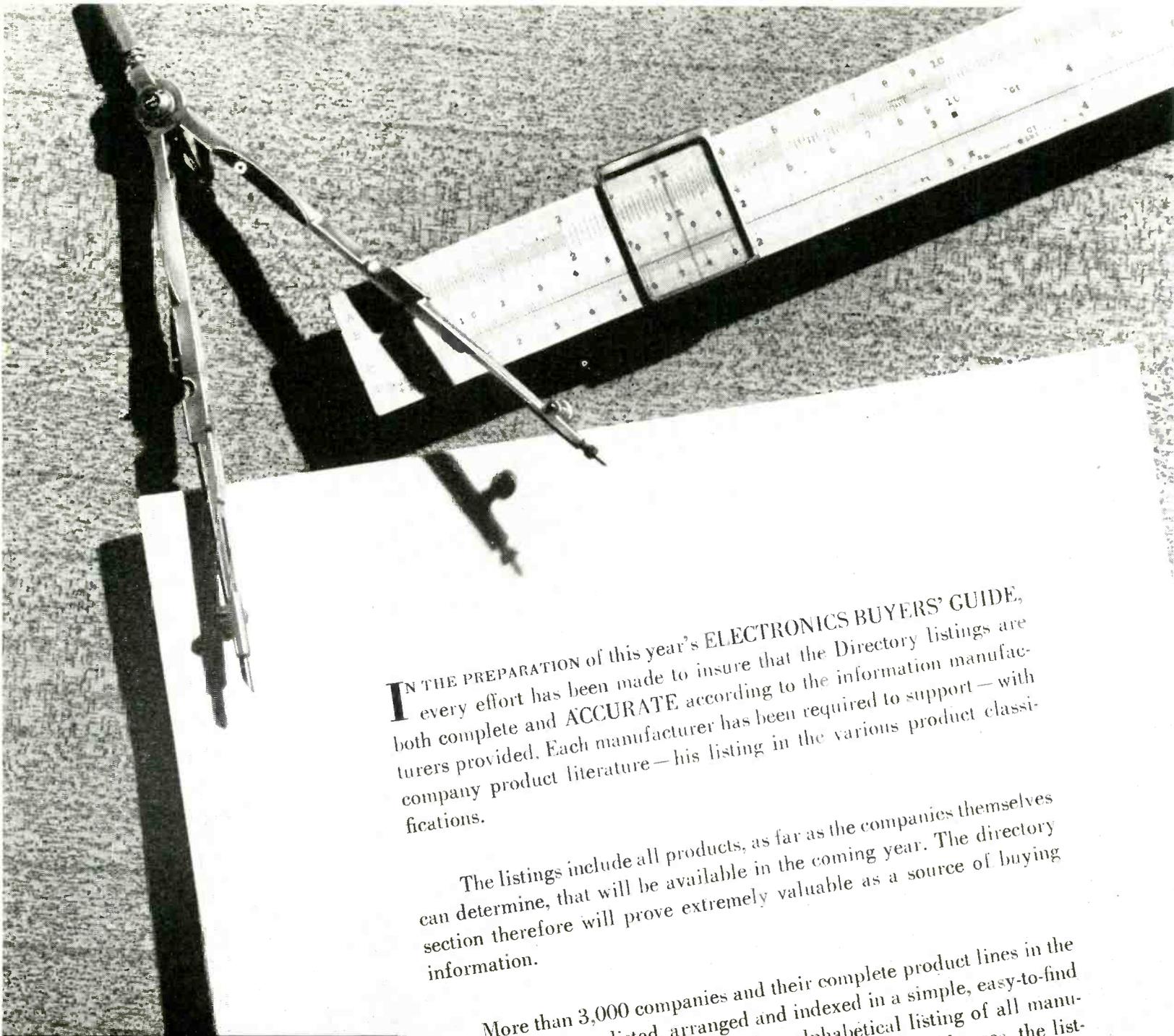
We could say all this, but Solar capacitor *performance* speaks for itself—proves "Quality Above All" is more than just a phrase.

SOLAR MANUFACTURING CORPORATION
285 Madison Avenue • New York 17, New York



ELECTROLYTIC, PAPER AND MICA CAPACITORS FOR THE ELECTRONIC INDUSTRY

Ⓢ 107511



THE 1946-1947 electronics BUYERS' GUIDE

IN THE PREPARATION of this year's **ELECTRONICS BUYERS' GUIDE**, every effort has been made to insure that the Directory listings are both complete and **ACCURATE** according to the information manufacturers provided. Each manufacturer has been required to support — with company product literature — his listing in the various product classifications.

The listings include all products, as far as the companies themselves can determine, that will be available in the coming year. The directory section therefore will prove extremely valuable as a source of buying information.

More than 3,000 companies and their complete product lines in the electronic field are listed, arranged and indexed in a simple, easy-to-find manner. This year, besides a complete alphabetical listing of all manufacturers of electronic and allied products with their addresses, the listings have been broken into five separate and independent sections: Communications, Industrial (including medical), Components, Test Instruments, and Allied Products.

Each of these sections presents a complete alphabetical product listing with manufacturers' names and addresses listed alphabetically under the correct product heading. Where the name of a manufacturer who is also an advertiser in the **BUYERS' GUIDE** appears in the listings, the page number of his advertisement is indicated. This will make it possible to obtain, quickly and easily, complete information on the product.

1946-1947

ELECTRONICS BUYERS' GUIDE

PRODUCT INDEX

Use this index for reference to products in any section of the Buyers' Guide. Classification number indicates heading under which the products, manufacturers' names and addresses are located. Product classifications will be found in numerical order as an easy method to find desired listings.

PRODUCT	CLASSIFICATION	PRODUCT	CLASSIFICATION	PRODUCT	CLASSIFICATION
A		Analyzers, Audio Amplifier	273	Antennae, Television	450
Abrasives	1005	Analyzers, Capacitor	274	Antennae, U.H.F. & V.H.F.	451
Accelerometers	196	Analyzers, Circuit	275	Antimony	1120
Accessories and Associated Equipment	175	Analyzers, Color	115	Arrestors, Lightning	452
Acetylene Soldering Tools	1088	Analyzers, Gas	112	Arsenic	1121
Acrylics	1173	Analyzers, Harmonic	276	Asbestos Ebony	1075
Adaptors	403	Analyzers, Hearing Aid	277	Asbestos Insulated Wire	984
Adaptors, Panoramic	1	Analyzers, Intermodulation	278	Asbestos Insulation	1074
Adhesives	1006	Analyzers, Microwave Radar	279	Asphalts	1060
A. F. Signal Generators	308	Analyzers, Noise	280	Assemblies, Cable	481
Air Cleaners	1008	Analyzers, Sound	281	Attenuation Meters	327
Air Precision Capacitors	503	Analyzers, Spectrum	282	Attenuators	546
Airborne Radar Spinner Antennae	427	Analyzers, Surface	113	Audio Amplifier Analyzers	273
Aircraft Antennae	428	Analyzers, Vibration	114	Audio Forked Controlled Oscillators	368
Aircraft Communication Systems	9	Analyzers, Wave	283	Audio Frequency Amplifiers	2
Aircraft Landing, Radar	33	Anchors, Screw or Bolt	1009	Audio Frequency Oscillators	743
Aircraft Microphones	717	Annunciation Wire	982	Audio Input Systems	3
Aircraft Receivers	56	Anodes, Carbon	923	Audio & Power Chokes	518
Aircraft Transmitters	93	Anodes, Gold	922	Audio & Power Transformers	901
Aircraft Type Relays	778	Anodes, Graphite	921	Audiometers	264
Airport Traffic Control Communication Systems	10	Anodes, Metallized Graphite	925	Auto Antennae	430
Alarm Systems	117	Anodes, Metal	920	Auto Radio Ignition Suppressors	858
Alignment Tools	1091	Anodes, Silver	924	Auto Radio Remote Controls	548
All Wave Receiving Antennae	429	Antenna Coils	523	Auto Transformers	902
Allyls	1167	Antenna Copper Splicing Sleeves	523	Automatic Cycle Timers	234
Alnico Metals	1119	Antenna Drives	593	Automatic Interval Timers	235
Altimeters	34	Antenna Fairleads	421	Automatic Mixture Control Indicators	177
Aluminum	1118	Antenna Feed Systems	422	Automatic Radio Alarm Receivers	58
Aluminum Chassis	517	Antenna Filters	598	Automatic Record Changers	513
Aluminum Oxide	1073	Antenna Forms	607	Automatic Reset Timers	236
AM Combination Receivers	39	Antenna Housings	634	Automatic Switches	865
AM Console Receivers	40	Antenna Mounts	734	Automatic Tuning Controls	547
AM Fixed Frequency Receivers	57	Antenna Pedestals, Radar	423	Automobile Radio Housings	635
AM Portable Receivers	41	Antenna Reels	424	Automobile Receivers	60
AM Table Model Receivers	42	Antenna Reflectors	425	Aviation Transceivers	87
AM Vest Pocket Receivers	43	Antenna Tension Springs	852		
AM-FM Combination Receivers	44	Antenna Towers & Supports	1010	B	
AM-FM Communication Receivers	59	Antenna Tuning Units	426	Back-Pack Transceivers	88
AM-FM Console Receivers	45	Antenna Wire	983	Baffles	453
AM-FM Portable Receivers	46	Antennae, Airborne Radar	427	Balances, Electronic	192
AM-FM Table Model Receivers	47	Antennae, Aircraft	428	Ballast Tubes	944
Amateur Receivers	61	Antennae, All Wave Receiving	429	Band Elimination Filters	598
Amateur Transmitters	94	Antennae, Automobile	430	Band Pass Filters	599
Ammeters	326	Antennae, Broadcast	431	Band Switches	878
Amplifiers, Audio	2	Antennae, Dipole	432	Barium Metal	1122
Amplifiers, Mobile	3	Antennae, Dummy Loads	434	Base Pins	926
Amplifiers, Decade	408	Antennae, FM	450	Bases	927
Amplifiers, Facsimile	409	Antennae, Ground Plane	437	Bases, Chassis	455
Amplifiers, Keying	410	Antennae, Intra Video	438	Bases, Relay	457
Amplifiers, Musical Instrument	413	Antennae, Kits	439	Batteries, Dry	458
Amplifiers, Photocell	414	Antennae, Loop	440	Batteries, Hearing Aid	624
Amplifiers, Radio Frequency	415	Antennae, Marine	441	Batteries, Standard Cell	459
Amplifiers, Strain Gauge	416	Antennae, Microwave	442	Batteries, Storage	460
Amplifiers, Television	417	Antennae, Parabolic	443	Batteries, Storage Non-Spill	461
Amplifiers, Ultra-Sonic	418	Antennae, Portable Telescopic	444	Battery Adaptors	403
Amplifiers, Vibration Pickup	419	Antennae, Radar Receiving	445	Battery Charger Tubes	945
Amplifiers, Wide Band	420	Antennae, Radar Transmitting	446	Battery Chargers	1011
		Antennae, Railroad	447		
		Antennae, Rotary Beam	448		
		Antennae, Telescopic	449		

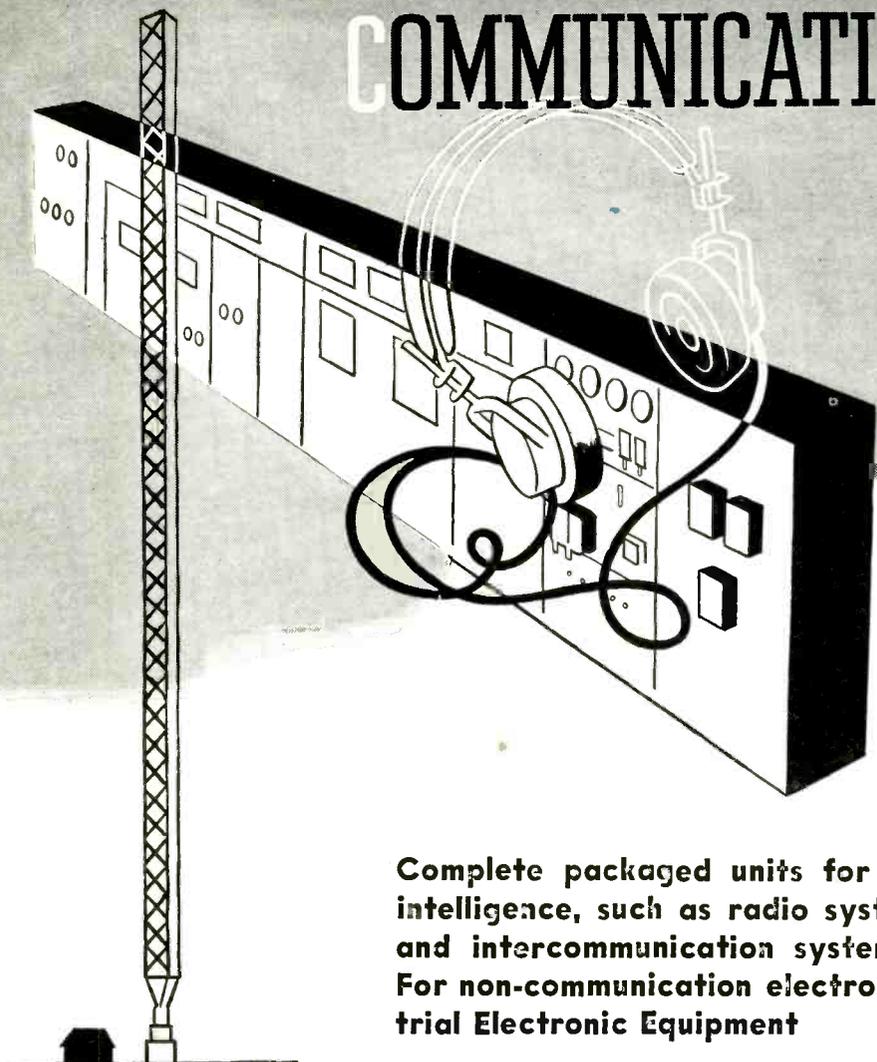
PRODUCT	CLASSIFICATION	PRODUCT	CLASSIFICATION	PRODUCT	CLASSIFICATION
Battery Sockets	843	Capacitors, Plastic Dielectric	502	Coils, Transmitting	532
Battery Testers	386	Capacitors, Precision Air	503	Collector Rings	820
Bead Insulation	643	Capacitors, Receiver Tuning	509	Colloidal Graphite	1055
Bearings, Miniature	462	Capacitors, Silvered Mica	504	Color Television Transmitters	907
Bellows	463	Capacitors, Small High Voltage	505	Colorimeters	115
Belts, Dial Drive	464	Capacitors, Transmitter Tuning	510	Columbium	1129
Bench Test Set-Ups	1013	Capacitors, Trimmer Receiving	506	Combustion Controls	145
Beryllium & Beryllium Alloys	1123	Capacitors, Vacuum	507	Combustion Recorders	222
Binding Post	764	Capacitors, Variable Fluid	508	Communication and Amateur Receivers	61
Blank Recording Discs	1033	Capacity Decade Boxes	298	Communication Apparatus—Vehicular	12
Blocking Oscillator Transformers	903	Capacity Operated Relays	779	Communication Systems, Complete	9
Blocks	465	Caps	929	Comparator Gauges	161
Blowers, Small	1036	Carbon Anodes	923	Comparators	297
Blueprint Machines	1094	Carbon Filling Machines for Microphones	1095	Compasses, Gyro	116
Boards, Resistor	466	Carbon & Graphite Brushes	471	Complete Laminated Cores	564
Bobbins	1014	Carbon Microphones	718	Compressed Gas Capacitors	491
Bolometer Tubes	946	Carbon Packing Rings	819	Condenser Microphones	719
Bolometers	284	Carbon Seals	828	Condensers	490
Bolts	1015	Cardiograph, Electronic	256	Cones, Speaker	537
Bolts, Expansion	1016	Cardiotachometers	251	Connector Inserts	542
Bolts, Eye	1017	Carrier Current Systems	11	Connectors	538
Bolts, Toggle	1018	Cases, Portable Set	512	Connectors, Hearing Aid	626
Booms, Microphone	467	Cathode-Ray Instruments	373	Consoles, Broadcast Studio	5
Boxes	1019	Cathode-Ray Oscillograph Cameras	6	Consoles, Receivers	41, 45, 48
Brackets	468	Cathode-Ray Tube Powders	931	Contact Microphones	720
Brass & Bronze	1124	Cathode-Ray Tube Shields	837	Contactors	545
Brass & Copper Tubing	1209	Cathode-Ray Tube Side Contacts	932	Contacts (Switch Parts)	888
Brazing Compounds	1048	Cathode-Ray Tubes	947	Continuity Testers	390
Brazing & Silver Soldering Flux	1047	Cathode Sleeves and Tubes	930	Control Consoles	5
Breakers, Circuit	470	Cavity Oscillators	744	Control Switches	867
Break-in Relays	789	Cellulose Acetate	1168	Control Tubes	969
Bridges	285	Cellulose Acetate Butyrate	1169	Controls, Attenuation	546
Broadcast Monitors	25	Cellulose Nitrate	1170	Controls, Automatic Tuning	547
Broadcast Station Vertical Radiators	431	Cements	1021	Controls, Generator	549
Broadcast (STL) Transmitters	96	Ceramic Cable Connectors	540	Controls, Industrial	117-153
Broadcast Studio Speech Input Control Equipment	5	Ceramic Insulated Capacitors	490	Controls, Mechanical Switch	550
Broadcast Transmitters	95	Ceramic Insulated Wire	985	Controls, Motor	549
Brushes	471	Ceramic Insulation	1077	Controls, Radio Remote	551
Built-in Wall Type Home Receivers	55	Ceramic Insulators	675	Controls, Sound System	552
Bulbs & Envelopes	928	Ceramic Parts	646	Controls, Torque Unit	553
Burglar Alarms	117	Ceramic Stampings & Punchings	659	Controls, Volume & Tone	554
Bus Bar Systems	473	Ceramic Tube Parts	933	Converters, FM	555
Bus Bars	473	Ceramic Tubing	663	Converters, Freq. Shift	556
Bushings, Hermetically Sealed	475	Cesium Compounds	1126	Converters, Low Frequency	557
Bushings, Non-Metallic	476	Chambers, Test	1022	Converters, Vibrator Type	558
Bushings (Metal Parts)	710	Changers, Auto. Record	513	Copper	1130
		Changers, Frequency	514	Copper Insulated Wire	987
		Chassis	517	Copper Tubing	1209
		Checkers, Crystal Rectifier	290	Copper Wire	986
		Checkers, "QX"	291	Cord Sets	559
		Chemical Controls	118	Cords, Dial	560
		Chemicals, Radio	1023	Cords, Line	561
		Choke Coils	524	Cords, Patch	563
		Choke Forms	608	Cords, Resistance	562
		Chokes, Audio Power	518	Cores, Hipersil	565
		Chokes, Filter	519	Cores, Iron	567
		Chokes, Hearing Aid	625	Cores, Laminated	564
		Chokes, Hermetically Sealed	520	Cores, Powdered Iron	566
		Chokes, R.F. & I.F.	521	Cores, Slug Tuning Units	568
		Chromium	1127	Cortical Stimulators	252
		Chronaximeters	293	Counters	119
		Chronographs, Inertialess	294	Counting Rate Meters (Geiger)	197
		Chronoscopes	295	Counting & Sorting Controls	120
		Circuit Analyzers	275	Couplings, Shaft	569
		Circuit Testers	388	Crackle Finishes	1043
		Clips and Clamps	522	Crystal Analysis Equipment	1030
		Cloths, Speaker Grille	1024	Crystal Cartridges	571
		Coatings	1026	Crystal Comparators	297
		Coaxial Cable	482	Crystal Disc Lapping Machines	1097
		Coaxial Cable Connectors	541	Crystal Finish	1039
		Coaxial Cable Switches	866	Crystal Holders	631
		Coaxial Relays	780	Crystal Mfg. & Finishing Machines	1098
		Code Markers	1029	Crystal Microphones	721
		Coefficient Metals	1128	Crystal Oscillators	745
		Coil Assemblies	525	Crystal Ovens, Temp. Controlled	750
		Coil Dopes	1061	Crystal Rectifier Checkers	290
		Coil Forms	609	Crystal Rectifiers	772
		Coil Shields	838	Crystal Sets	62
		Coil Testers	389	Crystal Sockets	844
		Coil Winding Bobbins	1014	Crystal Testing Equipment	391
		Coil Winding Machines	1096	Crystal Voltmeters	329
		Coils, A.F. Coils & Windings	531	Crystals, Dial	585
		Coils, Antenna	523	Crystals, Frequency Standard	573
		Coils, Assemblies	525	Crystals, Frequency Multipliers	574
		Coils, Choke	524	Crystals, I.F. Filter	572
		Coils, Electronic Heating Inductors	526	Crystals, Quartz	575
		Coils, Magnet	527	Crystals, Quartz Raw	1193
		Coils, Motor & Generator Field	528	Crystals, Receiver Control	577
		Coils, Multiple Wound	529	Crystals, Rochelle Salt	578
		Coils, Pickup	530	Crystals, Supersonic	579
		Coils, Power Coils & Windings	531	Crystals, Tourmaline	580
		Coils, R.F. & I.F.	532	Crystals, Ultrasonic	576
		Coils, Receiving	532	Current Regulators	775
		Coils, Relay & Solenoid	533	Current Transformers	904
		Coils, Speaker	534	Curve Tracers	401
		Coils, Television Focusing	535	Cut Insulation Parts	647
		Coils, Transformer	536	Cutting Heads	1099

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PRODUCT	CLASSIFICATION	PRODUCT	CLASSIFICATION	PRODUCT	CLASSIFICATION
Cutting Needles	736	Electrometer Tubes	948	FM Antenna Iso-Couplers	436
D		Electronic Aircraft Magneto Synchronizers	231	FM Antennae	450
D'Arsonval Relays	781	Electronic Balancing Equipment	1220	FM Combinations	48
Decade Amplifiers	298	Electronic Balancing Machines	192	FM Consoles	49
Decade Boxes, Capacitance	299	Electronic Beverage Inspection Machines	193	FM Converters	555
Decade Boxes, Inductance	299	Electronic Capacitance Meters	333	FM Portables	50
Decade Boxes, Resistance	300	Electronic Computing Mechanisms	194	FM Receivers	65
Decade Switches	868	Electronic Current Relays	783	FM Signal Generators	309
Decade Voltage Supplies	978	Electronic Fuel Indicator Gauges	163	FM Table Models	51
Decibel Meters	330	Electronic Gyro Compasses	116	FM & Television Antenna Brackets	469
Dehydration and Drying Dryers	159	Electronic Heating Inductors	526	FM Transmitters	102
Dehydrators, Automatic	1031	Electronic Inspection Gauges	164	FM Vest Pockets	52
Densitometers	198	Electronic Metal Locators & Detectors	790	FM-AM Consoles	45
Dermohmmeters	253	Electronic Micrometers	207	FM-AM Portables	46
Detectors, Crystal	581	Electronic Microscopes	267	FM-AM Table Models	47
Detectors, Explosive Gas	154	Electronic Office Recorders & Playbacks	75	Foil & Aluminum, Tin & Lead	1132
Detectors, Flaw & Defect	155	Electronic Ozone Measurement & Control Apparatus	124	Food Processing Controls	127
Detectors, Lie	189	Electronic Rotary Stylus Recorders	223	Footcandle Meters	205
Detectors, Mercury Vapor	156	Electronic Self-Balancing Recorders & Indicators	224	Foreign Adaptors	404
Detectors, Null	301	Electronic Speedometers	201	Forks, Tuning	302
Detectors, Vibration	157	Electronic Spring Checking Gauges	165	Forms	607
Detonation Filters	600	Electronic Switches	869	Fractional H.P. Motors	726
Detonation Indicators & Meters	178	Electronic Variable Frequency Generators	303	Frequency Changers	514
Dial Cords & Cables	560	Electronic Voltmeters	334	Frequency Meters	339
Dial Crystals	585	Electronic Wave Generators	261	Frequency Monitors	26
Dial Drive Belts	464	Electronically Regulated Power Supplies	766	Frequency Multipliers	574
Dial Escutcheons	1035	Electrolythysmographs	258	Frequency Recorders	375
Dial Lights and Panel Lights	695	Electro-Shock Therapy Apparatus	259	Frequency Regulators	776
Dial Locks	701	Electrostatic Air Cleaners	1008	Frequency Selective Relays	784
Dial & Pilot Light Sockets	846	Electrostatic Voltmeters	335	Frequency Shift Converters	556
Dial Pointers	762	Electro-Surgical Apparatus	260	Frequency Standard Crystals	573
Dials	586	Elements, Heating	595	Frequency Standards	379
Diaphragms	589	Enamel Finish	1040	Friction Tape	662
Diathermy	254	Enamelled Wire	988	Frits, Resistor	1049
Diathermy Accessories	255	Encephalograph, Electronic	257	Furnaces	1050
Dielectric Constant Recorders	374	Engraving & Profiling Machines	1101	Fuse Blocks & Holders	465
Dielectric Heating	174	Envelopes, Glass V.T.	928	Fused Quartz Insulators	677
Dielectrics	1032	Equalizer Filters	602	Fuses	612
Dies	590	Escutcheons	1035	G	
Differential Relays	782	Ethyl Cellulose	1171	Galena Detectors	582
Differential Winding Controls	120	Explosive Gas Detectors	154	Galvanometers	340
Dilatometers, Automatic Recording	158	Exposure Insulation Parts	648	Gas Analyzers	112
Dimension Controls	122	Extruded Insulation Parts	648	Gases, Rare	1051
Dimension Gauges	168	F		Gaskets	613
Diode Filter Capacitors	492	Fabric Insulation	1078	Gauges, Electronic	160
Dipole Antennae	432	Fabric Tubes and Tubing	664	Gear Driven Radar Antenna Pedestals	423
Direct Writing Oscillographs	369	Fabricated Insulation Parts	649	Gears	614
Direction Finding Receivers	70	Facsimile Amplifiers	409	Geiger Counter Indicators	317
Direction Finding Transmitters	98	Facsimile Communication Systems	13	Geiger Tubes	949
Directional Antennae Coupling & Phasing Units	433	Facsimile Recorders	76	General Purpose Relays	785
Directional Antenna Networks	738	Facsimile Recording Papers	754	Generators, A. F. Signal	308
Discriminator Transformers	905	Facsimile Transmitters	99	Generators, Electronic Variable Freq.	303
Disc Lapping Machines	1097	Fans and Blowers	1036	Generators, FM Signal	309
Discs, Blank Recording	1033	Fasteners and Fastening Devices	596	Generators, Gas Engine Driven	615
Displacement Measuring Gauges	162	Feeder Spreader Insulators	676	Generators, Hand-Driven	616
Distortion & Noise Meters	331	Felt Turntable Plates	1181	Generators, Harmonic Frequency	304
Diversity Reception Receivers	63	Felts and Felt Parts	1038	Generators, Induction & Dielectric Heating	617
Door Controls	123	Fiberglass Insulation	1080	Generators, Medical	261
Dopes, Coll	1061	Fiberglass Insulation Tubing	665	Generators, Power	618
Drafting Equipment	1034	Fibre Insulation	1079	Generators, Pulse	305
Drag Units, Antenna	591	Fibre Insulation Tubes	666	Generators, R.F. Signal	310
Drivers, Recording	592	Fibre Insulation Systems	666	Generators, S.H.F. Signal	311
Drives, Antenna	593	Fibre Stampings & Punchings	660	Generators, Square Wave	306
Dry Batteries	458	Field Intensity Meters	336	Generators, Sweeping	312
Dry Disc Rectifiers	773	Filament Wire	934	Generators, Television Synchronizing	313
Dryers, Electronic	159	Film Recorders	77	Generators, U.H.F. Signal	314
Dummy Loads	434	Film Thickness Indicators	179	Generators, Ultrasonic	307
Dynamic Microphones	722	Filmeters	202	Generators, V.H.F. Signal	315
Dynamometers	199	Filter Chokes	519	Generators, Wind-Driven	619
Dynamotors (Power Gen.)	615	Filters	597	Geophysical Apparatus	173
E		Fine Wire Specialties	989	Germanium Crystal Detectors	583
Earphones	622	Finishes	1039	Getters	935
Elapsed Time Meters	200	Fixed Capacitors	494	Gilsonite	1062
Electric Generators	615	Fixed Frequency Receivers	64	Glass Blowing Machines	1103
Electric Glass Annealing Furnaces	1050	Fixed Frequency Transmitters	100	Glass Bonded Mica	1082
Electric Motors	726	Fixed Resistors	810	Glass Insulated Wire	990
Electric Phonographs & Record Players	31	Fixed Station Antennae Systems	435	Glass Insulation	1081
Electric Sheets	1131	Fixed Station Communication Transmitters	101	Glass, Metal Sealing	1053
Electric Soldering Irons	1087	Flaw & Defect Detectors	155	Glass Tubes and Tubing	667
Electric Soldering Machines	1100	Flexible Shaft Equipment	1102	Glass Working Equipment	1054
Electric Wave Section Filters	601	Flexible Shafts	833	Gold Anodes	922
Electrically Driven Tuning Forks	302	Float Type Switches	870	Gold & Gold Alloys	1133
Electro Magnets	708	Flock and Flocked Paper	1045	Graphite	1055
Electrocardiograph	256	Flock Turntable Plates	1181	Graphite Anodes	921
Electrodynamometers	332	Flow Controls	125	Grid Wire	937
Electroencephalograph	257	Flow Meters	203	Grids & Supports	936
Electrolytic Capacitors	493	Fluid Conductivity Controls	126	Grilles	1056
		Fluorescent Light Suppressors	859	Grilles, Speaker	1058
		Fluorometers	204	Grommets	620
		Flux, Soldering	1046	Ground Plane Antennae	437
		Fluxmeter	337	Guides	1059
				Guy Wire	991

PRODUCT	CLASSIFICATION	PRODUCT	CLASSIFICATION	PRODUCT	CLASSIFICATION
Radar Receiving Antennae	446	R. F. Signal Generators	310	Sound Systems	84
Radar Systems and Equipment	33	R. F. and I. F. Chokes	521	Sources, Alpha Ray	1199
Radar Transmitting Antennae	446	R. F. and I. F. Coils	532	Spark Plug Suppressors	858
Radar Tube Testers	397	R. F. and I. F. Transformers	912	Speaker Baffles	454
Radio Batteries	458	Rheostats	817	Speaker Coils	534
Radio Cements	1021	Rhombic & Antenna Coupling Transformers	913	Speaker Cones	537
Radio Direction Finder Receivers	70	Rigid & Flexible Shaft Couplings	569	Speaker Grille Cloths	1024
Radio-Frequency Oscillators	748	Rings	819-822	Speaker Housings	638
Radio Harness	621	Ripple Finish	1043	Speaker Projector Horns	633
Radio Ignition Shielding	835	Rivets	823	Speaker Stands	856
Radio-Photo Receivers	76	Rochelle Salt Crystals	578	Speaker Suspensions	863
Radio-Photo Transmitters	99	Rods	656	Speakers	638
Radio Range Transmitters	107	Rotary and Band Change Switches	878	Special Nails	1200
Radio Remote Controls	551	Rotary Beam Antennae	448	Specific Gravity Indicators & Recorders	184
Radio Set Analyzers	275	Rotary Relays	798	Spectrometers & Spectrographs	229
Radio Switchboards	864	Rotary Solenoids	850	Spectrophotometers	215
Radio Teletype Complete Communication Systems	18	Rubber Insulation	1085	Spectroscopic Source Units	851
Radio Tube Pullers	1190			Speech Amplifiers	3
Radios	39-74			Speech Input Consoles	5
Railroad Antennae	447	S		Spring Clips	522
Railroad Communication Systems	19	Safety Control, Machine	134	Springs	852
Railroad Receivers	71	Safety Switches	879	Square Wave Generators	306
Railroad Transmitters	108	Salt-Spray Resistance Coatings	1028	Stainless Steel	1153
Ratiometers	214	Sapphire Coil Wind Guides	1059	Stainless Steel Wire	1002
Reactors (Choker)	518	Scales, Dial	586	Stampings	716
Receiver Control Crystals	577	Scales, Oscilloscope	824	Standard Cell Batteries	459
Receiver Mechanical Tuning Devices	974	Scanners	825	Standards	378-383
Receivers, Communication	56-74	Scramblers, Speech	826	Stand-off & Cone Connectors	544
Receivers, Hearing Aid	628	Screw Machine Parts	657	Stand-off & Cone Insulators	681
Receivers, Home-AM	39	Screw Machine Parts	715	Stands	855
Receivers, Home AM-FM	44	Screwdrivers & Small Insulated Tools	1091	Steatite Insulation	1086
Receivers, Home-FM	48	Screws (self-tapping and set)	827	Steel	154
Receivers, Radar	36	Seals	828	Steel Chassis Bases	455
Receivers, Recorders & Phonograph Combinations	53	Selective Calling Apparatus	831	Steel, Electrical	1155
Receiving Tubes	958	Self-Locking Nuts	741	Steel Hardness Indicators	185
Receptacles, Plug	543	Self-Sealing Nuts	742	Steel Tubing	1215
Record Changers, Auto	513	Sensitive Control Relays	799	Stencils	1201
Record Manufacturing Machinery	1111	Sequence Relays	800	Step Type Switches	882
Record Players	31	Sequence Timers	244	Stepping Relays	803
Recorder Radio Combinations	53	Servo Controls	144	Stethographs & Stethophones	270
Recorder Tape	891	Servo Motors	729	Stethoscopes, Amplifying	271
Recorders, Combustion	222	Shaft Locks	702	Stimulators, Cortical	252
Recorders, Dielectric Constant	374	Shafts	832	Storage Batteries	460
Recorders, Facsimile	76	Shafts, Flexible	833	Storage Non-Spill Batteries	661
Recorders, Film	77	Shapers, Signal	834	Straighteners, Tube Pin	1202
Recorders, Frequency	375	Sheets, Electric	1131	Strain Gauges	171
Recorders, Mechanical Pen	225	Sheets, Insulation Parts	658	Strain Indicators	320
Recorders, Office	75	S.H.F. Signal Generators	311	Strain Insulators	682
Recorders, Oxygen	226	Shielded Cable	485	Strain Reliefs	857
Recorders, Potentiometer	376	Shielded Wire	1000	Straps, Leather	1203
Recorders, Rotary Stylus	223	Shielding, Radio Ignition	835	Strippers, Wire	1204
Recorders, Self Balancing	224	Shields	836	Strips, Terminal	897
Recorders, Tape	79	Shifter Signal	83	Stroboscopes	230
Recorders, Telephone	80	Shock-Resisting Relays	801	Stroboscopic Light Sources	699
Recorders, Time	377	Short Wave Adaptors for Radio	405	Strobostrons	961
Recorders, Transcription Turntables	81	Shorted Turn Indicators	318	Strontium	1156
Recorders, Wire	82	Shunts	841	Studio Control Consoles	5
Recording Cutters	623	Signal Generators	308	Subminiature Tubes	962
Recording Engine Indicators	182	Signal Lights	698	Supersonic Controls	146
Recording Oscillographs	371	Signal Shifters	83	Supersonic Crystals	579
Recording and Transcription Turntables	81	Signal Tracers	402	Supersonic Depth Indicators & Recorders	186
Records	1194	Silicon Crystal Detectors	584	Suppressors, Radio Ignition	858
Rectifiers	772	Silicon Metal Compounds	1150	Surface Analyzers & Comparators	113
Rectifying Tubes	959	Silicone Compounds	1070	Suspensions	863
Reducers and Extensions, Shaft	570	Silver	1151	Sweep Calibrators	288
Reflected and Transmitted Light Scanners	825	Silver Alloys & Compounds	1152	Sweeping Signal Generators	312
Refrigeration Defrosting Controls	142	Silver Anodes	924	Switch Parts	888
Register Cutter Controls	143	Silver Brazing Alloys	1047	Switchboards	864
Regulated Power Supplies	768	Silver Plated Wire	1001	Switches	865-887
Regulating Transformers	917	Silver Solder	1197	Synchronizers, Aircraft Magneto, Electronic	231
Regulator Tubes	969	Silvered Mica Capacitors	504	Synchronizers, Electronic	384
Regulators	775	Sleeves	842	Synchronous Motors	730
Relay Rack Panels	753	Slide Switches	880	Synoscopes	385
Relay & Solenoid Coils	533	Slide Wire Instrument Rheostats	816	Synthetic Resin Tubing	671
Relays	778-809	Slug Tuning Units	568		
Remote Control Motors	728	Small Electric Drive Mechanisms	594	T	
Remote Controls	551	Small High Voltage Capacitors	505	Table Model Receivers	42, 47, 51
Remote Position Antenna Indicators	629	Smoke Density and Combustion Controls	145	Tab, Call Letter	889
Resins	1069	Snap Action Relays	802	Tachometers, Electronic	232
Resins, Plastic	1180	Snap Action Switches	881	Tantalum	1157
Resistance Cords	562	Sockets	843	Tap Switches	883
Resistance Decade Boxes	300	Sockets, Tube	927	Tape, Insulating	662
Resistance and Filament Wire	999	Solar Radiation Indicators	183	Tape, Magnetic	891
Resistance Soldering Tools	1090	Solder	1195	Tape Recorders	79
Resistance Specialties	815	Solder Rings & Preforms	1198	Tape, Telegraph	890
Resistance Standards	382	Soldering Irons & Tools	1087	Telegraph, Keys	690
Resistance Thermometers	1208	Soldering Machines	1100	Telegraph Tape	890
Resistance Wire	999	Solderless Bus Bars	474	Telemeter Indicators	640
Resistor Forms	610	Solenoids	849	Telemetering Systems, Electronic	85
Resistors	810-818	Sonic Gas-Filled Tubes	960	Telephone Recording Equipment	80
Retaining Rings	822	Sonic Locating Equipment	227	Telephone Relays	804
R. F. Ammeters	358	Sound Analyzers	281	Telephones, Handsets	892
R. F. Amplifiers	415	Sound Level Meters	360	Telescopic Antennae	449
R. F. Kilovoltmeters	359	Sound Level Recorder Indicators	319	Teletype, Radio	18
R. F. Oscillators	748	Sound and Phonograph Recorders	78	Television Amplifiers	417
		Sound System Controls	552		

COMMUNICATION EQUIPMENT



SEE INDEX FOR ALL
PRODUCT LISTINGS

Complete packaged units for use in the communication of intelligence, such as radio systems and units, public address and intercommunication systems, recording equipment, etc. For non-communication electronic units see the section Industrial Electronic Equipment

1

Adaptors

PANORAMIC ADAPTORS

Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.

2

Amplifiers

AUDIO FREQUENCY AMPLIFIERS

Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Missouri
Air Associates, Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
Airpax Products Co., P. O. Box 6741, Baltimore 4, Md.
Algene Radio Corp., 305 Throop Ave., Brooklyn 6, N. Y.
Altec Lansing Corp., 1161 N. Vine St., Hollywood 38, Calif.
Amplifier Co. of Amer., 396 Broadway, New York, N. Y.
Audar Inc., Argos, Indiana
Audio-Development Co., 2833 13th Ave. S., Minneapolis 7, Minn.
Audio Products Co., 2101 W. Olive Ave., Burbank, Calif.
See Advertisement on Page 270
Banks Mfg. Co., 1105 W. Lawrence Ave., Chicago 40, Ill.
Bell Sound Systems, Inc., 1183 Essex Ave., Columbus, Ohio
Bendix Radio Corp., Baltimore 4, Md.
Bogen Co., David, 663 Broadway, New York 12, N. Y.
Brook Electronics, Inc., 45 Hamilton St., Newark 5, N. J.
Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.

Clark Radio Equipment Corp., 4313 Lincoln Ave., Chicago 18, Ill.
Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
See Advertisements on Pages 105-107
Commercial Research Labs. Inc., 20 Bartlett Ave., Detroit, Mich.
See Advertisement on Page 126
Communication Equip. & Engrg. Co., 5646 W. Race St., Chicago 44, Ill.
Concord Radio Corp., 901 W. Jackson Blvd., Chicago, Ill.
See Advertisement on Page 179
Continental Electronics, Ltd., 81 Pine, New York, N. Y.
Dilks, Inc., Norwalk, Conn.
Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
Electronic Sound Engineering Co., 109 N. Dearborn St., Chicago 2, Ill.
Erwood Co., 223 W. Erie St., Chicago, Ill.
Fairchild Camera & Instrument Corp., 475 Tenth Ave., New York 18, N. Y.
Federal Telephone and Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Fidelity Amplifier Co., 1632 N. Halsted St., Chicago 14, Ill.
Five Star Radio Co., 416 Broadway, Cambridge, Mass.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
Globe Electronics, Inc., 225 W. 17th St., New York, N. Y.
Godfrey Mfg. Co., 171 S. 2nd St., Milwaukee 4, Wis.
Herbach & Rademan Co., Mfg. Div., 517 Ludlow St., Phila. 6, Pa.
Holtzer-Cabot, Div. of First Industrial Corp., 125 Amory St., Boston, Mass.
Intex Co., 303 W. 42nd St., New York 18, N. Y.
See Advertisement on Page 260
Lincoln Electronics Corp., 653 11th Ave., New York, N. Y.

Lincophone Co., 1661 Howard Ave., Utica, N. Y.
Long Co., L. J., 186 Grand St., New York 13, N. Y.
Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
Maico Co., Inc., 25 North 3rd St., Minneapolis, Minn.
Megard Corp., 1601 S. Burlington St., Los Angeles 6, Calif.
Miles Reproducer Co., Inc., 812 Broadway, New York, N. Y.
See Advertisement on Page 294
Music Master Radio Corp., 750 Main St., Hartford, Conn.
National Co., 61 Sherman St., Malden 48, Mass.
See Advertisement on Page 291
Nilsson Electrical Lab, Inc., 105 Lafayette St., New York 13, N. Y.
Northern Communications Mfg. Co., 210 E. 40th St., New York, N. Y.
See Advertisement on Page 206
Operadio Mfg. Co., St. Charles, Ill.
Pan Amer. Electric Co., Inc., 132 Front St., New York, N. Y.
Polytron Corp., 401 Broadway, New York 13, N. Y.
Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
See Advertisements on Pages 69-80
Presto Recording Corp., 242 W. 55th St., New York, N. Y.
See Advertisements on Pages 48-49
Radar Engineers, 4004 Arcade Bldg., Seattle 1, Wash.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Radio Development Labs., 362 Atlantic Ave., Brooklyn 2, N. Y.
Rahm Instruments, Inc., 12 W. Bdway, New York, N. Y.
Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
Riggs & Jeffreys, Inc., 73 Winthrop St., Newark 4, N. J.

10

AIRPORT TRAFFIC CONTROL COMMUNICATION SYSTEMS

- Aero Communications, Inc., 231 Main Street, Hempstead, L. I. N. Y.
- Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
- Ereco Radio Labs. Inc., Fenimore Ave., Hempstead, N. Y.
See Advertisement on Page 230
- Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
- Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.
- Radio Receptor Co., 251 W. 19th St., New York, N. Y.
See Advertisement on Page 26
- Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

11

CARRIER CURRENT SYSTEMS

- Communication Equipment & Engrg. Co., 5645 W. Race St., Chicago 44, Ill.
- Control Corp., 718 Central Ave., Minneapolis 14, Minn.
- Electronic Sound Engineering Co., 109 N. Dearborn St., Chicago 2, Ill.
- Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
- General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
- Radio Labs. Inc., 2701 Calif. Ave., Seattle 6, Wash.
- Philco Corp., Tioga & C Sts., Phila. 34, Pa.
- Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
See Advertisements on Pages 17-20; 190, 191

12

COMMUNICATION APPARATUS—VEHICULAR

- Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
- Bassett Inc., Rex, 500 S. E. 2nd St., Ft. Lauderdale, Fla.
- Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.
- Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
- Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago, Ill.
See Advertisement on Page 114
- Grady Instrument Co., 11 Bailey Ave., Wattertown 72, Mass.
- Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
- Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.

13

FACSIMILE COMMUNICATION SYSTEMS

- Aldens Products Co., 117 No. Main St., Brockton 64, Mass.
- Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y.
- Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 209-302
- Finch Telecommunications Inc., Passaic, N. J.
- General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
- Press Wireless Mfg. Corp., 1475 Broadway, New York City 18, N. Y.
See Advertisements on Pages 69-80
- Radio Inventions, Inc., Faxmille, Inc., 155 Perry St., New York 14, N. Y.

14

INDUCTION COMMUNICATION SYSTEMS

- Lenkurt Electric Co., 1138 Howard St., San Francisco 3, Calif.

- Rola Co. Inc., 2530 Superior Ave., Cleveland, Ohio
- Rowe Industries, 3120 Monroe St., Toledo 6, Ohio
See Advertisement on Page 254
- Rowe Radio Research Lab., 2422 N. Pulaski Rd., Chicago 39, Ill.
- Schuttig & Co., 9th & Kearney Sts., N. E., Washington 17, D. C.
- Setchell Carlson, Inc., 2233 University Ave., St. Paul 4, Minn.
- Simpson Mfg. Co. Inc., Mark, 188 W. 4th St., New York 14, N. Y.
- Smith-Meeker Engrg. Co., 125 Barclay St., New York 7, N. Y.
- Stephens Mfg. Co., 10416 National Blvd., Los Angeles 34, Calif.
- Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125
- Tech-Master Products Co., 123 Prince St., New York, N. Y.
- Technical Devices Corp., Beaufort & Eagle Rock Aves., Roseland, N. J.
- Telephonics Corp., 350 W. 31st St., New York 1, N. Y.
- Telicon Corp., 851 Madison Ave., New York 21, N. Y.
- United Radio Electronics Corp., 901 W. Jackson Blvd., Chicago, Ill.
- Walsh Engineering Co., 34 DeHart Pl., Elizabeth, N. J.
- Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

3

AUDIO INPUT SYSTEMS

- Brook Electronics, Inc., 45 Hamilton St., Newark 5, N. J.
- Chicago Sound Systems Co., 2124 S. Michigan Ave., Chicago, Ill.
- Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y.
- Concord Radio Corp., 901 W. Jackson Blvd., Chicago, Ill.
See Advertisement on Page 179
- Concord Radio Corp., 901 W. Jackson Blvd., Chicago, Ill.
- Gates Radio Co., 200 Hampshire St., Quincy, Ill.
- Langevin Co., Inc., 37 W. 65th St., New York, N. Y.
See Advertisements on Pages 175-178
- Lester Radio Co., 3103 Mermaid Ave., Brooklyn, N. Y.
- Loge Sound Engineers, J. M., 986 S. Western Ave., Los Angeles 6, Calif.
- Makan Inc., 79 Thurman Ave., Columbus 6, Ohio
- Pan American Electric Co., Inc., 132 Front St., New York, N. Y.
- Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
See Advertisements on Pages 69-80
- Radio Development & Research Co., 26 Cornellson Ave., Jersey City, N. J.
- Raytheon Mfg. Co., Broadcast Equip. Div., 7517 N. Clark St., Chicago, Ill.
See Advertisement on Page 135
- Schuttig & Co., 9th & Kearney Sts., N. E., Washington 17, D. C.
- SOS Cinema Supply Co., 449 W. 42nd St., New York 18, N. Y.
- Sound Equipment Co., 3903 San Fernando Rd., Glendale 4, Calif.
- Task Electronics Co., 245 W. 54th St., New York, N. Y.

4

PRE-AMPLIFIERS FOR COMMUNICATION RECEIVERS

- Clark Radio Equipment Corp., 4313 Lincoln Ave., Chicago 18, Ill.
- Radio Mfg. Engineers Inc., 304 First Ave., Peoria, Ill.

5

Broadcast Studio Speech Input Control Equipment

- American Communications Corp., 306 Broadway, New York, N. Y.

- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
- Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
See Advertisements on Pages 105-107
- Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
- Gates Radio Co., 200 Hampshire St., Quincy, Ill.
- General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
- Pan American Electric Co., Inc., 132 Front St., New York, N. Y.
- Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
- Radio Engineering Labs. Inc., 35-54 36th St., Long Island City, N. Y.
- Raytheon Mfg. Co., Broadcast Equip. Div., 7517 N. Clark St., Chicago, Ill.
See Advertisement on Page 135
- Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
- Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
- Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

6

Cameras

CATHODE RAY OSCILLOGRAPH CAMERAS

- Electro Medical Lab. Inc., Holliston, Mass.
- Fairchild Camera & Instrument Corp., 475—10th Ave., New York 18, N. Y.
- Jerome Engineering Co., Massapequa, L. I., N. Y.

7

TELEVISION PICKUP CAMERAS

- Remington Rand, Electronic Div., Middletown, Conn.

8

TELEVISION STUDIO CAMERAS

- Farnsworth Television & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.
- General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
- Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
- Telequip Radio Co., 1901 S. Washtenaw, Chicago, Ill.

9

Communication Systems Complete

AIRCRAFT COMMUNICATION SYSTEMS

- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Missouri
- Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
- Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
- Bendix Radio Corp., Baltimore 4, Md.
- Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
- Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
- Harvey Wells Electronics Inc., North St., Southbridge, Mass.
- Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
- Philco Corp., Tioga & C Sts., Phila. 34, Pa.
- Radio Development & Research Co., 26 Cornellson Ave., Jersey City, N. J.
- Radio Receptor Co., 251 W. 19th St., New York, N. Y.
See Advertisement on Page 26
- Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

ELECTRONIC and ALLIED PRODUCTS

Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
See Advertisements on Pages 17-20; 190, 191

15

MARINE RADIO-TELEPHONE COMMUNICATION SYSTEMS

Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Grady Instrument Co., 11 Bailey Ave., Wattertown 72, Mass.
Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
Harvey Wells Electronics Inc., North St., Southbridge, Mass.
Islip Radio Mfg. Co., Beech St., Islip, N. Y.
Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, L. I., N. Y.
Jefferson-Travis Radio Mfg. Corp., 245 E. 23rd St., New York 10, N. Y.
Radio Development & Research Co., 26 Cornellison Ave., Jersey City, N. J.
Submarine Signal Co., 160 State, Boston, Mass.
Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
See Advertisements on Pages 17-20; 190, 191

16

MICROWAVE COMMUNICATION SYSTEMS

Bendix Radio Corp., Baltimore 4, Md.
Raytheon Mfg. Co., Waltham 54, Mass.
See Advertisement on Page 135
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

17

PORTABLE INSTALLATION COMMUNICATION SYSTEMS

Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
Aireon Mfg. Corp., Fairfax & Funston Rds., Kansas City 15, Kansas
See Advertisement on Page 130
Bendix Radio Corp., Baltimore 4, Md.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Communications Equipment Corp., 134 W. Colorado St., Pasadena, Calif.
Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago, Ill.
See Advertisement on Page 114
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.

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**ELECTRONICS
BUYERS' GUIDE**

General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Gross Communications Prods., 1865-71 Prospect Ave., Cleveland 15, Ohio
See Advertisement on Page 214
Meck Industries, John, Liberty at Pa., Plymouth, Ind.
Philco Corp., Tioga & C Sts., Phila. 34, Pa.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
See Advertisements on Pages 17-20; 190, 191

18

RADIOTELETYPE COMPLETE COMMUNICATION SYSTEMS

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302

19

RAILROAD COMMUNICATION SYSTEMS

Aireon Mfg. Corp., Fairfax & Funston Rds., Kansas City 15, Kansas
See Advertisement on Page 130
Bendix Radio Corp., Baltimore 4, Md.
Farmers' Engineering & Mfg. Co., Union Trust Bldg., Pittsburgh, Pa.
Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160
Webster Electric Co., 1900 Clark St., Racine, Wis.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

20

Hearing Aids

American Earphone Co., 10 E. 43rd St., New York 17, N. Y.
Aurex Corp., 1117 N. Franklin St., Chicago, Ill.
Electronic Sound Engineering Co., 109 N. Dearborn St., Chicago 2, Ill.
Emerson Radio & Phonograph Corp., 111-8th Ave., New York, N. Y.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Globe Phone Mfg. Corp., 2 Linden St., Reading, Mass.
Hofmann Corp., C. L., 436 Boulevard of the Allies, Pittsburgh, Pa.
Laurehk Radio Mfg. Co., 3931 Monroe Ave., Wayne, Mich.
Maico Co. Inc., 25 North 3rd St., Minneapolis, Minn.
E. A. Myers & Son, Radioear Bldg., Mt. Lebanon, Pittsburgh, Pa.
Paraphone Hearing Aid Inc., 2056 East 4th St., Cleveland 15, Ohio
Radio Corp. of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Schulmerich Electronics Inc., Sellersville, Pa.
Sonotone Corp., P. O. Box 200, Saw Mill River Road, Elmsford, N. Y.
Tac Industries, 16 W. 36th St., New York, N. Y.
Telex Products Co., Telex Park, Minneapolis 1, Minn.
See Advertisement on Page 266
Trimm Inc., 1770 W. Berteau Ave., Chicago 13, Ill.
Vacolite Co., 3001-3003 N. Henderson, Dallas, Texas
Western Elec. Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182-183
Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

21

Instruments, Electronic Musical

Conn Ltd., C. G., 1101 E. Beardsley Ave., Elkhart, Ind.
Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Electronic Sound Engineering Co., 109 N. Dearborn St., Chicago 2, Ill.
Federal Recorder Co., Elkhart, Ind.
Valco Mfg. Co., 4700 W. Walton St., Chicago 51, Ill.
Wurlitzer Mfg. Co., N. Tonawanda, N. Y.

22

Intercommunication Systems

Air Associates, Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
American Communications Corp., 306 Broadway, New York, N. Y.
Aviometer Corp., 370 W. 35th St., New York 1, N. Y.
See Advertisement on Page 226
Banks Mfg. Co., 1105 W. Lawrence Ave., Chicago 40, Ill.
Bell Sound Systems, Inc., 1183 Essex Ave., Columbus, Ohio
Bendix Radio Corp., Baltimore 4, Md.
Biltmore Radio Corp., 15 Ave. A., New York 3, N. Y.
Bogen Co., David, 663 Broadway, New York 12, N. Y.
California Telephone & Elect. Co., 6075 W. Pico Blvd., Los Angeles 35, Calif.
Cannon Elec. Development Co., 3208 Humboldt St., Los Angeles 31, Calif.
See Advertisement on Page 60
Cavalcade Industries, Inc., 39 S. La Salle St., Chicago, Ill.
Chicago Sound Systems Co., 2124 S. Michigan Ave., Chicago, Ill.
Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y.
Dalmo, Victor, San Carlos, California
Dayton Acme Co., 930 York St., Cincinnati, Ohio
Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
Electronic Labs. Inc., Indianapolis, Indiana
Electronic Mfg. Co., 20 Orange St., Newark 2, N. J.
Electronic Sound Engineering Co., 109 N. Dearborn St., Chicago 2, Ill.
Executone Inc., 415 Lexington Ave., New York 17, N. Y.
Farmers' Engineering & Mfg. Co., Union Trust Bldg., Pittsburgh, Pa.
Gem Radio & Telev. Co., 72 Cortlandt St., New York 6, N. Y.
General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Globe Electronics, Inc., 225 W. 17th St., New York, N. Y.
Godfrey Mfg. Co., 171 S. 2nd St., Milwaukee 4, Wis.
Intercall Systems, Inc., 201 Hickory St., Dayton, Ohio
Lake Mfg. Co., 2323 Chestnut St., Oakland 7, Calif.
Lectradio Corp., 4-42 St. Francis St., Newark 5, N. J.
Loge Sound Engineers, J. M., 936 S. Western Ave., Los Angeles 6, Calif.
Long Co., L. J., 186 Grand St., New York 13, N. Y.
Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
Miles Reproducer Co. Inc., 612 Broadway, New York 3, N. Y.
See Advertisement on Page 294
National Intercommunicating Systems, 1531 Devon Ave., Chicago 26, Ill.
Operadio Mfg. Co., 135th & Indiana Sts., St. Charles, Ill.
Philco Corp., Tioga & C Sts., Phila. 34, Pa.
Polytron Corp., 401 Broadway, New York 13, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover

Radio Development & Research Co., 26 Cornellison Ave., Jersey City, N. J.
Radio Receptor Co., 251 W. 19th St., New York, N. Y.
 See Advertisement on Page 26
Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
Simpson Mfg. Co., Inc., Mark, 188 W. 4th St., New York 14, N. Y.
Stark Sound Engrg. Corp., P. O. 493, Ft. Wayne 1, Ind.
Stromberg-Carlson, Rochester, N. Y.
Talk-A-Phone Mfg. Co., 1512 S. Pulaski Rd., Chicago 23, Ill.
Task Electronics Co., 245 W. 54th St., New York, N. Y.
Tech-Master Prods. Co., 123 Prince St., New York, N. Y.
Telemotor Corp., 260 Fifth Ave., New York, N. Y.
Telephonics Corp., 350 W. 31st St., New York 1, N. Y.
Transelectric Mfg. Co., Oxford, Pa.
Webster Electric Co., 1900 Clark St., Racine, Wisc.
Western Sound & Elec. Labs., 3512 W. St. Paul Ave., Milwaukee, Wisc.

23

Loran Navigational Devices

National-Simplex-Bludworth, Inc., Marine Div., 100 Gold St., New York 7, N. Y.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

24

Megaphones, Electronic

Guided Radio Corp., 161-6th Ave., New York 13, N. Y.
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.

25

Monitors

BROADCAST MONITORS

Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago, Ill.
 See Advertisement on Page 114
General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
Kluge Electronics Co., 1031 N. Alvarado St., Los Angeles 26, Calif.
Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
 See Advertisements on Pages 69-80
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
Radio Engineering Laboratories, Inc., 35-54 36th St., Long Island City, N. Y.
Raytheon Mfg. Co., Broadcast Equip. Div., 7517 N. Clark St., Chicago, Ill.
 See Advertisement on Page 135
Schuttig & Co., 9th & Kearney Sts., N. E., Washington 17, D. C.
Transmitter Equipment Mfg. Co. Inc., 345 Hudson St., New York 14, N. Y.
Western Electric Co. Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182-183
Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17, 18, 19, 20, 190, 191

26

FREQUENCY MONITORS

Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago, Ill.
 See Advertisement on Page 114
General Electric Co., Syracuse, N. Y.
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

Kluge Electronics Co., 1031 N. Alvarado St., Los Angeles 26, Calif.
Lampkin Laboratories, Bradenton, Fla.
 See Advertisement on Page 294
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover

27

MODULATION MONITORS

Du Mont Labs., Inc., 2 Main Ave., Passaic, N. J.
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Press Wireless Mfg. Corp., 1475 Broadway, New York City 18, N. Y.
 See Advertisements on Pages 69-80
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover

28

TELEVISION MASTER MONITORS

Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
Radio Corp. of America, RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
Remington Rand, Electronic Div., Middletown, Conn.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
Telegrip Radio Co., 1901 S. Washtenaw, Chicago, Ill.

29

(FS) TRANSMITTER MONITORS

Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
 See Advertisements on Pages 69-80

30

Music Systems, Industrial & Commercial

Executone, Inc., 415 Lexington Ave., New York 17, N. Y.
Schulmerich Electronics Inc., Sellersville, Pa.
Webster Elec. Co., 1900 Clark St., Racine, Wisc.

31

Phonographs

ELECTRIC PHONOGRAPHS and RECORD PLAYERS

Admiral Corp., 3800 W. Cortland St., Chicago 47, Ill.
Air-King Prods. Co., Inc., 1523-63rd St., Brooklyn, N. Y.
Algene Radio Corp., 305 Throop Ave., Brooklyn 6, N. Y.
Andrea Radio Corp., 43-20-34th St., L. I. City, N. Y.
Audak Co., 500 Fifth Ave., New York, N. Y.
 See Advertisement on Page 27
Audar Inc., Argos, Indiana
Audio Industries, Michigan City, Ind.
Autoerac Radio Co., 3855 N. Hamilton Ave., Chicago, Ill.
Barr Electronic Co., 1314 Forest Ave., Dallas, Texas
Bell Sound Systems, Inc., 1183 Essex Ave., Columbus, Ohio
Bendix Radio Corp., Baltimore 4, Md.

Biltmore Radio Corp., 15 Ave. A., New York 3, N. Y.
Bogen Co., David, 663 Broadway, New York 12, N. Y.
Chicago Sound Systems Co., 2124 S. Michigan Ave., Chicago, Ill.
Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y.
Continental Electronics, Ltd., 81 Pine, New York, N. Y.
Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
Electromatic Mfg. Corp., 88 University Pl., New York, N. Y.
Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
Electronic Devices Co., 601 W. 26th St., New York, N. Y.
Ellinwood Industries, 180 W. Slauson, Los Angeles 3, Calif.
 See Advertisement on Page 262
Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.
Espey Mfg. Co., Inc., 33 W. 46th St., New York 19, N. Y.
Fada Radio & Electric Co., Inc., 30-20 Thomson Ave., Long Island City, N. Y.
Favorite Mfg. Co., 105 E. 12th St., New York 3, N. Y.
Fisher Radio Co., 41 E. 47th St., New York, N. Y.
Five Star Radio Co., 416 Broadway, Cambridge, Mass.
Galvin Mfg. Corp., 4545 W. Augusta Blvd., Chicago 51, Ill.
Garod Radio Corp., 70 Washington St., Brooklyn 1, N. Y.
Garrard Sales Corp., 401 Broadway, New York 13, N. Y.
Gem Radio & Telev. Co., 72 Cortlandt St., New York 6, N. Y.
Globe Electronics, Inc., 225 W. 17th St., New York, N. Y.
Godfrey Mfg. Co., 171 S. 2nd St., Milwaukee 4, Wisc.
Harris Mfg. Co., 2422 W. Seventh St., Los Angeles 5, Calif.
Hoffman Radio Corp., 3430 S. Hill St., Los Angeles, Calif.
Hunt Corp., The, Carlisle, Pa.
International Detroit Corp., 1501 Beard Ave., Detroit, Mich.
Intex Co., 303 W. 42nd St., New York 18, N. Y.
 See Advertisement on Page 260
Lavoie Labs., Morganville, N. J.
Lester Radio Co., 3103 Mermaid Ave., Brooklyn, N. Y.
Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
 See Advertisements on Pages 62, 63
Lincoln Electronics Corp., 653 11th Ave., New York, N. Y.
Long Co., L. J., 186 Grand St., New York 13, N. Y.
Magnavox Co., The, 2131 Bueter Rd., Fort Wayne 4, Ind.
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Majestic Radio & Television Corp., St. Charles, Ill.
Makan Inc., 79 Thurman Ave., Columbus 6, Ohio
Meck Industries, John, Plymouth, Ind.
Mec-Rad Div., Black Industries, 1440 E. 22nd St., Cleveland 17, Ohio
Megard Corp., 1601 S. Burlington St., Los Angeles 6, Calif.
Mirror Record Corp., 1133 Broadway, New York 10, N. Y.
Musitron Co., 223 W. Erie St., Chicago 10, Ill.
Northeastern Engineering Inc., Manchester, N. H.
Parker Engineering Prods. Co., 16 W. 22nd St., New York 10, N. Y.
Philharmonic Radio Corp., 528 E. 72nd St., New York 24, N. Y.
Polytron Corp., 401 Broadway, New York 13, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
Ray-Dyne Mfg. Corp., 141 W. 24th St., New York 11, N. Y.
Record-O-Vox, Inc., 230 1/2 S. Spring St., Los Angeles, Calif.
Riggs & Jeffreys, Inc., 73 Winthrop St., Newark 4, N. J.
Robinson Recording Labs., 351 Ninth St., Phila. Pa.
 See Advertisement on Page 202
Russell Electric Co., 340 W. Huron St., Chicago 10, Ill.
Sheridan Electro Corp., 2850 S. Michigan Ave., Chicago, Ill.
Signal Electronic & Mfg. Co., 114 E. 16th St., New York 3, N. Y.

ELECTRONIC and ALLIED PRODUCTS

Simpson Mfg. Co., Inc., Mark, 188 W. 4th St., New York 14, N. Y.
 Sparks Withington Co., Jackson, Mich.
 Tac Industries, 16 W. 36th St., New York, N. Y.
 Tech-Master Products Co., 123 Prince St., New York, N. Y.
 Telequip Radio Co., 1901 S. Washtenaw, Chicago, Ill.
 Teletone Radio Co., 609 W. 51st St., New York 19, N. Y.
 Templetone Radio Mfg. Corp., New London, Conn.
 United Radio Electronics Corp., 901 W. Jackson Blvd., Chicago, Ill.
 Waters Conley Co., 501 First St., N. W., Rochester, Minn.
 Watterson Radio Mfg. Co., P. O. Box 54, Dallas, Texas
 Webster-Chicago Corp., 5622 Bloomingdale Ave., Chicago 39, Ill.
 Western Sound & Elec. Labs., 3512 W. St. Paul Ave., Milwaukee, Wisc.

32

Pre-Selectors

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Radio Mfg. Engineers Inc., 304 First Ave., Peoria, Ill.

33

Radar Systems and Equipment

AIRCRAFT LANDING

Gillfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 15, Calif.
 Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

34

ALTIMETERS

Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover

35

RADAR NAVIGATIONAL DEVICES

General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Radiomarine Corp. of America, 75 Varick Street, New York 13, N. Y.
 Raytheon Mfg. Co., Electronic Equip. Div., Waltham 54, Mass.
 See Advertisement on Page 135
 Submarine Signal Co., 160 State St., Boston, Mass.
 Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
 See Advertisements on Pages 17-20; 190, 191

36

RADAR RECEIVERS

Bendix Radio Corp., Baltimore 4, Md.
 Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
 Hazeltine Electronics Corp., 1775 Broadway, New York, N. Y.
 National-Simplex-Bludworth, Inc., Marine Div., 100 Gold St., New York 7, N. Y.
 Philco Corp., Tioza & C Sts., Phila. 34, Pa.
 Raytheon Mfg. Co., Electronic Equip. Div., Waltham 54, Mass.
 See Advertisement on Page 135
 Rayton Inc., 407 N. Jackson St., Jackson, Mich.
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

37

TRAINERS

Holtzer-Cabot, Div. of First Industrial Corp., 125 Amory Street, Boston, Mass.
 Wilmotte Mfg. Co., 1713 Kalorama Rd. N. W., Washington 9, D. C.
 See Advertisement on Page 281

38

TRANSMITTERS

Bendix Radio Corp., Baltimore 4, Md.
 Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
 National-Simplex-Bludworth, Inc., Marine Div., 100 Gold St., New York 7, N. Y.
 Philco Corp., Tioza & C Sts., Phila. 34, Pa.
 Raytheon Mfg. Co., Electronic Equip. Div., Waltham 54, Mass.
 See Advertisement on Page 135
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

39

Receivers, Home—AM

AM COMBINATIONS

A. R. F. Products, 7713 Lake St., River Forest, Ill.
 Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
 Air-King Products Co., Inc., 1523-63rd St., Bklyn, N. Y.
 Algene Radio Corp., 305 Throop Ave., Brooklyn 6, N. Y.
 American Communications Corp., 306 Broadway, New York, N. Y.
 American Electronics, 37 E. 18th St., New York, N. Y.
 Andrea Radio Corp., 43-20-34th St., L. I. City, N. Y.
 Ansley Radio Corp., 41 St. Joes Ave., Trenton 9, N. J.
 Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.
 Barr Electronic Co., 1314 Forest Ave., Dallas, Texas
 Bendix Radio Corp., Baltimore 4, Md.
 Biltmore Radio Corp., 15 Ave. A., New York 3, N. Y.
 Colonial Radio Corp., 254 Rano St., Buffalo, N. Y.
 Continental Electronics Corp., 41 Chestnut St., New Haven, Conn.
 Coronet Radio & Television Corp., Front St., Hempstead, L. I.
 Crosley Corp., The Cincinnati 25, Ohio
 Delco Radio Div., General Motors Corp., Kokomo, Indiana
 DeWald Radio Mfg. Corp., 440 Lafayette St., New York, N. Y.
 Dynavox Corp., 40-05 21st St., Long Island City, N. Y.
 Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
 Echophone Radio, Div. of Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Electromatic Mfg. Corp., 88 University Pl., New York, N. Y.
 Electronic Corp. of Amer., 170-53rd St., Bklyn, N. Y.
 Electronic Devices Co., 601 W. 26th St., New York, N. Y.
 Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
 Espey Mfg. Co., Inc., 33 W. 46th St., New York, N. Y.
 Fada Radio & Electric Co., Inc., 30-20 Thomson Ave., Long Island City, N. Y.
 Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
 Garod Radio Corp., 70 Washington St., Bklyn, N. Y.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Gilmer Mfg. Co., Steger, Ill.
 Hoffman Radio Corp., 3430 S. Hill St., Los Angeles, Calif.
 Howard Radio Co., 1731 Belmont Ave., Chicago, Ill.
 Kingston Products Corp., Kokomo, Indiana
 Lavole Labs., Morganville, N. J.
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.

Magnavox Co., 2131 Bueter Rd., Fort Wayne, Ind.
 Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
 Majestic Radio & Television Corp., St. Charles, Ill.
 Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.
 Minerva Corp. of Amer., 238 William St., New York, N. Y.
 Noblitt Sparks Industries, Columbus, Indiana
 Northeastern Engineering, Inc., Manchester, N. H.
 Olympic Radio & Television Div., Hamilton Radio Corp., 510 Sixth Ave., New York 11, N. Y.
 Packard-Bell Co., 3443 Welshire Blvd., Los Angeles 5, Calif.
 Philco Corp., Tioza & C Sts., Phila. 34, Pa.
 Pilot Radio Corp., 37-06 36th St., L. I. City, N. Y.
 Precision Specialties, 210-26 N. Western Ave., Los Angeles, Calif.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Record-O-Vox, Inc., 230½ S. Spring St., Los Angeles, Calif.
 Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
 Sonora Radio & Television Corp., 325 N. Hoyle Ave., Chicago, Ill.
 Sparks Withington Co., Jackson, Mich.
 Stromberg-Carlson Co., Rochester, N. Y.
 Tac Industries, 16 W. 36th St., New York, N. Y.
 Tech-Master Prods. Co., 123 Prince St., New York, N. Y.
 Teletone Radio Co., 609 W. 51st St., New York 19, N. Y.
 Telicon Corp., 851 Madison Ave., New York, N. Y.
 Templetone Radio Mfg. Corp., Templetone Building, New London, Conn.
 Trav-Ler Karenola, 571 W. Jackson Blvd., Chicago, Ill.
 United States Television Mfg. Corp., 106 Seventh Ave., New York, N. Y.
 Vibracolor Mfg. Co., 3597 Mission St., San Francisco, Calif.
 Watterson Radio Mfg. Co., P. O. Box 54, Dallas, Texas
 Wells Gardner & Co., 2701 North Kildare, Chicago 39, Ill.
 Westinghouse Electric Corp., Receiver Div., Sunbury, Pa.
 See Advertisements on Pages 17-20; 190, 191
 Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

40

AM CONSOLES

Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
 Air-King Prods. Co., Inc., 1523-63rd St., Brooklyn, N. Y.
 Automatic Radio Mfg. Co. Inc., 122 Brookline Ave., Boston, Mass.
 Barr Electronic Co., 1314 Forest Ave., Dallas, Texas
 Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.
 Bendix Radio Corp., Baltimore 4, Md.
 Colonial Radio Corp., 254 Rano St., Buffalo 7, N. Y.
 Crosley Corp., Cincinnati, Ohio
 Delco Radio Div., General Motors Corp., Kokomo, Indiana
 Echophone Radio, Division of Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
 Fada Radio & Electric Co., Inc., 30-20 Thomson Ave., Long Island City, N. Y.
 Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Hoffman Radio Corp., 3430 S. Hill St., Los Angeles, Calif.
 Howard Radio Co., 1735 Belmont Ave., Chicago 13, Ill.
 Kingston Products Corp., Kokomo, Indiana
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
 Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
 See Advertisements on Pages 62, 63
 Lincoln Electronics Corp., 653 11th Ave., New York, N. Y.
 Magnavox Co., The 2131 Bueter Rd., Fort Wayne, Ind.
 Majestic Radio & Television Corp., St. Charles, Ill.

Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.
 Midwest Radio Corp., 909 Broadway, Cincinnati, Ohio
 Minerva Corp. of Amer., 238 William St., New York, N. Y.
 Noblitt Sparks Industries, Columbus, Indiana
 Olympic Radio & Television Div., Hamilton Radio Corp., 510 Sixth Ave., New York 11, N. Y.
 Philco Corp., Tioga & C Streets, Phila. 34, Pa.
 Philharmonic Radio Corp., 528 E. 72nd St., New York 21, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
 Sonora Radio & Television Corp., 325 N. Hoyne Ave., Chicago, Ill.
 Sparks Withington Co., Jackson, Mich.
 Stewart Warner Corp., 1826 Diversey Pkway., Chicago, Ill.
 Stromberg-Carlson Co., Rochester, N. Y.
 Tac Industries, 16 W. 36th St., New York, N. Y.
 Telicon Corp., 851 Madison Ave., New York, N. Y.
 Templetone Radio Mfg. Corp., Templetone Building, New London, Conn.
 United States Television Mfg. Corp., 106 Seventh Ave., New York, N. Y.
 Watterson Radio Mfg. Co., P. O., Box 54, Dallas, Texas
 Wells Gardner & Co., 2701 North Kildare, Chicago 39, Ill.
 Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

41

AM PORTABLES

Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
 Air-King Prods. Co., Inc., 1523-63rd St., Bklyn, N. Y.
 Algene Radio Corp., 305 Throop Ave., Brooklyn 6, N. Y.
 Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.
 Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.
 Bendix Radio Corp., Baltimore 4, Md.
 Biltmore Radio Corp., 15 Ave. A., New York 3, N. Y.
 Bowers Battery & Spark Plug Co., Reading, Pa.
 Colonial Radio Corp., 254 Rano St., Buffalo 7, N. Y.
 Continental Electronics, Ltd., 81 Pine, New York, N. Y.
 Crosley Corp., Cincinnati, Ohio
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 DeWald Radio Mfg. Corp., 440 Lafayette St., New York, N. Y.
 Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
 Echophone Radio, Div. of Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Electromatic Mfg. Corp., 88 University Pl., New York, N. Y.
 Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
 Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
 Fada Radio & Electric Co. Inc., 30-20 Thomson Ave., Long Island City, N. Y.
 Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
 Garod Radio Corp., 70 Washington St., Bklyn, N. Y.
General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Gilner Manufacturing Co., Steger, Ill.
 Globe Electronics, Inc., 225 W. 17th St., New York, N. Y.
 Hoffman Radio Corp., 3430 S. Hill St., Los Angeles, Calif.
 Howard Radio Co., 1731 Belmont Ave., Chicago, Ill.
 Kingston Prods. Corp., Kokomo, Indiana
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
 See Advertisements on Pages 62, 63
 Magnavox Co., The, Fort Wayne 4, Indiana
 Majestic Radio & Television Corp., St. Charles, Ill.
 Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.
 Noblitt Sparks Industries, Columbus, Indiana

Packard-Bell Co., 3443 Welshire Blvd., Los Angeles 5, Calif.
 Philco Corp., Tioga & C Sts., Phila. 34, Pa.
 Philharmonic Radio Corp., 528 E. 72nd St., New York 21, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
 Setchell Carlson, 2233 University Ave., St. Paul, Minn.
 Sheridan Electro Corp., 2850 S. Michigan Ave., Chicago, Ill.
 Sonora Radio & Television Corp., 325 N. Hoyne Ave., Chicago, Ill.
 Sparks Withington Co., Jackson, Mich.
 Stromberg-Carlson Co., Rochester, N. Y.
 Tech-Master Prods., Co., 123 Prince St., New York, N. Y.
 Telicon Corp., 851 Madison Ave., New York, N. Y.
 Templetone Radio Mfg. Corp., Templetone Bldg., New London, Conn.
 Trav-Ler Karenola, 571 W. Jackson Blvd., Chicago, Ill.
 Wells Gardner & Co., 2701 N. Kildare, Chicago 39, Ill.
Westinghouse Electric Corp., Receiver Div., Sunbury, Pa.
 See Advertisements on Pages 17-20; 190, 191
 Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

42

AM TABLE MODELS

A. R. F. Products Co., 7627 Lake St., River Forest, Ill.
 Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
 Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
 Air-King Products Co. Inc., 1523-63rd St., Bklyn, N. Y.
 Algene Radio Corp., 305 Throop Ave., Brooklyn 6, N. Y.
 American Communications Corp., 306 Broadway, New York, N. Y.
 American Electronics, 37 E. 18th St., New York 3, N. Y.
American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Andrea Radio Corp., 43-20 34th St., L. I. City, N. Y.
 Autocrat Radio Co., 3855 N. Hamilton Ave., Chicago, Ill.
 Automatic Radio Mfg. Co. Inc., 122 Brookline Ave., Boston, Mass.
 Barr Electronic Co., 1314 Forest Ave., Dallas, Texas
 Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.
 Bendix Radio Corp., Baltimore 4, Md.
 Bowers Battery & Spark Plug Co., Reading, Pa.
Concord Radio Corp., 901 W. Jackson Blvd., Chicago, Ill.
 See Advertisement on Page 179
 Colonial Radio Corp., 254 Rano St., Buffalo 7, N. Y.
 Coronet Radio & Television Corp., Front St., Hempstead, L. I.
 Crosley Corp., The, Cincinnati 25, Ohio
 Crystal Products Co., 1519 McGee Trafficway, Kansas City, Mo.
 Delco Radio Div., General Motors Corp., Kokomo, Indiana
 DeWald Radio Mfg. Corp., 440 Lafayette St., New York, N. Y.
 Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
 Echophone Radio, Div. of Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Electromatic Mfg. Corp., 88 University Pl., New York, N. Y.
 Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
 Electronic Devices Co., 601 W. 26th St., New York, N. Y.
 Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
 Espey Mfg. Co., Inc., 33 West 46th St., New York, N. Y.
 Fada Radio & Electric Co. Inc., 30-20 Thomson Ave., Long Island City, N. Y.
 Five Star Radio Co., 416 Broadway, Cambridge, Mass.
 Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
 Garod Radio Corp., 70 Washington St., Brooklyn, N. Y.

Gem Radio & Telev. Co., 72 Cortlandt St., New York 6, N. Y.
General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 General Television & Radio Corp., 2701 North Lehmann Court, Chicago 14, Ill.
 Gilner Manufacturing Co., Steger, Ill.
 Globe Electronics, Inc., 225 W. 17th St., New York, N. Y.
 Hoffman Radio Corp., 3430 S. Hill St., Los Angeles, Calif.
 Howard Radio Co., 1731 Belmont Ave., Chicago, Ill.
 Kingston Products Corp., Kokomo, Indiana
 La Magna Mfg. Co., Inc., East Rutherford, N. J.
 Lavoie Labs., Morganville, N. J.
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
 See Advertisements on Pages 62, 63
 Lincoln Electronics Corp., 653 11th Ave., New York, N. Y.
 Magnavox Co., The, Fort Wayne 4, Indiana
 Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
 Majestic Radio & Television Corp., St. Charles, Ill.
 Makan Inc., 79 Thurman Ave., Columbus 6, Ohio
 Marco Industries, 245 S. Beverly Dr., Beverly Hills, Calif.
 Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.
 Megard Corp., 1601 S. Burlington Ave., Los Angeles 6, Calif.
 Midwest Radio Corp., 909 Broadway, Cincinnati, Ohio
 Minerva Corp. of Amer., 238 William St., New York, N. Y.
 Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
 Noblitt Sparks Industries, Columbus, Indiana
 Northeastern Engineering Inc., Manchester, N. H.
 Olympic Radio & Television Div., Hamilton Radio Corp., 510 Sixth Ave., New York, N. Y.
 Packard-Bell Co., 3443 Welshire Blvd., Los Angeles 5, Calif.
 Pan American Electric Co., Inc., 132 Front St., New York, N. Y.
 Philco Corp., Tioga & C Sts., Phila. 34, Pa.
 Philharmonic Radio Corp., 428 E. 72nd St., New York 21, N. Y.
 Pilot Radio Corp., 37-06 36th St., L. I. City, N. Y.
 Precision Specialties, 210-26 N. Western Ave., Los Angeles, Calif.
 Premier Crystal Labs. Inc., 63 Park Row, New York, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Craftzman, 1341 S. Michigan Ave., Chicago 5, Ill.
 Radio Process Co., 7618 Melrose Ave., Los Angeles, Calif.
 Record-O-Vox, Inc., 230 1/2 S. Spring St., Los Angeles, Calif.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
 Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
 Setchell Carlson, 2233 University Ave., St. Paul, Minn.
 Sheridan Electro Corp., 2850 S. Michigan Ave., Chicago, Ill.
 Sonora Radio & Television Corp., 325 N. Hoyne Ave., Chicago, Ill.
 Sparks Withington Co., Jackson, Mich.
 Stewart Warner Corp., 1826 Diversey Parkway, Chicago, Ill.
 Stromberg-Carlson Co., Rochester, N. Y.
 Tac Industries, 16 W. 36th St., New York, N. Y.
 Tech-Master Prods. Co., 123 Prince St., New York, N. Y.
 Telitone Radio Co., 609 W. 51st St., New York 19, N. Y.
 Telicon Corp., 851 Madison Ave., New York, N. Y.
 Templetone Radio Mfg. Corp., Templetone Building, New London, Conn.
 Trav-Ler Karenola, 571 W. Jackson Blvd., Chicago, Ill.
 United States Television Mfg. Corp., 106 Seventh Ave., New York, N. Y.
 Watterson Radio Mfg. Co., P. O. Box 54, Dallas, Texas
 Wells Gardner & Co., 2701 North Kildare, Chicago 39, Ill.
Westinghouse Electric Corp., Receiver Div., Sunbury, Pa.
 See Advertisements on Pages 17-20; 190, 191

ELECTRONIC and ALLIED PRODUCTS

Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

43

AM VEST POCKETS

Automatic Radio Mfg. Co. Inc., 122 Brookline Ave., Boston, Mass.
Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.
Bendix Radio Corp., Baltimore 4, Md.
Colonial Radio Corp., 254 Rano St., Buffalo 7, N. Y.
Delco Radio Division, General Motors Corp., Kokomo, Indiana
Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.
Noblitt Sparks Industries, Columbus, Indiana
Philharmonic Radio Corp., 528 E. 72nd St., New York 21, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
Tac Industries, 16 W. 36th St., New York, N. Y.
Telicon Corp., 851 Madison Ave., New York, N. Y.

44

HOME RECEIVERS, AM-FM

AM-FM COMBINATIONS

A. R. F. Products, 7713 Lake St., River Forest, Ill.
Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
American Electronics, 37 E. 18th St., New York 3, N. Y.
Andrea Radio Corp., 43-20 34th St., L. I. City, N. Y.
Barr Electronic Co., 1314 Forest Ave., Dallas, Texas
Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.
Bendix Radio Corp., Baltimore 4, Md.
Biltmore Radio Corp., 15 Ave. A., New York 3, N. Y.
Brook Electronics, Inc., 45 Hamilton St., Newark 5, N. J.
Colonial Radio Corp., 254 Rano St., Buffalo 7, N. Y.
Crosley Corp., The Cincinnati 25, Ohio
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
Emerson Radio & Phonographs Corp., 111 8th Ave., New York, N. Y.
Espey Mfg. Co. Inc., 33 W. 46th St., New York, N. Y.
Fada Radio & Electric Co. Inc., 30-20 Thomson Ave., Long Island City, N. Y.
Farnsworth Television & Radio Corp., 3700 Pontiac St., Fort Wayne, Ind.
Fisher Radio Co., 41 E. 47th St., New York, N. Y.
Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
Garrod Radio Corp., 70 Washington St., Brooklyn, N. Y.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Howard Radio Co., 1731 Belmont Ave., Chicago, Ill.
Kingston Products Corp., Kokomo, Ind.
Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
See Advertisements on Pages 62, 63
Magnavox Co., The Fort Wayne, Ind.
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Majestic Radio & Television Corp., St. Charles, Ill.
Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
Midwest Radio Corp., Cincinnati, Ohio
Music Master Radio Corp., 750 Main St.
Noblitt Sparks Industries, Columbus, Ind.
Packard-Bell Co., 3443 Welshire Blvd., Los Angeles 5, Calif.
Philco Corp., Phila. 34, Pa.
Philharmonic Radio Corp., 528 E. 72nd St., New York 21, N. Y.
Pilot Radio Corp., 37-06 36th St., L. I. City, N. Y.
Premier Crystal Labs. Inc., 63 Park Row, New York, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Scott Radio Labs. Inc., 4450 N. Ravenswood Ave., Chicago, Ill.
Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
Signal Electronics, Inc., 114 East 16th St., New York 3, N. Y.
Sonora Radio & Television Corp., 325 N. Hoyne Ave., Chicago, Ill.
Sparks Withington Co., Jackson, Mich.
Stromberg-Carlson Co., Rochester, N. Y.
Telicon Corp., 851 Madison Ave., New York, N. Y.
Templetone Radio Mfg. Corp., Templetone Building, New London, Conn.
Walsh Engineering Co., 34 DeHart Pl., Elizabeth, N. J.
Wells Gardner & Co., 2701 N. Kildare, Chicago 39, Ill.
Westinghouse Electric Corp., Receiver Div., Sunbury, Pa.
See Advertisements on Pages 17-20; 190, 191
Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

45

AM-FM CONSOLES

Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
Air-King Products Co., Inc., 1523-63rd St., Brooklyn, N. Y.
Barr Electronic Co., 1314 Forest Ave., Dallas, Texas
Belmont Radio Corp., 5921 West Dickens Ave., Chicago 39, Ill.
Bendix Radio Corp., Baltimore 4, Md.
Colonial Radio Corp., 254 Rano St., Buffalo 7, N. Y.
Crosley Corp., Cincinnati 25, Ohio
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
Fada Radio & Electric Co. Inc., 30-20 Thomson Ave., Long Island City, N. Y.
Farnsworth Television & Radio Corp., 3700 Pontiac St., Fort Wayne, Ind.
Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
Herbach & Rademan, 517 Ludlow St., Phila. 6, Pa.
Kingston Radio Products Corp., Kokomo, Indiana
Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
See Advertisements on Pages 62, 63
Magnavox Co., The, 2131 Bueter Rd., Fort Wayne, Ind.
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Majestic Radio & Television Corp., St. Charles, Illinois
Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.
Midwest Radio Corp., 909 Broadway, Cincinnati, Ohio
Packard-Bell Co., 3443 Welshire Blvd., Los Angeles 5, Calif.
Philco Corp., Tioga & C Sts., Phila. 34, Pa.

When Ordering or Inquiring

please mention the

**ELECTRONICS
BUYERS' GUIDE**

Radio Corp. of Amer., RCA Victor Div., Camden, N. J.

See Advertisement on Back Cover
Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
Sonora Radio & Television Corp., 325 N. Hoyne Ave., Chicago, Ill.
Sparks Withington Co., 2400 E. Ganson St., Jackson, Mich.
Stewart Warner Corp., 1826 Diversey Parkway, Chicago, Ill.
Stromberg-Carlson Co., Rochester, N. Y.
Telicon Corp., 851 Madison Ave., New York, N. Y.
Templetone Radio Mfg. Corp., Templetone Building, New London, Conn.
Walsh Engineering Co., 34 DeHart Pl., Elizabeth, N. J.
Wells Gardner & Co., 2701 N. Kildare, Chicago 39, Ill.
Westinghouse Electric Corp., Receiver Div., Sunbury, Pa.
See Advertisements on Pages 17-20; 190, 191
Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

46

AM-FM PORTABLES

Air-King Products Co., Inc., 1523-63rd St., Brooklyn, N. Y.
Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
Packard-Bell Co., 3443 Welshire Blvd., Los Angeles 5, Calif.
Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
Telicon Corp., 851 Madison Ave., New York, N. Y.

47

AM-FM TABLE MODELS

A. R. F. Products Co., 7627 W. Lake St., River Forest, Ill.
Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
Air-King Products Co. Inc., 1523-63rd St., Bklyn., N. Y.
Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.
Bendix Radio Corp., Baltimore 4, Md.
Colonial Radio Corp., 254 Rano St., Buffalo 7, N. Y.
Crosley Corp., Cincinnati 25, Ohio
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
Fada Radio & Electric Co. Inc., 30-20 Thomson Ave., Long Island City, N. Y.
Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Gilner Manufacturing Co., Steger, Ill.
Howard Radio Co., 1731 Belmont Ave., Chicago, Ill.
Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
Magnavox Co., The, Fort Wayne 4, Ind.
Majestic Radio & Television Corp., St. Charles, Ill.
Noblitt Sparks Industries, Columbus, Ind.
Packard-Bell Co., 3443 Welshire Blvd., Los Angeles 5, Calif.
Pan American Electric Co., Inc., 132 Front St., New York, N. Y.
Philco Corp., Tioga & C Sts., Phila. 34, Pa.
Pilot Radio Corp., 37-06 36th St., L. I. City, N. Y.
Premier Crystal Labs., Inc., 63 Park Row, New York, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
Sonora Radio & Television Corp., 325 N. Hoyne Ave., Chicago, Ill.
Sparks Withington Co., Jackson, Mich.
Stewart Warner Corp., 1826 Diversey Parkway, Chicago, Ill.
Stromberg-Carlson Co., Rochester, N. Y.
Telicon Corp., 851 Madison Ave., New York, N. Y.
Templetone Radio Mfg. Corp., Templetone Bldg., New London, Conn.

Wells Gardner & Co., 2701 N. Kildare, Chicago 39, Ill.
Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

48

Receivers, Home—FM

FM COMBINATIONS

A. R. F. Products, 7713 Lake St., River Forest, Ill.
Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
Barr Electronic Co., 1314 Forest Ave., Dallas, Texas
Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.
Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
Freed Radio Corp., 200 Hudson St., New York, N. Y.
Kingston Radio Co., Inc., Kokomo, Ind.
Magnavox Co., The, Fort Wayne 4, Ind.
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Meck Industries, John, Liberty at Pa., Plymouth, Ind.
Minerva Corp. of America, 238 William St., New York, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
Sparks Withington Co., 2400 E. Ganson St., Jackson, Mich.
Telicon Corp., 851 Madison Ave., New York, N. Y.
Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

49

FM CONSOLES

Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
Air-King Prods. Co., Inc., 1523-63rd St., Brooklyn, N. Y.
Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
Kingston Radio Co., Inc., Kokomo, Ind.
Magnavox Co., The, Fort Wayne 4, Indiana
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Meck Industries, John, Liberty at Pa., Plymouth, Ind.
Minerva Corp. of Amer., 238 William St., New York, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
Sparks Withington Co., 2400 E. Ganson St., Jackson, Mich.
Telicon Corp., 851 Madison Ave., New York, N. Y.
Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

50

FM PORTABLES

Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
Telicon Corp., 851 Madison Ave., New York, N. Y.

51

FM TABLE MODELS

A. R. F. Products, 7713 Lake St., River Forest, Ill.
Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
Belmont Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.

Electronic Corp. of Amer., 170-53rd St., Brooklyn, N. Y.
Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
Kingston Radio Co., Inc., Kokomo, Ind.
Magnavox Co., The, Fort Wayne 4, Indiana
Minerva Corp. of Amer., 238 William St., New York, N. Y.
Pan American Electric Co., Ind., 132 Front St., New York, N. Y.
Premier Crystal Labs. Inc., 63 Park Row, New York, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.
Sparks Withington Co., 2400 E. Ganson St., Jackson, Mich.
Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

52

FM VEST POCKETS

Telicon Corp., 851 Madison Ave., New York, N. Y.

53

RECEIVERS-RECORDERS & PHONOGRAPH COMBINATIONS

Andrea Radio Corp., 43-20 34th St., L. I. City, N. Y.
Ansley Radio Corp., 41 St. Joes Ave., Trenton 9, N. J.
Biltmore Radio Corp., 15 Ave. A., New York 3, N. Y.
Garod Radio Corp., 70 Washington St., Brooklyn 1, N. Y.
Makan Inc., 79 Thurman Ave., Columbus 6, Ohio
Packard-Bell Co., 3443 Welshire Blvd., Los Angeles 5, Calif.
Quality Industries, Electronic Dept., 25 E. Jackson Blvd., Chicago 4, Ill.
Sonora Radio & Television Corp., 325 N. Hoyne Ave., Chicago, Ill.
Stromberg-Carlson Co., Rochester, N. Y.

54

TELEVISION COMBINATION RECEIVERS

Andrea Radio Corp., 43-20 34th St., L. I. City, N. Y.
Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Lewyt Corp., 60 Broadway, Brooklyn, N. Y.
See Advertisements on Pages 62, 63
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
United States Television Mfg. Corp., 106-7th Ave., New York, N. Y.
Westinghouse Electric Corp., Receiver Div., Sunbury, Pa.
See Advertisements on Pages 17-20; 190, 191

55

BUILT-IN WALL TYPE HOME RECEIVERS

Ansley Radio Corp., 41 St. Joes Ave., Trenton 9, N. J.
Flush Wall Radio Co., 15 Washington St., Newark, N. J.

56

Receivers, Communication

AIRCRAFT RECEIVERS

Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150-151
Alradco Inc., Melrose Ave. & Battery Pl., Stamford, Conn.

Bassett Inc., Rex, 500 S. E. 2nd St., Ft. Lauderdale, Fla.
Belmont Radio Corp., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, Ill.
Bendix Radio Corp., Baltimore 4, Md.
Collins Radio Co., Cedar Rapids, Iowa
See Advertisements on Pages 105-107
Colonial Radio Corp., 254 Rano St., Buffalo 7, N. Y.
Electronic Specialty Co., 3456 Glendale Blvd., Los Angeles, Calif.
Harvey Wells Electronics Inc., North St., Southbridge, Mass.
Heath Co., Benton Harbor, Mich.
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
Midwest Radio Corp., 909 Broadway, Cincinnati 2, Ohio
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Radio Navigational Instrument Corp., 500 Fifth Ave., New York, N. Y.
Setchell Carlson, 2233 University Ave., St. Paul, Minn.
Technical Devices Corp., Beaufort & Eagle Rock Ave., Roseland, N. J.
Western Elec. Co. Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182-183
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

57

AM FIXED FREQUENCY RECEIVERS

Browning Labs., Inc., 750 Main St., Winchester, Mass.
Lavoie Labs., Morganville, N. J.
Magnavox Co., The, Fort Wayne 4, Indiana
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Western Elec. Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182-183

58

AUTOMATIC RADIO ALARM RECEIVERS

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 209-302
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

59

AM/FM COMMUNICATION RECEIVERS

Hallcrafters Co., The, 2611 S. Indiana Ave., Chicago, Ill.

60

AUTOMOBILE RECEIVERS

Delco Radio Div., General Motors Corp., Kokomo, Ind.
Eckstein Radio & Telev. Co., 914 La Salle Ave., Minneapolis 2, Minn.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Sonora Radio & Television Corp., 325 N. Hoyne Ave., Chicago, Ill.

61

COMMUNICATION AND AMATEUR RECEIVERS

Aero Communications, Inc., 231 Main St., Hempstead, L. I., N. Y.
Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231

ELECTRONIC and ALLIED PRODUCTS

Banks Mfg. Co., 1105 W. Lawrence Ave., Chicago 40, Ill.
 Bendix Radio Corp., Baltimore 4, Md.
 Browning Labs., Inc., 750 Main St., Winchester, Mass.
 Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
 Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Communications Equipment Corp., 134 W. Colorado St., Pasadena, Calif.
 Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
Gross Communications Prods., 1865-71 Prospect Ave., Cleveland 15, Ohio
 See Advertisement on Page 214
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
 Harvey Wells Electronics Inc., North St., Southbridge, Mass.
 Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
 Hoffman Radio Corp., 3430 S. Hill St., Los Angeles 7, Calif.
 Islip Radio Mfg. Co., Beech St., New York, N. Y.
 Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, L. I., N. Y.
 Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
 Link, Fred M., 125 W. 17th St., New York, N. Y.
 Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
 McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
 Megard Corp., 1601 S. Burlington St., Los Angeles 6, Calif.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 Northern Radio Co., 2208 4th Ave., Seattle, Wash.
 Pierson Electronic Corp., 533 E. Fifth St., Los Angeles 13, Calif.
Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
 See Advertisements on Pages 69-80
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Development & Research Co., 26 Cornellson Ave., Jersey City, N. J.
 Radio Labs. Inc., 2701 Calif. Ave., Seattle 6, Wash.
 Radio Mfg. Engineers Inc., 304 First Ave., Peoria, Ill.
Radio Receptor Co., 251 W. 19th St., New York, N. Y.
 See Advertisement on Page 26
 Radio Specialty Mfg. Co., 2023 S. E. 6th St., Portland 14, Oregon
 Sargent Co., E. M., 212 Ninth St., Oakland, Calif.
 Technical Devices Corp., Beaufort & Eagle Rock Ave., Roseland, N. J.
 United Radio Electronics Corp., 901 W. Jackson Blvd., Chicago, Ill.
 Waterproof Electric Co., 72 E. Verdugo Ave., Burbank, Calif.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

62

CRYSTAL SETS

Elkay Radio Products, 305 E. Walnut St., Oglesby, Ill.

63

DIVERSITY RECEPTION RECEIVERS

Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
 See Advertisements on Pages 69-80
 Schuttig & Co., 9th & Kearney Sts., N. E., Washington 17, D. C.

64

FIXED FREQUENCY RECEIVERS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Browning Laboratories, Inc., 750 Main St., Winchester, Mass.
 Radio Labs. Inc., 2701 Calif. Ave., Seattle 6, Wash.
Western Elec. Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182-183

65

FM RECEIVERS

Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
 Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Erco Radio Labs. Inc., Fenimore Ave., Hempstead, N. Y.
 Espey Mfg. Co. Inc., 33 W. 46th St., New York 19, N. Y.
 Fada Radio & Electric Co., Inc., 30-20 Thomson Ave., L. I. City, N. Y.
 Fisher Radio Co., 41 E. 47th St., New York, N. Y.
General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
Gross Communications Products, 1865-71 Prospect Ave., Cleveland 15, Ohio
 See Advertisement on Page 214
 Harvey Wells Electronics Inc., North St., Southbridge, Mass.
 Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
 Lavoie Labs., Morganville, N. J.
 Magnavox Co., The, Fort Wayne 4, Indiana
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Engineering Labs. Inc., 35-54 36th St., Long Island City, N. Y.
 Telicon Corp., 851 Madison Ave., New York 21, N. Y.

66

LORAN RECEIVERS

Philco Corp., Tloga & C Sts., Phila. 34, Pa.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

67

MARINE RECEIVERS

Bassett Inc., Rex, 500 S. E. 2nd St., Ft. Lauderdale, Fla.
 Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
 Fonda Corp., 2453 23rd St., New York 10, N. Y.
 Gray Radio Co., 730 Okeeshobee Rd., W. Palm Beach, Fla.
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Harvey Wells Electronics Inc., North St., Southbridge, Mass.
 Hudson American Corp., 25 W. 43rd St., New York, N. Y.
 Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, L. I., N. Y.
 Jefferson-Travis Radio Mfg. Corp., 245 E. 23rd St., New York 10, N. Y.
 Radiomarine Corp. of America, 75 Varick Street, New York 13, N. Y.
 Radio Navigational Instrument Corp., 500 Fifth Ave., New York, N. Y.
Western Elec. Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182-183

Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
 See Advertisements on Pages 17-20; 190-191

68

MICROWAVE RECEIVERS

Bendix Radio Corp., Baltimore 4, Md.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Raytron, Inc., 407 N. Jackson Street, Jackson, Mich.
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

69

PANORAMIC RECEIVERS

Hallicrafters Co., 2611 Indiana Ave., Chicago 16, Ill.
 Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.

70

RADIO DIRECTION FINDER RECEIVERS

Bendix Radio Corp., Baltimore 4, Md.
Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Fairchild Camera & Instrument Corp., 475-10th Ave., New York 18, N. Y.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Fisher Research Lab., 1946 University Ave., Palo Alto, Calif.
 Fonda Corp., 2453 23rd St., New York 10, N. Y.
 Garod Radio Corp., 70 Washington St., Brooklyn, N. Y.
 General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Grady Instrument Co., 11 Bailey Ave., Watertown 72, Mass.
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, L. I., N. Y.
 Jefferson-Travis Radio Mfg. Corp., 245 E. 23rd St., New York 10, N. Y.
 Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
 National-Simplex-Bludworth, Inc., Marine Div., 100 Gold St., New York 7, N. Y.
 Nilsson Electrical Lab., Ind., 103 Lafayette St., New York 13, N. Y.
 Paulsen-Webber Cordage Corp., 176 John St., New York 7, N. Y.
 Philco Corp., Tloga & C Sts., Phila. 34, Pa.
Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
 See Advertisements on Pages 69-80
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Labs. Inc., 2701 Calif. Ave., Seattle 6, Wash.
 Radiomarine Corp. of Amer., 75 Varick St., New York 13, N. Y.
 Radio Navigational Instrument Corp., 500 Fifth Ave., New York, N. Y.
 Sargent Co., E. M., 212 Ninth St., Oakland, Calif.
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
 Submarine Signal Co., 160 State, Boston, Mass.
Western Elec. Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183

71

RAILROAD RECEIVERS

Bendix Radio Corp., Baltimore 4, Md.
Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.

Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
Western Elec. Co. Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182-183
Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
 See Advertisements on Pages 17-20; 190-191

72

TELEVISION RECEIVERS

Admiral Corp., 3800 W. Cortland St., Chicago, Ill.
 Air-King Products Co., Inc., 1523-63rd St., Brooklyn, N. Y.
 American Electronics, 37 E. 18th St., New York 3, N. Y.
 Biltmore Radio Corp., 15 Ave. A., New York 3, N. Y.
 Crosley Corp., 1329 Arlington St., Cincinnati 3, Ohio
 Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
 Echophone Radio Div. of Hallcrafters Co., 2611 S. Indiana Ave., Chicago 16, Ill.
 Electromatic Mfg. Co., 88 University Pl., New York, N. Y.
 Electronic Corp. of Amer., 170 53rd St., Brooklyn, N. Y.
 Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
 Espey Mfg. Co., Inc., 33 W. 46th St., New York 19, N. Y.
 Fada Radio & Electric Co., Inc., 30-20 Thomson Ave., L. I. City, N. Y.
 Farnsworth Television & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.
 Fisher Radio Co., 41 E. 47th St., New York, N. Y.
 Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.
 Garod Radio Corp., 70 Washington St., Brooklyn, N. Y.
 Hallcrafters Co., 2611 Indiana Ave., Chicago 16, Ill.
 Hoffman Radio Corp., 3430 S. Hill St., Los Angeles 7, Calif.
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
 Magnavox Co., The, Ft. Wayne 4, Indiana
 Majestic Radio & Telev. Corp., St. Charles, Ill.
 Minerva Corp. of Amer., 238 William St., New York, N. Y.
 Pan American Electric Co., Inc., 132 Front St., New York, N. Y.
 Philco Corp., Tioga & C. Sts., Phila. 34, Pa.
 Philharmonic Radio Corp., 528 E. 72nd St., New York 21, N. Y.
 Pilot Radio Corp., 37-06 36th St., L. I. City, N. Y.
 Record-O-Vox, Inc., 230½ S. Spring St., Los Angeles, Calif.
 Sonora Radio & Telev. Corp., 325 N. Hoyne Ave., Chicago, Ill.
 Sparks Withington Co., 2400 E. Ganson St., Jackson, Mich.
 Stewart Warner Corp., 1826 Diversy Pkwy., Chicago 14, Ill.
 Stromberg-Carlson Co., Rochester, N. Y.
 Telequip Radio Co., 1901 S. Washtenaw, Chicago, Ill.
 Telicon Corp., 851 Madison Ave., New York 21, N. Y.

73

U.H.F. RECEIVERS

Abbott Instrument Inc., 8 W. 18th St., New York, N. Y.
 Bendix Radio Corp., Baltimore 4, Md.
Erco Radio Labs. Inc., Fenimore Ave., Hempstead, N. Y.
 See Advertisement on Page 280
 Gross Communications Lab., 1865-71 Prospect Ave., Cleveland 15, Ohio
 Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
 McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
 Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182-183

74

V.H.F. RECEIVERS

Abbott Instrument Inc., 8 W. 18th St., New York, N. Y.
 Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
 Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
 Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Communications Equipment Corp., 134 W. Colorado Street, Pasadena, Calif.
Doollittle Radio, Inc., 7421 Loomis Bldg., Chicago, Ill.
 See Advertisement on Page 114
Erco Radio Labs. Inc., Fenimore Ave., Hempstead, N. Y.
 See Advertisement on Page 280
 Farnsworth Television & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.
Gross Communications Prods., 1865-71 Prospect Ave., Cleveland 15, Ohio
 See Advertisement on Page 214
 Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Harvey Wells Electronics Inc., North St., Southbridge, Mass.
 Megard Corp., 1601 S. Burlington Street, Los Angeles 6, Calif.
Radio Receptor Co., 251 W. 19th St., New York, N. Y.
 See Advertisement on Page 26
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

75

Recorders

ELECTRONIC OFFICE RECORDERS AND PLAYBACKS

Dictaphone Corp., 420 Lexington Ave., New York, N. Y.
 Thos. A. Edison Inc., 51 Lakeside Ave., West Orange, N. J.
 Gray Mfg. Co., 16-30 Arbor St., Hartford, Conn.
Miles Reproducer Co. Inc., 812 Broadway, New York 3, N. Y.
 See Advertisement on Page 294
 Patrick's Industries, 397 W. Marshall Ave., Ferndale 20, Mich.
 Sound Scribe Corp., 82 Audubon St., New Haven 11, Conn.
 Speak-O-Phone Recording & Equipment Co., 23 W. 60th St., New York, N. Y.

76

FACSIMILE RECORDERS

Alden Products Co., 117 N. Main St., Brockton 64, Mass.
 Finch Telecommunication Inc., Passaic, N. J.
 Radio Inventions, Inc., Faximile, Inc., 155 Perry St., New York 14, N. Y.

77

FILM RECORDERS

Hart & Co., Inc., Frederick, Recordgraph Div., 350 Madison Ave., New York 17, N. Y.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 See Advertisement on Page 294
 SOS Cinema Supply Co., 449 W. 42nd St., New York 18, N. Y.

78

SOUND & PHONOGRAPH RECORDERS

Acme Radio & Sound Labs., 3528 City Terr. Dr., Los Angeles, Calif.
Allied Recording Products Co., 21-09-43rd Ave., Long Island City 1, N. Y.
 See Advertisement on Page 268
Ellinwood Industries, 180 W. Slauson, Los Angeles 3, Calif.
 See Advertisement on Page 262
 Fada Radio & Electric Co., Inc., 30-20 Thomson Ave., L. I. City, N. Y.

Hart & Co., Inc., F., Recordgraph Div., 350 Madison Ave., New York 17, N. Y.
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
 Malco Co., Inc., 25 N. 3rd St., Minneapolis, Minn.
 Makan Inc., 79 Thurman Ave., Columbus 6, Ohio
 Meck Industries, John, Liberty at Pa., Plymouth, Indiana
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 See Advertisement on Page 294
 Presto Recording Corp., 242 W. 55th Street, New York 19, N. Y.
 Webster-Chicago Corp., 5622 Bloomingdale Ave., Chicago 39, Ill.

79

TAPE RECORDERS

Boehme Inc., H. O., 915 Broadway, New York, N. Y.
Brush Development Co., 3405 Perkins Ave., Cleveland 14, Ohio
 See Advertisement on Page 137
 California Telephone & Elect. Co., 6075 W. Pico Blvd., Los Angeles 35, Calif.
 F. Hart & Co., Inc., Recordgraph Div., 350 Madison Ave., New York 17, N. Y.
 Jefferson-Travis Radio Mfg. Corp., 245 E. 23rd St., New York 10, N. Y.
 Magnograph Corp., 5800 W. 3rd St., Los Angeles, Calif.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 See Advertisement on Page 294
Press Wireless Mfg. Corp., 1475 Broadway, New York City 18, N. Y.
 See Advertisement on Pages 69-80
 Radio Development & Research Co., 26 Cornellison Ave., Jersey City, N. J.
 Seeburg Corp., J. P., 1500 N. Dayton Ave., Chicago 22, Ill.
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182-183

80

TELEPHONE RECORDING EQUIPMENT

Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 See Advertisement on Page 294

81

RECORDING AND TRANSCRIPTION TURNTABLES

Acme Radio & Sound Labs., 3528 City Terr. Dr., Los Angeles, Calif.
Allied Recording Products Co., 21-09 43rd Ave., Long Island City 1, N. Y.
 See Advertisement on Page 268
 Clark Radio Equipment Corp., 4313 Lincoln Ave., Chicago 13, Ill.
 Fairchild Camera & Instrument Corp., 475 10th Ave., New York 18, N. Y.
 Gates Radio Co., 200 Hampshire St., Quincy, Ill.
 Globe Industries, Inc., 125 Sunrise Pl., Dayton 7, Ohio
 Harris Mfg. Co., 2422 W. Seventh St., Los Angeles 5, Calif.
 Hartley & Holt, 730 Fifth Ave., New York 19, N. Y.
 Makan Inc., 79 Thurman Ave., Columbus 6, Ohio
Presto Recording Corp., 242 W. 55th St., New York, N. Y.
 See Advertisements on Pages 48, 49
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Engineering Labs., Inc., 35-54 36th St., L. I. City, N. Y.
Robinson Recording Labs., 35 S. Ninth St., Phila., Pa.
 See Advertisement on Page 202
Rowe Industries, 3120 Monroe St., Toledo 6, Ohio
 See Advertisement on Page 254
 Russell Electric Co., 340 W. Huron St., Chicago 10, Ill.
 Sonora Radio & Telev. Corp., 325 N. Hoyne Ave., Chicago 28, Ill.

ELECTRONIC and ALLIED PRODUCTS

Webster Chicago Corp., Electronics Div.,
3825 Armitage Ave., Chicago, Ill.

82

WIRE RECORDERS

Aurex Corp., 1117 N. Franklin St., Chicago, Ill.
Bendix Radio Corp., Baltimore 4, Md.
Brush Development Co., 3405 Perkins Ave.,
Cleveland 14, Ohio
See Advertisement on Page 137
Conn Ltd., C. G., 1101 E. Beardsley Ave.,
Elkhart, Ind.
Federal Recorder Co., Elkhart, Ind.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
F. Hart & Co., Inc., Recordgraph Div., 350
Madison Ave., New York 17, N. Y.
Kluge Electronics Co., 1031 N. Alvarado St.,
Los Angeles 26, Calif.
Lear, Inc., 110 Ionia Ave., N. W., Grand
Rapids 2, Mich.
Lincoln Electronics Corp., 653 11th Ave.,
New York, N. Y.
Magnecord, Inc., 304 W. 63rd St., Chicago
21, Ill.
Molded Insulation Co., Aircraft Control Div.,
335 E. Price St., Phila., Pa.
Radio Corp. of Amer., RCA Victor Div.,
Camden, N. J.
See Advertisement on Back Cover
Radio Development & Research Co., 26
Cornellson Ave., Jersey City, N. J.
Seeburgh Corp., J. P., 1500 N. Dayton Ave.,
Chicago 22, Ill.
Sonora Radio & Television Corp., 325 N.
Hoynes Ave., Chicago, Ill.
Stromberg-Carlson, Rochester, N. Y.
Webster-Chicago Corp., 5622 Bloomingdale
Ave., Chicago 39, Illinois
Western Elec. Co., Inc., 120 Broadway, New
York 5, N. Y.
See Advertisements on Pages 182, 183
Wilcox Gay Corp., Charlotte, Mich.

83

Shifter, Signal

Meissner Mfg. Div., Maguire Industries Inc.,
Mt Carmel, Ill.

84

Sound Systems

COMPLETE SOUND SYSTEMS

Altec Lansing Corp., 1161 N. Vine St.,
Hollywood 38, Calif.
American Radio Co., 611 E. Garfield Ave.,
Glendale, Calif.
See Advertisement on Page 231
Audar Inc., Argos, Indiana
Bell Sound Systems, Inc., 1183 Essex Ave.,
Columbus, Ohio
Bendix Aviation Corp., Pacific Div., 11600
Sherman Way, North Hollywood, Calif.
Bendix Radio Corp., Baltimore 4, Md.
Bogen Co., David, 663 Broadway, New York
12, N. Y.
Communication Equipment & Engineering
Co., 5646 W. Race St., Chicago 44, Ill.
Communicating Systems Inc., 203 E. 18th
St., New York 3, N. Y.
Concord Radio Corp., 901 W. Jackson Blvd.,
Chicago, Ill.
See Advertisement on Page 179
Dilks, Inc., Norwalk, Conn.
Electronic Apparatus, Inc., 347 Madison
Ave., New York 17, N. Y.
Electronic Sound Engineering Co., 109 N.
Dearborn St., Chicago 2, Ill.
Ellinwood Industries, 180 W. Slauson, Los
Angeles 3, Calif.
See Advertisement on Page 262
Executone, Inc., 415 Lexington Ave., New
York 17, N. Y.
Gates Radio Co., 220 Hampshire St., Quincy,
Ill.
Gem Radio & Telev. Co., 72 Cortlandt St.,
New York 6, N. Y.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Globe Phone Mfg. Corp., 2 Linden St., Read-
ing, Mass.
Harris Mfg. Co., 2422 W. Seventh St., Los
Angeles 5, Calif.

Langevin Co., Inc., 37 W. 65th St., New
York, N. Y.
See Advertisements on Pages 175-178
Lincoln Electronics Corp., 653 11th Ave.,
New York, N. Y.
Lincophone Co., 1661 Howard Ave., Utica,
N. Y.
Miles Reproducer Co., Inc., 812 Broadway,
New York, N. Y.
See Advertisement on Page 294
Operadio Mfg. Co., 135th & Indiana Sts., St.
Charles, Ill.
Pan American Electric Co., Inc., 132 Front
St., New York, N. Y.
Radio Corp. of Amer., RCA Victor Div.,
Camden, N. J.
See Advertisement on Back Cover
Radio Development & Research Co., 26
Cornellson Ave., Jersey City, N. J.
Rauland Corp., 4245 N. Knox Ave., Chicago
41, Ill.
Riggs & Jeffreys, Inc., 73 Winthrop St.,
Newark 4, N. J.
Rowe Industries, 3120 Monroe St., Toledo 6,
Ohio
See Advertisement on Page 254
S. O. S. Cinema Supply Corp., 449 W. 42nd
St., New York, N. Y.
Schulmerich Electronics Co., Sellersville, Pa.
Simpson Mfg. Co., Inc., Mark, 188 W. 4th
St., New York 14, N. Y.
Speak-O-Phone Recording & Equipment Co.,
23 W. 60th St., New York, N. Y.
Stark Sound Engrg. Corp., Box 493, Fort
Wayne 1, Ind.
Stromberg-Carlson, Rochester, N. Y.
Task Electronics Co., 245 W. 54th St., New
York, N. Y.
Televiso Products Inc., 6533 N. Olmstead
Ave., Chicago, Ill.
Webster Electric Co., 1900 Clark St., Racine,
Wisc.
Western Electric Co., Inc., 120 Broadway,
New York 5, N. Y.
See Advertisements on Pages 182, 183
Western Sound & Electric Labs., 3512 W.
St. Paul Ave., Milwaukee, Wisc.

85

Telemetering Systems, Electronic

Baker & Co., 113 Astor St., Newark 5, N. J.
Control Corp., 718 Central Ave., Minneapolis
14, Minn.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Leupold & Stevens Instruments, 4445 N. E.
Glisan St., Portland 13, Oregon

86

Television Systems, Industrial

Remington Rand, Electronic Div., Middle-
town, Conn.

87

Transceivers

AVIATION TRANSCEIVERS

Bassett Inc., Rex, 500 S. E. 2nd St., Ft.
Lauderdale, Fla.
Belmont Radio Corp., Div. Raytheon Mfg.
Co., 5921 Dickens Ave., Chicago 39, Ill.
Erco Radio Labs. Inc., Fenimore Ave.,
Hempstead, N. Y.
See Advertisement on Page 280

When Ordering or Inquiring

please mention the
**ELECTRONICS
BUYERS' GUIDE**

Radio Mfg. Engineers Inc., 304 First Ave.,
Peoria, Ill.
Ripley Co., Torrington, Conn.
See Advertisements on Pages 30; 108, 109
Rowe Radio Research Labs., 2422 N. Pu-
laski Rd., Chicago 39, Ill.

88

BACK-PACK TRANSCEIVERS

Federal Telephone & Radio Corp., 591 Broad
St., Newark, N. J.
See Advertisements on Pages 299-302
Gross Communications Prods., 1865-71 Pros-
pect Ave., Cleveland 15, Ohio
See Advertisement on Page 214
Hallcrafters Co., The, 2611 S. Indiana Ave.,
Chicago, Ill.

89

LIFEBOAT TRANSCEIVERS

Federal Telephone & Radio Corp., 591 Broad
St., Newark, N. J.
See Advertisements on Pages 299-302
Radiomarine Corp. of Amer., 75 Varick St.,
New York 13, N. Y.

90

U.H.F. TRANSCEIVERS

Abbott Instrument, Inc., 8 W. 18th St., New
York, New York
Western Electric Co., Inc., 120 Broadway,
New York 5, N. Y.
See Advertisements on Pages 182, 183

91

V.H.F. TRANSCEIVERS

Abbott Instrument, Inc., 8 W. 18th St., New
York, New York
Western Electric Co. Inc., 120 Broadway,
New York 5, N. Y.

92

HAND-PACK TRANSCEIVERS

Hallcrafters Co., The, 2611 S. Indiana Ave.,
Chicago, Ill.
Raytron Inc., 407 N. Jackson Street, Jack-
son, Mich.

93

Transmitters

AIRCRAFT TRANSMITTERS

Airadio Inc., Melrose Ave. & Battery Pl.,
Stamford, Conn.
Air Associates Inc., 5827 W. Century Blvd.,
Los Angeles 45, Calif.
Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150, 151
American Radio Co., 611 E. Garfield Ave.,
Glendale, Calif.
See Advertisement on Page 231
Bassett Inc., Rex, 500 S. E. 2nd St., Ft.
Lauderdale, Fla.
Belmont Radio Corp., Div. Raytheon Mfg.
Co., 5921 Dickens Ave., Chicago 39, Ill.
Bendix Radio Corp., Baltimore 4, Md.
Communications Co., Inc., 300 Greco Ave.,
Coral Gables 34, Fla.
Electronic Specialty Co., 3456 Glendale
Blvd., Los Angeles, Calif.
Federal Telephone & Radio Corp., 591 Broad
St., Newark, N. J.
See Advertisements on Pages 299-302
Gates Radio Co., Quincy, Ill.
General Elec. Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Hallcrafters Co., 2611 S. Indiana Ave., Chi-
cago, Ill.
Harvey Wells Electronics Inc., North St.,
Southbridge, Mass.
Heath Co., Benton Harbor, Michigan

Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
 Islip Radio Mfg. Co., Beech St., Islip, N. Y.
 Kluge Electronics Co., 1031 N. Alvarado St., Los Angeles 26, Calif.
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
 Lincoln Electronics Corp., 653 11th Ave., New York, N. Y.
 Link, Fred M., 125 W. 17th St., New York, N. Y.
 Midwest Radio Corp., 909 Broadway, Cincinnati, Ohio
 Northern Communications Mfg. Co., 210 E. 40th St., New York, N. Y.
 See Advertisement on Page 206
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 Radio Receptor Co., 251 W. 19th St., New York, N. Y.
 See Advertisement on Page 26
 Radio Specialty Mfg. Co., 2023 S. E. 6th St., Portland 14, Oregon
 Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 33, Ill.
 Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182-183
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

94

AMATEUR TRANSMITTERS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 Audar Inc., Argos, Indiana
 Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Dine and C., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
 Gross Communications Prods., 1865-71 Prospect Ave., Cleveland 15, Ohio
 See Advertisement on Page 214
 Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
 Kluge Electronics Co., 1031 N. Alvarado St., Los Angeles 26, Calif.
 MacLeod & Honopol, 24 Chelsea St., Charlestown 29, Mass.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

95

BROADCAST TRANSMITTERS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Gates Radio Co., 200 Hampshire St., Quincy, Ill.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Kluge Electronics Co., 1031 N. Alvarado St., Los Angeles 26, Calif.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Engineering Labs. Inc., 35-54 36th St., Long Island City, N. Y.
 Raytheon Mfg. Co., Broadcast Equip. Div., 7517 N. Clark St., Chicago, Ill.
 See Advertisement on Page 135
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
 Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
 See Advertisements on Pages 17-20; 190, 191

96

BROADCAST STL TRANSMITTERS

General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Radio Engineering Labs. Inc., 35-54 36th St., Long Island City, N. Y.

Raytheon Mfg. Co., Broadcast Equip. Div., 7517 N. Clark St., Chicago, Ill.
 See Advertisement on Page 135

97

COLOR TELEVISION TRANSMITTERS

Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17, 18, 19, 20, 190, 191

98

DIRECTION FINDING TRANSMITTERS

Airplane & Marine Instruments, Inc., Clearfield, Pa.
 Electronic Specialty Co., 3456 Glendale Blvd., Los Angeles 26, Calif.
 Grady Instrument Co., 11 Bailey Ave., Watertown 72, Mass.
 Gray Radio Co., 730 Okeechobee Rd., West Palm Beach, Fla.
 Hallicrafters Co., 2611 Indiana Ave., Chicago 16, Ill.
 National-Simplex-Bludworth, Inc., Marine Div., 100 Gold St., New York 7, N. Y.
 Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
 Western Electric Co., 120 Broadway, New York 7, N. Y.

99

FACSIMILE TRANSMITTERS

Bruning Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Times Telephoto Equipment Inc., 229 W. 43rd St., New York, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

100

FIXED FREQUENCY TRANSMITTERS

Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
 Lavoie Labs., Morganville, N. J.

101

FIXED STATION COMMUNICATION TRANSMITTERS

Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
 Alradio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
 Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
 Aireon Mfg. Corp., Fairfax & Funston Rds., Kansas City 15, Kansas
 See Advertisement on Page 130
 American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, North Hollywood, Calif.
 Bendix Radio Corp., Baltimore 4, Md.
 Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Communications Equipment Corp., 134 W. Colorado St., Pasadena, Calif.
 Electronic Engrg. Co., 616 G St., San Diego 1, Calif.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Gates Radio Co., 200 Hampshire St., Quincy, Ill.
 Gem Radio & Telev., 72 Cortlandt St., New York 6, N. Y.
 General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.

General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
 Harvey Wells Electronics Inc., North St., Southbridge, Mass.
 Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
 Hoffman Radio Corp., 3430 S. Hill St., Los Angeles 7, Calif.
 Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
 Link, Fred M., 125 W. 17th St., New York, N. Y.
 McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
 Press Wireless Mfg. Corp., 1475 Broadway, New York City 18, N. Y.
 See Advertisements on Pages 69-80
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Receptor Co., 251 W. 19th St., New York, N. Y.
 See Advertisement on Page 26
 Technical Devices Corp., Beaufort & Eagle Rock Ave., Roseland, N. J.
 Transmitter Equip. Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Waterproof Electric Co., 72 E. Verdugo Ave., Burbank, Calif.
 Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.

102

FM TRANSMITTERS

Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
 Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Communications Equip. Corp., 134 W. Colorado St., Pasadena, Calif.
 Ereo Radio Labs. Inc., Fenimore Ave., Hempstead, N. Y.
 See Advertisement on Page 280
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Gates Radio Co., 200 Hampshire St., Quincy, Ill.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Gross Communications Prods., 1865-71 Prospect Ave., Cleveland 15, Ohio
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
 Harvey Wells Electronics Inc., North St., Southbridge, Mass.
 Hoffman Radio Corp., 3430 S. Hill St., Los Angeles 7, Calif.
 Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Engineering Labs. Inc., 35-54 36th St., Long Island City, N. Y.
 Radio Labs. Inc., 2701 Calif. Ave., Seattle 6, Wash.
 Raytheon Mfg. Co., Broadcast Equipment Div., 7517 N. Clark St., Chicago, Ill.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
 See Advertisements on Pages 17, 18, 19, 20, 190, 191

103

MARINE TRANSMITTERS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
 Gates Radio Co., Quincy, Ill.

ELECTRONIC and ALLIED PRODUCTS

General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Gray Radio Co., 730 Okeeshobee Rd., W. Palm Beach, Fla.
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Islip Radio Mfg. Co., Beech St., Islip, N. Y.
 Jefferson, Inc. Ray, 40 E. Merrick Rd., Freeport, L. I., N. Y.
 Jefferson-Travis Radio Mfg. Corp., 245 E. 23rd St., New York 10, N. Y.
 Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
 Lincoln Electronics Corp., 653 11th Ave., New York, N. Y.
 Northern Radio Co., 2208 4th Ave., Seattle, Wash.
 Radio Labs. Inc., 2701 Calif. Ave., Seattle 6, Wash.
 Televiso Products Inc., 6533 N. Olmstead Ave., Chicago, Ill.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Western Elec. Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183
 Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
 See Advertisements on Pages 17-20; 190, 191

104

MICROWAVE TRANSMITTERS

Bendix Radio Corp., Baltimore 4, Md.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

105

PORTABLE & MOBILE RADIOTELEPHONE TRANSMITTERS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Barker & Williamson, 225 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Bassett Inc., Rex, 500 S. E. 2nd St., Ft. Lauderdale, Fla.
 Belmont Radio Corp., Div. Raytheon Mfg. Co., 5921 Dickens Ave., Chicago 39, Ill.
 Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, North Hollywood, Calif.
 Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Cover Dual Signal Systems, Inc., Div. of Electra Voice Corp., 5215-25 Ravenswood Ave., Chicago 40, Ill.
 Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago, Ill.
 See Advertisement on Page 114
 Erco Radio Labs. Inc., Fenimore Ave., Hempstead, N. Y.
 See Advertisement on Page 280
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Gray Radio Co., 730 Okeeshobee Rd., W. Palm Beach, Fla.
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Harvey Wells Electronics Inc., North St., Southbridge, Mass.

Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
 Hudson Amer. Corp., 25 W. 43rd St., New York, N. Y.
 Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, L. I., N. Y.
 Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
 Kluge Electronics Co., 1031 N. Alvarado St., Los Angeles 26, Calif.
 Meck Industries, John, Liberty at Pa., Plymouth, Indiana
 Northern Radio Co., 2208 4th Ave., Seattle, Wash.
 Philco Corp., Tioga & C Sts., Phila. 34, Pa.
 Radio Engineering Labs. Inc., 35-54 36th Sts., Long Island City, N. Y.
 Radio Labs. Inc., 2701 Calif. Ave., Seattle 6, Wash.
 Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
 Raytron, Inc., 407 N. Jackson Street, Jackson, Mich.
 Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183

106

PULSE TIME MODULATION TRANSMITTERS

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302

107

RADIO RANGE TRANSMITTERS

Aero Communications, Inc., 231 Main St., Hempstead, L. I., N. Y.
 Bendix Radio Corp., Baltimore 4, Md.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Radio Receptor Co., 251 W. 19th St., New York, N. Y.
 See Advertisement on Page 26

108

RAILROAD TRANSMITTERS

Elmont Radio Corp., Div. Raytheon Mfg. Co., 5921 Dickens Ave., Chicago 39, Ill.
 Bendix Radio Corp., Baltimore 4, Md.
 Communications Co. Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Western Electric Co. Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183
 Westinghouse Electric Corp., 2519 Wilkens Ave., Baltimore 3, Md.
 See Advertisements on Pages 17-20; 190-191

109

TELEVISION TRANSMITTERS

DuMont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
 Farnsworth Television & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.

Federal Telephone & Radio Corp., 501 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Radio Corp. of America, RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Raytheon Mfg. Co., Waltham 54, Mass.
 See Advertisement on Page 135
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
 Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
 See Advertisements on Pages 17-20; 190-191

110

U.H.F. TRANSMITTERS

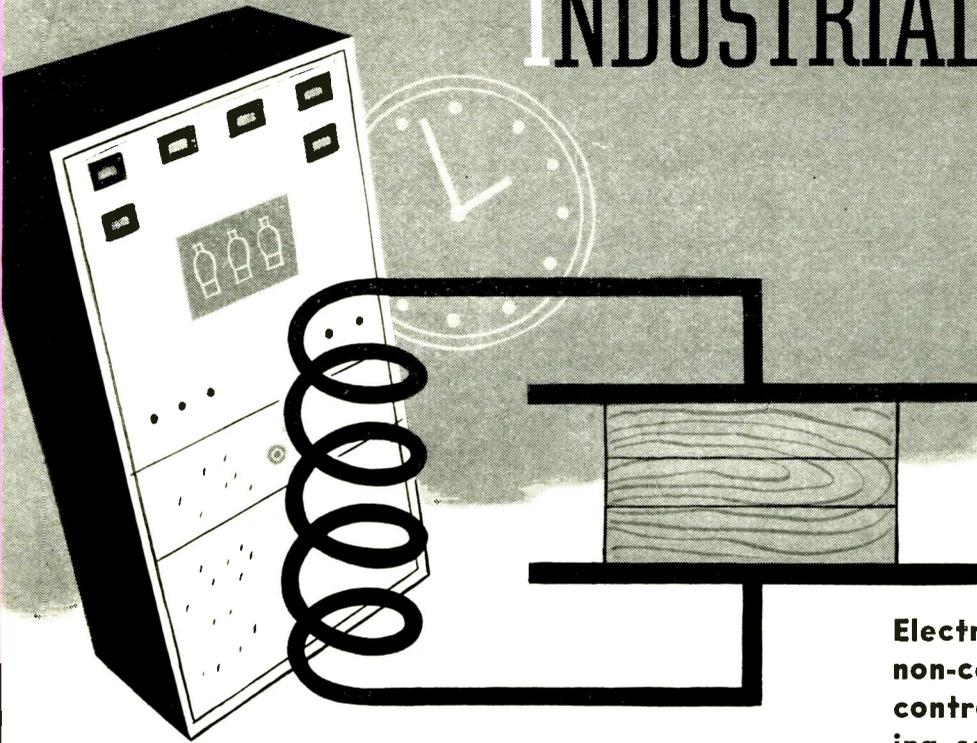
Abbott Instrument, Inc., 8 W. 18th St., New York, New York
 Bendix Radio Corp., Baltimore 4, Md.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Elec. Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Remington Rand, Electronic Div., Middletown, Conn.

111

V.H.F. TRANSMITTERS

Abbott Instrument, Inc., 8 W. 18th St., New York, New York
 Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
 Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
 Bassett Inc., 500 S. E. 2nd St., Ft. Lauderdale, Fla.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Communications Equipment Corp., 134 W. Colorado St., Pasadena, Calif.
 Cover Dual Signal Systems, Inc., Div. of Electra Voice Corp., 5215-25 Ravenswood Ave., Chicago 40, Ill.
 Erco Radio Labs. Inc., Fenimore Ave., Hempstead, N. Y.
 See Advertisement on Page 280
 Farnsworth Television & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.
 General Elec. Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Gross Communications Prods., 1865-71 Prospect Ave., Cleveland 15, Ohio
 See Advertisement on Page 214
 Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
 Harvey Wells Electronics Inc., North St., Southbridge, Mass.
 Islip Radio Mfg. Co., Beech St., Islip, N. Y.
 Megard Corp., 1601 S. Burlington St., Los Angeles 6, California
 Radio Receptor Co., 251 W. 19th St., New York, N. Y.
 See Advertisement on Page 26
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

INDUSTRIAL ELECTRONIC EQUIPMENT



SEE INDEX FOR ALL PRODUCT LISTINGS

Electronic devices and systems used for non-communication purpose—for process control, for certain research work, counting, sorting etc.—will be found in this portion of the Buyers' Guide. For Medical Electronic Equipment, see listing at the end of this section

112

Analyzers

GAS ANALYZERS

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212

113

SURFACE ANALYZERS & COMPARATORS

Brush Development Co., 3405 Perkins Ave., Cleveland 14, Ohio
See Advertisement on Page 137
Physicists Research Co., 343 S. Main St., Ann Arbor, Mich.
Saxl Instr. Co., 6 Linnaean St., Cambridge 38, Mass.
York Elec. & Machine Co., Carillotone Div., 30-34 N. Penn St., York, Pa.

114

VIBRATION ANALYZERS

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

115

Colorimeters

PHOTO-ELECTRIC COLORIMETERS

Baker Instrument Co., 310 Main St., Orange, N. J.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Fisher Scientific Co., 717 Forbes St., Pittsburgh, Pa.
General Electric Co., Schenectady, N. Y.
See Advertisements on Pages 204, 212

Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
Pho-Tron Instrument Co., 5713 Euclid Ave., Cleveland, Ohio
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.

116

Compasses, Gyro

ELECTRONIC GYRO COMPASSES

Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

117

Controls

ALARM SYSTEMS

Browning Laboratories, Inc., 750 Main, Winchester, Mass.
Edison Inc., Thomas H., Instrument Div., Orange, N. J.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Electronic Radio Alarm, Inc., 1920 Lincoln-Liberty Bldg., Philadelphia 7, Pa.
Ess Instrument Co., 963 Washington St., Bergenfield, N. J.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Moulis Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill.
Radio Development Labs., 362 Atlantic Ave., Brooklyn 2, N. Y.
Worner Products Corp., 1019 W. Lake St., Chicago 6, Ill.

118

CHEMICAL CONTROLS

La Motte Chem. Prod. Co., Towson 4, Baltimore, Md.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

119

COUNTERS

Airpax Products Co., P. O. Box 5741 Baltimore 4, Md.
American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
Automatic Temperature Control Co., 18 W. Chelton Ave., Phila. 44, Pa.
Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.
Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Hetherington & Son Inc., Robert, Sharon Hill, Pa.
Potter Instrument Co., 136-56 Roosevelt Ave., Flushing, N. Y.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Radio Development Labs., 362 Atlantic Ave., Brooklyn 2, N. Y.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191
Worner Products Corp., 1019 W. Lake St., Chicago, Ill.

120

COUNTING & SORTING CONTROLS

Airpax Products Co., P. O. Box 5741, Baltimore 4, Md.
Autotron Co., Danville, Ill.

1946-1947 DIRECTORY of ELECTRONIC and ALLIED PRODUCTS

Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Photoswitch, 77 Broadway, Cambridge 42, Mass.
Pollak Manufacturing Co., Arlington, N. J.
Willmote Mfg. Co., 1713 Kalamazoo Rd., N. W. Washington 9, D. C.
See Advertisement on Page 281

121

DIFFERENTIAL WINDING CONTROLS

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

122

DIMENSION CONTROLS

Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Foote, Pierson & Co. Inc., 75 Hudson St., Newark 4, N. J.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212

123

DOOR CONTROLS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Radio Development Labs., 362 Atlantic Ave., Brooklyn 2, N. Y.
Stanley Works, New Britain, Conn.

124

ELECTRONIC OZONE MEASUREMENT & CONTROL APPARATUS

Kemlite Labs., 1809 N. Ashland Ave., Chicago, Ill.
Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J.

125

FLOW CONTROLS

American Instrument Co., 8030 Georgia Ave., Silver Springs, Md.
Askania Regulator Co., 1603 S. Michigan Ave., Chicago 16, Ill.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

126

FLUID CONDUCTIVITY CONTROLS

Combustion Control Corporation, 77 Broadway, Cambridge 42, Mass.
Foxboro Co., Foxboro, Mass.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

127

FOOD PROCESSING CONTROLS

Electric Sorting Machine Co., 410 Dennis Rd. S.W., Grand Rapids, Mich.

128

HEAT TREATING CONTROLS

Electronic Process Corp., 249 Richards Rd., Ridgewood, N. J.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.

129

HUMIDITY CONTROLS

Bristol Co., The, Waterbury 91, Conn.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Friez Instrument Div., Bendix Aviation Corp., Taylor Ave., near Loch Raven Blvd., Baltimore 4, Md.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y.
Tenney Engineering Inc., 24-28 Avenue B., Newark, N. J.

130

INSPECTION CONTROLS

Airpax Products Co., P. O. Box 6741, Baltimore 4, Md.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Photoswitch, 77 Broadway, Cambridge 42, Mass.
Pollak Manufacturing Co., Arlington, N. J.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover

131

LIGHTING CONTROLS

Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Electronic Products Co., 19 No. First St., Geneva, Ill.
Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
See Advertisement on Page 259
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Radio Development Labs., 362 Atlantic Ave., Brooklyn 2, N. Y.
Ripley Co., Torrington, Conn.
See Advertisements on Pages 30; 108, 109
Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
See Advertisements on Pages 198, 199

132

LIQUID LEVEL CONTROLS

Alco Valve Co., 865 Kingsland, St. Louis 5, Mo.
Askania Regulator Co., 1603 So. Michigan Ave., Chicago 16, Ill.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio
Bristol Co., The, Waterbury 91, Conn.
Edison Inc., Thomas H., Instrument Div., Orange, N. J.
Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
Fisher-Pierce Co., 80 Ceylon Street, Boston, Mass.
See Advertisement on Page 259

When Ordering or Inquiring

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**ELECTRONICS
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General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Lumenite Electric Co., 407 S. Dearborn St., Chicago, Illinois
Photoswitch, 77 Broadway, Cambridge 42, Mass.
Technographics, Inc., 1457 W. Diversity Blvd., Chicago 14, Ill.
Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill.

133

LOOP REGULATION CONTROLS

Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190-191

134

MACHINE SAFETY CONTROLS

Airpax Products Co., P. O. Box 6741, Baltimore 4, Maryland
American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Hoffman Engineering Co., 458 Sexton Bldg., Minneapolis 4, Minn.
Photoswitch, 77 Broadway, Cambridge 42, Mass.
Weltronic Co., 3080 E. Outer Drive, Detroit 17, Mich.
Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill.

135

MOISTURE CONTROLS

American Instrument Co., 8030 Georgia Ave., Silver Springs, Md.
Foxboro Co., Foxboro, Mass.
Moisture Register Co., 133 No. Garfield, Alhambra, Calif.
Tech Laboratories, 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

136

PACKAGE WRAPPING CONTROLS

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212

137

PHOTOELECTRIC CONTROLS

Aerolux Light Corp., 653-11th Ave., New York 19, N. Y.
Alreon Mfg. Corp., Fairfax & Funston Rds., Kansas City 15, Kansas
See Advertisement on Page 130
American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
Cinaudagraph Speakers, Inc., 3911 S. Michigan Ave., Chicago, Ill.
Eagle Signal Corp., 202 20th St., Moline, Ill.
Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Electronic Controls Inc., 44 Summer Ave., Newark, N. J.
Fischer-Smith Inc., 162 State St., West Englewood, N. J.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill.
Photoswitch, 77 Broadway, Cambridge 42, Mass.
Ripley Co., Torrington, Conn.
See Advertisements on Pages 30; 108, 109
Vendo Co., 1907 Grand Ave., Kansas City 8, Mo.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190-191
Worner Electronic Devices, 609 W. Lake St., Chicago 6, Ill.

138

PHOTOGRAPHIC EXPOSURE CONTROLS

Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Sidward Products Co., 261 Broadway, New York 7, N. Y.
 Wilmotte Mfg. Co., 1713 Kalorama Rd. N. W., Washington 9, D. C.
 See Advertisement on Page 281

139

POSITIONING CONTROLS

Fairchild Camera & Instrument Corp., 475 10th Ave., New York 18, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212

140

PRESSURE CONTROLS

Askania Regulator Co., 1603 So. Michigan Ave., Chicago 16, Ill.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio
 Bristol Co., The, Waterbury 91, Conn.
 Commercial Research Labs, Inc., 20 Bartlett Ave., Detroit 3, Mich.
 See Advertisement on Page 126
 Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Technographics, Inc., 1457 W. Diversity Blvd., Chicago 14, Ill.
 United Electric Controls Co., 71A Street, S. Boston 27, Mass.

141

PRINTING CONTROLS

Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
 See Advertisement on Page 259
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Photoswitch, 77 Broadway, Cambridge 42, Mass.
 Ripley Co., Torrington, Conn.
 See Advertisements on Pages 30; 108, 109

142

REFRIGERATION DEFROSTING CONTROLS

Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
 See Advertisement on Page 259

143

REGISTER CUTTER CONTROLS

General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

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BUYERS' GUIDE

144

SERVO CONTROLS

Askania Regulator Co., 1603 So. Michigan Ave., Chicago 16, Ill.
 Fairchild Camera & Instrument Corp., 475 10th Ave., New York 18, N. Y.
 Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
 Yardeny Laboratories, Inc., 105 Chambers Street, New York 7, N. Y.

145

SMOKE DENSITY COMBUSTION and CONTROLS

Airpax Products Co., P. O. Box 6741, Baltimore 4, Maryland
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland, Ohio
 Combustion Control Corp., 77 Broadway, Cambridge 42, Mass.
 Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electronic Products Co., 19 No. First St., Geneva, Ill.
 Ess Instrument Co., 963 Washington St., Bergenfield, N. J.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Photoswitch, 77 Broadway, Cambridge 42, Mass.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Task Electronics Co., 245 W. 54th St., New York, N. Y.
 Worner Products Corp., 1019 W. Lake St., Chicago 6, Ill.

146

SUPERSONIC CONTROLS

Vendo Co., 1907 Grand Ave., Kansas City 8, Mo.

147

TEMPERATURE CONTROLS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Askania Regulator Co., 1603 So. Michigan Ave., Chicago 16, Ill.
 Automatic Temperature Control Co., 34 E. Logan St., Phila., Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio
 Baker Instrument Co., 310 Main St., Orange, N. J.
 Bristol Co., The, Waterbury 91, Conn.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Fisher-Smith, Inc., 162 State St., West Englewood, N. J.
 Friez Instrument Div., Bendix Aviation Corp., Taylor Ave., near Loch Raven Blvd., Baltimore 4, Md.
 Fulton Sylphon Co., Knoxville, Tenn.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Huber Radio Co., 260 S. Center St., Casper, Wyo.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Sarco Co., Inc., 475 Fifth Ave., New York 17, N. Y.
 United Electric Controls Co., 71A Street, S. Boston 27, Mass.
 Wheelco Instruments Corp., 847 W. Harrison St., Chicago 7, Ill.

148

TENTERING CONTROLS

Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
 See Advertisement on Page 259

149

TIMING CONTROLS

Airpax Products Co., P. O. Box 6741, Baltimore 4, Md.
 American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Automatic Temperature Control Co., 18 W. Cheltenham Ave., Phila. 44, Pa.
 Cramer Co., R. W., Centerbrook, Conn.
 Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.
 Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
 Electronic Controls Inc., 44 Summer Ave., Newark, N. J.
 Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
 See Advertisement on Page 259
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Kay Electric Co., 8 Eaton Pl., Newark, N. J.
 See Advertisement on Page 134
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Radio Development Labs., 362 Atlantic Ave., Brooklyn 2, N. Y.
 Sciaky Bros., 4915 W. 67th St., Chicago 38, Ill.
 Standard Elect. Time Co., 89 Logan St., Springfield, Mass.

150

VENTILATING CONTROL SYSTEMS

Worner Products Corp., 1019 W. Lake St., Chicago, Ill.

151

WATER DETECTOR CONTROLS

Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
 See Advertisement on Page 259

152

WEIGHT CONTROLS

Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
 Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
 Foxboro Co., Foxboro, Mass.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212

153

WELDING CONTROLS

Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wisc.
 Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
 Electronic Power Co. Inc., 18 W. 44th St., New York, N. Y.
 Electronic Products Co., 19 No. First St., Geneva, Ill.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Hercules Electric & Mfr. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
 Sciaky Bros., 4915 W. 67th St., Chicago 38, Ill.
 Taylor-Winfield Corp., 1052 Mahoning Ave., N.W., Warren, Ohio
 Vangtronic Corp., 87 Washburn St., Bridgeport, Conn.
 See Advertisement on Page 38
 Weltronic Co., 3080 E. Outer Drive, Detroit 17, Mich.
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

154

Detectors

EXPLOSIVE GAS DETECTORS

Cardox Western, Inc., 1515 North Ave. 19, Los Angeles 31, Calif.

ELECTRONIC and ALLIED PRODUCTS

155

FLAW & DEFECT DETECTORS

Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Sperry Products, Inc., 15th & Willow Avenue, Hoboken, N. J.
Westinghouse Elec. Corp., East Pittsburgh, Pa.

See Advertisements on Pages 17-20; 190, 191

156

MERCURY VAPOR DETECTORS

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212

157

VIBRATION DETECTORS

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

158

Dilatometers, Automatic Recording

Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125

159

Dryers, Electronic

DEHYDRATION and DRYING

Communication Prods. Co., Inc., Route 36, Palmer Ave., Keansburg, N. J.
Despatch Oven Co., 619 S. E. Eighth St., Minneapolis 14, Minn.
Electronic Processes Corp., 249 Richards Rd., Ridgewood, N. J.

160

Gauges, Electronic

Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
Senn Corp., New Augusta, Ind.

161

COMPARATOR GAUGES

Continental Machines, Inc., 1366 S. Washington Ave., Minneapolis 4, Minn.
Jack & Heintz Precision Industries, Inc., Cleveland 1, Ohio
Metron Instrument Co., 432 Lincoln St., Denver 9, Colo.
Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.
Scherr, Geo. D., 200 Lafayette St., New York, N. Y.

162

DISPLACEMENT MEASURING GAUGES

Statham Labs., 8222 Beverly Blvd., Los Angeles 36, Cal.

163

ELECTRONIC FUEL INDICATOR GAUGES

Simonds Aerocessories, Inc., 30 Rockefeller Plaza, New York 20, N. Y.

164

ELECTRONIC INSPECTION GAUGES

Autotron Co., Canville, Ill.

165

ELECTRONIC SPRING CHECKING GAUGES

Link Engineering Co., 13581 Elmira St., Detroit 27, Mich.

166

IONIZATION GAUGES

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 201, 212
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

167

PAINT DEPTH GAUGES

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

168

PHOTOELECTRIC DIMENSION GAUGES

Electronic Control Corp., 1573 E. Forest Street, Detroit, Mich.

169

PIRANI GAUGES

Ballantine Labs. Inc., Boonton, N. J.
See Advertisement on Page 124

170

PRESSURE GAUGES

Brush Development Co., 3405 Perkins Ave., Cleveland 14, Ohio
See Advertisement on Page 137
Statham Laboratories, 8222 Beverly Blvd., Los Angeles 36, Cal.
Trimount Instrument Co., 37 W. Van Buren, Chicago 5, Ill.

171

STRAIN GAUGES

Baker Instrument Co., 310 Main St., Orange, N. J.
Chatillon & Sons, John, 93 Cliff St., New York 7, N. Y.
Hathaway Instrument Company, 1315 S. Clarkson St., Denver 10, Colorado
See Advertisement on Page 210
Statham Laboratories, 8222 Beverly Blvd., Los Angeles 36, Cal.

172

VACUUM GAUGES

Continental Electric Co., 903 Merchandise Mart, Chicago 54, Ill.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.
National Research Corp., Vacuum Engrg. Div., 100 Brookline Ave., Boston 15, Mass.
Savilion Labs., Inc., 1025 Broad Street, Newark 2, N. J.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Phila. 20, Pa.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
Winslow Co., 9 Liberty St., Newark 5, N. J.

173

Geophysical Apparatus

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
Engineering Laboratories, Inc., 602 E. Fourth St., Tulsa 3, Okla.
Geophysical Instrument Co., Key Blvd. & Nash St., Arlington, Va.
Helland Research Corp., 130 East Fifth St., Denver 9, Colo.
Miller Corp., Wm., 362 W. Colorado St., Pasadena, Calif.
Trion Electric Corp., 76 Ellicott St., Buffalo 3, N. Y.

174

Heating, Electronic

INDUCTION and DIELECTRIC HEATING

Airtonics Mfg. Co., 5145 W. San Fernando Rd., Los Angeles 26, Calif. (Dielectric)
Ajax Electrothermic Induction Corp., Ajax Park, Trenton, N. J.
Allis Chalmers Mfg. Co., Milwaukee 1, Wisc. (Induction and Dielectric)
American Radio Co., 611 E. Garfield Ave., Glendale, Calif. (Dielectric)
See Advertisement on Page 231
Budd Induction Heating Inc., Detroit, Mich. (Induction)
Bunnell & Co., J. H., 215 Fulton St., New York, N. Y. (Induction & Dielectric)
Burnam Co., C. N., 781 River St., Paterson, N. J.
Cornish Development Corp., 123 William St., New York, N. Y. (Induction)
Ecco High Frequency Elec. Corp., 7020 Hudson Blvd., North Bergen, N. J. (Induction)
Electric Furnace Co., W. Wilson St., Salem, Ohio (Induction)
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif. (Induction)
Federal Elect. Co. Inc., 8700 S. State St., Chicago 19, Ill. (Induction and Dielectric)
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J., (Induction & Dielectric)
See Advertisements on Pages 209-302
General Electric Co., Schenectady 5, N. Y. (Induction and Dielectric)
See Advertisements on Pages 204, 212
Induction Heating Corp., 389 LaFayette St., New York 3, N. Y. (Induction & Dielectric)
Kahle Engrg. Co., 1307 7th St., North Bergen, N. J. (Dielectric)
LaRose, W. T. & Associates, 635 Second Ave., Troy, N. Y. (Induction and Dielectric)
Lepel High Frequency Labs., 39 W. 60th St., New York, N. Y. (Induction and Dielectric)
Lincoln Electronics Corp., 653 11th Ave., New York, N. Y. (Dielectric)
Lyman Electronic Corp., 12 Cass St., Springfield, Mass. (Induction and Dielectric)
Marion Electrical Instrument Co., Manchester, N. H. (Induction)
Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill. (Induction & Dielectric)
Ohio Crankshaft Co., Tocco Div., 3800 Harvard Ave., Cleveland 1, Ohio (Induction)
Parker Engineering Prods. Co., 16 W. 22nd St., New York 10, N. Y. (Induction and Dielectric)
Polk Electronics, 119 Bleecker St., New York 12, N. Y. (Induction and Dielectric)
S-W Inductor Co., 1056 N. Wood St., Chicago, Illinois (Induction and Dielectric)
Scientific Elec. Div. of "S" Corrugated Quenched Gap Co., 111 Monroe St., Garfield, N. J. (Induction and Dielectric)
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y. (Induction and Dielectric)
Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y. (Induction)
See Advertisement on Page 125

Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J. (Dielectric)
 Weltronic Co., 3080 E. Outer Dr., Detroit 17, Mich. (Induction)

175

ACCESSORIES and ASSOCIATED EQUIPMENT

Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Lepel High Frequency Labs., 39 W. 60th St., New York, N. Y.
 Long Co., L. J., 186 Grand St., New York 13, N. Y.
 Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.
 Wilmotte Mfg. Co., 1713 Kalorama Rd., N. W., Washington 9, D. C.
 See Advertisement on Page 281

176

Ignitions, Electronic

Madison Electrical Products Corp., 74 Main St., Madison, N. J.
 See Advertisement on Page 232

177

Indicators

AUTOMATIC MIXTURE CONTROL INDICATORS

Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

178

DETONATION INDICATORS & METERS

Electro Products Labs., 549 W. Randolph St., Chicago 6, Ill.
 See Advertisement on Page 278
 Engineering Lab. Inc., 602 E. 4th St., Tulsa, 3, Okla.
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

179

FILM THICKNESS INDICATORS

Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.

180

MOISTURE INDICATORS

General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
 C. J. Tagliabue Div., Portable Products Corp., 550 Park Avenue, Brooklyn 5, N. Y.

181

POWER LEVEL INDICATORS and RECORDERS

Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
 Daven Co., 191 Central Ave., Newark 4, N. J.
 See Advertisement on Inside Back Cover
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
 Shallcross Mfg. Co., 10 Jackson Ave., Colingdale, Pa.
 See Advertisement on Page 38

Sound Apparatus Co., 233 Broadway, New York 7, N. Y.
 See Advertisement on Page 152
 Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
 See Advertisement on Page 249

182

RECORDING ENGINE INDICATORS

American Instrument Co., 8030 Georgia Ave., Silver Springs, Md.
 Electro Products Labs., 549 W. Randolph St., Chicago 6, Ill.

183

SOLAR RADIATION INDICATORS

Eppley Lab. Inc., Newport, R. I.
 Victoreen Instrument Co., 5806 Hough Ave., Cleveland 3, Ohio

184

SPECIFIC GRAVITY INDICATORS & RECORDERS

Ess Instrument Co., 963 Washington St., Bergenfield, N. J.

185

STEEL HARDNESS INDICATORS

Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.

186

SUPERSONIC DEPTH INDICATORS & RECORDERS

National-Simplex-Bludworth, Inc., Marine Div., 100 Gold St., New York 7, N. Y.

187

TEMPERATURE INDICATORS

C. J. Tagliabue Div., Portable Products Corp., 550 Park Avenue, Brooklyn 5, N. Y.

188

TURBIDITY INDICATORS & RECORDERS

American Instr. Co., 8030 Georgia Ave., Silver Springs, Md.
 Ess Instrument Co., 963 Washington St., Bergenfield, N. J.

189

Lie Detectors

Malco Co. Inc., 25 N. 3rd St., Minneapolis, Minn.

190

Locators

ELECTRONIC METAL LOCATORS & DETECTORS

Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
 Engineering Lab. Inc., 602 E. 4th St., Tulsa 3, Okla.
 Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Geophysical Instrument Co., Key Blvd. & Nash Street, Arlington, Va.

Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn.
 Nilsson Electrical Lab. Inc., 103 Lafayette St., New York 13, N. Y.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Wilmotte Mfg. Co., 1713 Kalorama Rd., N. W., Washington 9, D. C.
 See Advertisement on Page 281

191

POWER LINE FAILURE LOCATORS

Raytron, Inc., 407 N. Jackson St., Jackson, Mich.

192

Machines

ELECTRONIC BALANCING MACHINES

Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind.
 Roller-Smith, Bethlehem, Pa.
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

193

ELECTRONIC BEVERAGE INSPECTION MACHINES

Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover

194

Mechanisms, Computing

ELECTRONIC COMPUTING MECHANISMS

Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

195

Meteorological Equipment, Electronic

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Friez Instrument Div., Bendix Aviation Corp., Taylor Ave., near Loch Raven Blvd., Baltimore 4, Md.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212

196

Meters, Industrial

ACCELEROMETERS

Statham Labs., 8222 Beverly Blvd., Los Angeles 36, Cal.
 Trimount Instrument Co., 37 W. Van Buren, Chicago 5, Ill.

197

COUNTING RATE METERS (Geiger)

Atomic Instruments Co., 160 Charles St., Boston, Mass.
 See Advertisement on Page 202
 Cyclotron Specialties Co., Morago 3, Calif.
 Engineering Lab. Inc., 602 E. 4th St., Tulsa 3, Okla.

ELECTRONIC and ALLIED PRODUCTS

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Geophysical Instrument Co., Key Blvd. & Nash St., Arlington, Va.
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Instrument Development Labs., 817 East 55th St., Chicago 15, Ill.
Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.

198

DENSITOMETERS

Applied Research Labs., 4336 San Fernando Rd., Glendale 4, Calif.
Long Co., L. J., 186 Grand St., New York 13, N. Y.
Madison Electrical Products Corp., 74 Main St., Madison, N. J.
See Advertisement on Page 232

199

DYNAMOMETERS

Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
See Advertisement on Page 210
L. A. B. Corp., Summit, N. J.
Statham Labs., 8222 Beverly Blvd., Los Angeles 36, Cal.

200

ELAPSED TIME METERS

Aero Instrument Co., 3907 San Fernando Rd., Glendale 4, Calif.
Industrial Timer Corp., 117 Edison Pl., Newark 5, N. J.
Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.

201

ELECTRONIC SPEEDOMETERS

Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.

202

FILMETERS

American Instrument Co., 8030 Georgia Ave., Silver Springs, Md.

203

FLOW METERS

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio
Fischer & Porter Co., Hatboro, Pa.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

204

FLUOROMETERS

Coleman Elec. Co., 318 Madison St., Maywood, Ill.
Farrand Optical Co. Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
Marco Co., Inc., 125 N. 34th St., Minneapolis, Minn.
Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.

205

FOOTCANDLE METERS

General Electronics, Inc., 101 Hazel St., Paterson, N. J.

206

LIGHT METERS

DeJur-Amsco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y.
See Advertisements on Pages 46-47
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

207

ELECTRONIC MICROMETERS

Carson Micrometer Corp., Box 57, Little Falls, N. J.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246
Television Products, Inc., 6533 N. Ohmsted Ave., Chicago, Ill.
Westinghouse Electric Corp., East Pittsburgh, Pa.

208

MOISTURE METERS

Delmhorst Instrument Co., 115 Cornelia Street, Boonton, N. J.
Measurements Corp., Boonton, N. J.
See Advertisement on Page 194
Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

209

pH METERS, RECORDERS & COMPARATORS

Baker Instrument Co., 310 Main St., Orange, N. J.
Brown Instrument Co., 4428 Wayne Ave., Philadelphia 44, Pa.
Central Scientific Co., 1700 Irving Park Blvd., Chicago 13, Ill.
Coleman Electric Co., 318 Madison St., Maywood, Ill.
Fisher Scientific Co., 717 Forbes St., Pittsburgh 16, Pa.
Foxboro Co., Foxboro, Mass.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
LaMotte Chemical Products Co., Towson 4, Baltimore, Md.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
National Technical Labs., 820 Mission St., South Pasadena, Calif.
Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Rubicon Co., 3751 Ridge Ave., Phila., Pa.
See Advertisement on Page 295
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

210

PHOTOELECTRIC REFLECTION METERS

Gardner Lab., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Photovolt Corp., 95 Madison Ave., New York 16, N. Y.

211

PHOTOMETERS

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.
Perkin Elmer Corp., Glenbrook, Conn.
Photovolt Corp., 95 Madison Ave., New York 16, N. Y.

212

PORTABLE INSTRUMENT POTENTIOMETERS

Wheelco Instruments Corp., 847 W. Harrison St., Chicago 7, Ill.
Winslow Co., 9 Liberty St., Newark 5, N. J.

213

PYROMETERS & POTENTIOMETER PYROMETERS

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio
Brown Instrument Co., 4428 Wayne Ave., Philadelphia 44, Pa.
Electro-Tech Equipment Co., 331 Canal St., New York 13, N. Y.
Elematic Equipment Corp., 6046 S. Wentworth Ave., Chicago 21, Ill.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Illinois Testing Labs. Inc., 420 N. La Salle St., Chicago 10, Ill.
JBT Instruments, Inc., 441 Chapel St., New Haven 8, Conn.
See Advertisement on Page 293
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
Scientific Service Lab., Subsidiary Electronics, Inc., South Pasadena, Calif.
Tagliabue Div., C. J., Portable Prod. Corp., 550 Park Ave., Brooklyn 5, N. Y.
Wheelco Instruments Corp., 846 W. Harrison St., Chicago 7, Ill.
Winslow Co., 9 Liberty St., Newark 5, N. J.

214

RATIOMETERS

Edison Inc., Thomas H., Instrument Div., Orange, N. J.
Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.

215

SPECTROPHOTOMETERS

Coleman Elec. Co., 318 Madison St., Maywood, Ill.
Farrand Optical Co. Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
National Technical Lab., 820 Mission St., South Pasadena, Calif.

216

TENSION METERS

Saxl Instrument Co., 6 Linnaean St., Cambridge 38, Mass.
Sipp-Eastwood Corp., Keen & Summer Sts., Paterson, N. J.

217

VIBRATION METERS

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

When Ordering or Inquiring

please mention the

**ELECTRONICS
BUYERS' GUIDE**

218

VISCOSIMETERS WITH ELECTRONIC RECORDERS

Fish-Schurman Corp., 230 E. 45th St., New York 17, N. Y.

219

VISCOSITY METERS

Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

220

X-RAY INTENSITY METERS

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Victoreen Instrument Co., 5806 Hough Ave., Cleveland 3, Ohio

221

Pilots, Automatic

Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

222

Recorders

COMBUSTION RECORDERS

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio

223

ELECTRONIC ROTARY STYLUS RECORDERS

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
Connecticut Telephone & Elec. Div., Great American Industries, 70 Britannia St., Meriden, Conn.

224

ELECTRONIC SELF-BALANCING RECORDERS & INDICATORS

Foxboro Co., Foxboro, Mass.

225

MECHANICAL PEN RECORDERS

Rahm Instruments, Inc., 12 W. Broadway, New York, N. Y.

226

OXYGEN RECORDERS

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio

227

Sonic Locating Equipment

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Submarine Signal Co., 160 State, Boston, Mass.

228

Sonic Pressure Measuring Equipment

Massa Labs, Inc., 3868 Carnegie Ave., Cleveland, Ohio
See Advertisement on Page 246
Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y.

229

Spectrometers & Spectrographs

Applied Research Labs., 4336 San Fernando Rd., Glendale 4, Calif.
Consolidated Engrg. Corp., 595 E. Colorado St., Pasadena 5, Calif.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 66, N. Y.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
North American Phillips Co. Inc., 100 E. 42nd St., New York 17, N. Y.
Perkin Elmer Corp., Glenbrook, Conn.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Victoreen Instrument Co., 5806 Hough Ave., Cleveland 3, Ohio

230

Stroboscopes

Audio Products Co., 2101 W. Olive Ave., Burbank, Calif.
See Advertisement on Page 270
Communication Measurements Lab., 120 Greenwich St., New York, N. Y.
See Advertisements on Pages 261, 294
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Federal Recorder Co., Elkhart, Ind.
General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

231

Synchronizers, Electronic

ELECTRONIC AIRCRAFT MAGNETO SYNCHRONIZERS

Lyman Electronic Corp., 12 Cass St., Springfield, Mass.

232

Tachometers, Electronic

Biddle Co., Jas. G., 1213 Arch St., Phila. Pa.
Brown Instrument Co., 4428 Wayne Ave., Philadelphia 44, Pa.

Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
See Advertisement on Page 113
Metron Instrument Co., 432 Lincoln St., Denver 9, Colo.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

233

Testers

INK PENETRATION TESTERS

Tech Laboratories, 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

234

Timers

AUTOMATIC CYCLE TIMERS

Cramer Co., R. W., Centerbrook, Conn.
Cutler-Hammer, Inc., 315 North 12th Street, Milwaukee 1, Wisc.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
General Control Co., 1200 Soldiers Field Rd., Boston 34, Mass.
Gorrell & Gorrell, 40 Littlefield Rd., Newton Center, Mass.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
Paragon Electric Co., 37 W. Van Buren St., Chicago 5, Ill.
Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
See Advertisement on Page 270
Rowe Radio Research Laboratory Co., 2422 N. Pulaski Rd., Chicago 39, Ill.
Tork Clock Co., 1 Grove St., Mt. Vernon, N. Y.

235

AUTOMATIC INTERVAL TIMERS

Aurex Corp., 1117 N. Franklin St., Chicago, Ill.
Automatic Temperature Control Co., 34 E. Logan St., Philadelphia 44, Pa.
Cramer Co., R. W., Centerbrook, Conn.
Electronic Controls Inc., 44 Summer Ave., Newark, N. J.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Gorrell & Gorrell, 40 Littlefield Rd., Newton Center, Mass.
Industrial Timer Corp., 117 Edison Pl., Newark 5, N. J.
Instrument Development Labs., 817 E. 55th St., Chicago 15, Ill.
Kay Electric Co., 8 Eaton Pl., Newark, N. J.
See Advertisement on Page 134
Lekra Labs., 30 E. 10th St., New York, N. Y.
Paragon Electric Co., 37 W. Van Buren St., Chicago 5, Ill.
Potter Instrument Co., 136-56 Roosevelt Ave., Flushing, Long Island, N. Y.
Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
See Advertisement on Page 270
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Reliance Automatic Lighting Co., 1927 Mead St., Racine, Wisc.
Rowe Radio Research Laboratory, 2422 N. Pulaski Rd., Chicago 29, Ill.
Signal Engineering & Manufacturing Co., 154 W. 14th St., New York, N. Y.
Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246
Technical Devices Corp., Beaufort & Eagle Rock Ave., Roseland, N. J.
Telechron Inc., Homer Ave., Ashland, Mass.
Tork Clock Co., 1 Grove St., Mt. Vernon, N. Y.

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ELECTRONICS BUYERS' GUIDE

ELECTRONIC and ALLIED PRODUCTS

Walser Automatic Timer Co., 420 Lexington Ave., New York, N. Y.
Zenith Electric Co., 152 W. Walton St., Chicago, Ill.

236

AUTOMATIC RESET TIMERS

Cramer Co., R. W., Centerbrook, Conn.
Eagle Signal Corp., Moline, Ill.
General Control Co., 1200 Soldiers Field Rd., Boston 34, Mass.
Gorrell & Gorrell, 40 Littlefield Rd., Newton Center, Mass.
Hetherington & Son Inc., Robert, Sharon Hill, Pa.
Industrial Timer Corp., 117 Edison Pl., Newark 5, N. J.
Paragon Electric Co., 37 W. Van Buren St., Chicago 5, Ill.
Potter & Bramfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
See Advertisement on Page 270
Reliance Automatic Lighting Co., 1927 Mead St., Racine, Wisc.
Vangtronic Corp., 87 Washburn St., Bridgeport, Conn.
See Advertisement on Page 38
Zenith Electric Co., 152 W. Walton St., Chicago, Ill.

237

HOOR COUNTING TIMERS

National Instrument Co., 246 Walnut St., Newtonville 60, Mass.

238

IMPULSE TIMERS

Cramer Co., R. W., Centerbrook, Conn.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212

239

INERTIA TIMERS

Struthers-Dunn, Inc., 1321 Arch St., Philadelphia 7, Pa.

240

MOTOR OPERATED TIMERS

Struthers-Dunn, Inc., 1321 Arch St., Philadelphia 7, Pa.
Tork Clock Co., 1 Grove St., Mt. Vernon, N. Y.

241

MULTI-CONTACT TIMERS

Cramer Co., R. W., Centerbrook, Conn.
Tork Clock Co., 1 Grove St., Mt. Vernon, N. Y.

242

PERCENTAGE TIMERS

Cramer Co., R. W., Centerbrook, Conn.

243

PHOTO-ELECTRIC TIMERS

Pho Tron Instrument Co., 5713 Euclid Ave., Cleveland, Ohio
Westinghouse Electric Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

244

SEQUENCE TIMERS

Control Corp., 718 Central Ave., Minneapolis 14, Minn.

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please mention the
ELECTRONICS BUYERS' GUIDE

245

THERMAL TIMERS

Struthers-Dunn, Inc., 1321 Arch St., Philadelphia 7, Pa.

246

WELDING TIMERS

Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.

247

Titration Apparatus

Fischer Scientific Co., 717 Forbes St., Pittsburgh 16, Pa.
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Precision Scientific Co., 1750 N. Springfield Ave., Chicago 47, Ill.

248

Welders

TEMPERATURE CONTROLLED ELECTRONIC WELDERS

Denham & Co., Book Bldg., Detroit 26, Mich.

249

X-Ray Equipment, Industrial

General Elec. X-Ray Corp., 2012 Jackson Blvd., Chicago, Ill.
North American Phillips Co. Inc., 100 E. 42nd St., New York 17, N. Y.
Picker X-Ray Corp., 300 Fourth Ave., New York 10, N. Y.
St. John X-Ray Service, Inc., 30-20 Thomson Ave., Long Island City 1, N. Y.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

ELECTRONIC MEDICAL EQUIPMENT

250

X-RAY CAMERAS

North American Phillips Co. Inc., 100 East 42nd St., New York 17, N. Y.

251

Cardiotachometers

Waters Conley Co., 501 First St., N. W., Rochester, Minn.

252

Cortical Stimulators

Electro Medical Lab. Inc., Holliston, Mass.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Rahm Instruments, Inc., 12 W. Broadway, New York, N. Y.

253

Dermohmeters

Electro Medical Lab. Inc., Holliston, Mass.

254

Diathermy

American Diathermy Productions, 10860 Santa Monica Blvd., Los Angeles 25, Calif.
American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
Branston Elect. Mfg. Co., 61-65 Gill Pl., Buffalo 13, N. Y.
Edin Electronics Co., 207 Main Street, Worcester, Mass.
Electronic Supply Co., 207 Main St., Worcester, Mass.
General Elec. X-Ray Corp., 2012 Jackson Blvd., Chicago 4, Ill.
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Hetherington & Son Inc., Robert, Sharon Hill, Pa.
Lincoln Electronics Corp., 653 11th Ave., New York, N. Y.
Mooradian High Frequency Labs., 137 Park Place, Bogota, N. J.
Peerless Labs., 461-467 10th Ave., New York 18, N. Y.
Polk Electronics, 119 Bleecker St., New York 12, N. Y.
Standard Technical Devices, Inc., 129 Livingston St., Brooklyn 2, N. Y.
Terma Electric Co., 20 W. 22nd St., New York, N. Y.
Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J.

255

DIATHERMY ACCESSORIES

Peerless Labs., 461-467 10th Ave., New York 18, N. Y.
Standard Technical Devices, 129 Livingston St., Brooklyn 2, N. Y.

256

Electrocardiograph

Edin Electronics Co., 207 Main Street, Worcester, Mass.
Electro Physical Laboratories, 45 W. 18th St., New York 11, N. Y.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Electronic Supply Co., 207 Main St., Worcester, Mass.
General Elec. X-Ray Corp., 2012 Jackson Blvd., Chicago 4, Ill.
Rahm Instruments, Inc., 12 W. Broadway, New York, N. Y.
Sanborn Co., 39 Osborne St., Cambridge 39, Mass.
Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J.

257

Electroencephalograph

Electro Medical Lab. Inc., Holliston, Mass.

1946-1947 DIRECTORY of ELECTRONIC and ALLIED PRODUCTS

Electro Physical Laboratories, 45 W. 18th St., New York 11, N. Y.
Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
Rahm Instruments, Inc., 12 W. Broadway, New York, N. Y.
Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J.

258

Electroplethysmographs

Electro Physical Laboratories, 45 W. 18th St., New York 11, N. Y.

259

Electro-Shock Therapy Apparatus

Electro Physical Labs., 45 W. 18th St., New York 11, N. Y.
Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
Rahm Instruments, Inc., 12 W. Broadway, N. Y., N. Y.

260

Electro-Surgical Apparatus

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
Liebel-Flarsheim Co., 303 W. Third St., Cincinnati 2, Ohio
Mooradian High Frequency Labs., Bogota, N. J.

261

Generators

ELECTRONIC WAVE GENERATORS

Lektra Labs., 30 E. 10th St., New York, N. Y.
Peerless Labs., 461-467 10th Ave., New York 18, N. Y.

262

Hemoglobinometer, Electronic

Fisher Scientific Co., 717 Forbes St., Pittsburgh 16, Pa.

Kemlite Labs., 1809 N. Ashland Ave., Chicago, Ill.
Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn.

263

Meters, Medical

Electro Physical Labs., 45 W. 18th St., New York 11, N. Y.

264

AUDIOMETERS

Audio Development Co., 2833 13th Ave. S., Minneapolis 7, Minn.
Aurex Corp., 1117 N. Franklin St., Chicago, Ill.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Maico Co. Inc., 25 North 3rd St., Minneapolis, Minn.
Vacolite Co., 3001-3003 N. Henderson, Dallas, Texas

265

OSCILLOMETERS

Electro Physical Labs., 45 W. 18th Street, New York 11, N. Y.

266

Tonometers

Electro Physical Laboratories, 45 W. 18th St., New York 11, N. Y.

267

Microscopes

ELECTRONIC MICROSCOPES

Farrand Optical Co. Inc., Bronx Blvd. & E. 238th St., New York 66, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover

268

Polarographs

Electro Physical Labs., 45 W. 18th Street, New York 11, N. Y.

269

Psychogalvanometers

Electro Medical Lab. Inc., Holliston, Mass.
Moulie Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill.

270

Stethographs & Stethophones

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231

271

Stethoscopes, Amplifying

Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn.

272

X-Ray Equipment, Medical

General Elect. X-Ray Corp., 2012 Jackson Blvd., Chicago, Ill.
Gibbs & Co., Thomas B., Div. of George W. Borg Corp., 814 Michigan St., Delavan, Wisc.
Liebel-Flarsheim Co., 3030 W. Third St., Cincinnati 2, Ohio
Mattern, F. Mfg. Co., 4647 N. Cicero Avenue, Chicago 30, Ill.
North American Philips Co. Inc., 100 E. 42nd St., New York 17, N. Y.
Peerless Labs., 461-467 10th Ave., New York 18, N. Y.
Standard X-Ray Co., 1932 N. Burling St., Chicago 14, Ill.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 90, 91

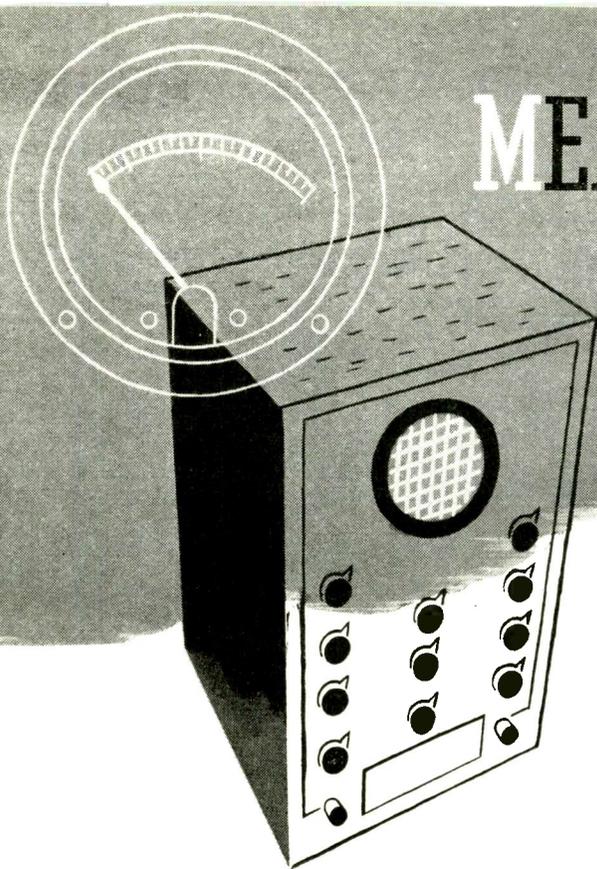
MASS CHEST SURVEY APPARATUS

North American Philips Co. Inc., 100 E. 42nd St., New York 17, N. Y.

RADIATION THERAPY APPARATUS

North American Philips Co. Inc., 100 E. 42nd St., New York 17, N. Y.

MEASURING EQUIPMENT



In this section will be found measuring equipment incorporated in electronic apparatus, used for any laboratory or research analysis, or for determining operational performance, classified by the name it is most frequently called. If in doubt where to find a product—use the index

SEE INDEX FOR ALL PRODUCT LISTINGS

273

Analyzers

AUDIO AMPLIFIER ANALYZERS

Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Malco Co. Inc., 25 N. 3rd St., Minneapolis, Minn.
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

274

CAPACITOR ANALYZERS

Jackson Electrical Instr. Co., 16 S. Patterson Blvd., Dayton 1, Ohio
Solar Mfg. Corp., 285 Madison Ave., New York 17, N. Y.
See Advertisement on Page 304

275

CIRCUIT ANALYZERS

Amerline, 1753 N. Honore St., Chicago 22, Ill.
Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebr.
J-B-T Instruments, Inc., 441 Chapel St., New Haven 8, Conn.
See Advertisement on Page 293
Madison Electrical Products Corp., Madison, N. J.
See Advertisement on Page 232
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Precision Apparatus Co., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Shallcross Mfg. Co., 10 Jackson Ave., Colingdale, Pa.
See Advertisement on Page 38
Supreme Instruments Corp., Greenwood, Miss.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

276

HARMONIC ANALYZERS

Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
See Advertisement on Page 278
General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.

277

HEARING AID ANALYZERS

Tech Laboratories, 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

278

INTERMODULATION ANALYZERS

Altec Lansing Corp., 1161 N. Vine St., Hollywood 38, Calif.

279

MICROWAVE RADAR ANALYZERS

Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

280

NOISE ANALYZERS

Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
See Advertisement on Page 285
Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
See Advertisement on Page 278
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

281

SOUND ANALYZERS

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

282

SPECTRUM ANALYZERS

Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125

283

WAVE ANALYZERS

Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
See Advertisement on Page 285
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
See Advertisement on Page 113
Technology Instrument Corp., 1058 Main Street, Waltham, Mass.
Televiso Products Inc., 6533 N. Olmstead Ave., Chicago, Ill.
Waterman Products Co., Inc., 2445-63 Emerald St., Phila. 25, Pa.
See Advertisement on Page 232

284

Bolometers

Browning Laboratories Inc., 750 Main, Winchester, Mass.

285

Bridges

Boonton Radio Corp., Boonton, N. J.
See Advertisement on Page 42
Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Clough Bregle Co., 5501 N. Bdway., Chicago 22, Ill.
Communication Measurements Lab., 120 Greenwich St., New York, N. Y.
See Advertisements on Pages 261, 294
Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
See Advertisement on Page 278
Eppley Lab., Inc., Newport, R. I.
Freed Transformer Co., 72 Spring St., New York 12, N. Y.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.

Industrial Transformer Corp., 2540 Belmont Ave., New York 58, N. Y.
 See Advertisements on Pages 235-238
Leeds & Northrup Co., 4901 Stenton Ave., Phila., Pa.
McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
Magnetic Products Corp., Norwalk, Conn.
Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
Pan American Electric Co., Inc., 132 Front St., New York, N. Y.
Radio City Prods. Co., 127 W. 26th St., New York, N. Y.
Reiner Electronics Co., 152 W. 25th Street, New York, N. Y.
Rubicon Co., 3751 Ridge Ave., Phila., Pa.
 See Advertisement on Page 245
Shalleross Mfg. Co., 10 Jackson Ave., Col- lington, Pa.
 See Advertisement on Page 38
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
Standard Instruments Corp., 568 Prospect Ave., New York 55, N. Y.
Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125
Tech Labs., 7 Lincoln St., Jersey City, N. J.
 See Advertisement on Page 246
Technology Instrument Corp., 1058 Main St., Waltham, Mass.
Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J.
Tobe Dentschmann Corp., Filterette Div., Canton, Mass.
 See Advertisements on Pages 91-98
Trimount Instrument Co., 37 W. Van Buren, Chicago 5, Ill.
Waterman Products Co., Inc., 2445-63 Emer- ald St., Phila. 25, Pa.
 See Advertisement on Page 232
Winslow Co., 9 Liberty St., Newark 5, N. J.

286

TEMPERATURE BRIDGES

Eppley Lab. Inc., Newport, R. I.

287

Calibrators

288

SWEEP CALIBRATORS

Bipley Co., Torrington, Conn.
 See Advertisements on Pages 30, 108, 109

289

U. H. F. CALIBRATORS

Ferris Instrument Co., 110-112 Cornelia St., Boonton, N. J.

290

Checkers

CRYSTAL RECTIFIER CHECKERS

Marion Electrical Instrument Co., Man- chester, N. H.

291

"QX" CHECKERS

Boonton Radio Corp., Boonton, N. J.
 See Advertisement on Page 42

292

V. H. F. CIRCUIT CHECKERS

Boonton Radio Corp., Boonton, N. J.
 See Advertisement on Page 42

293

Chronaximeters

Electro Medical Lab. Inc., Holliston, Mass.

294

Chronographs, Inertialess

American Time Products Inc., 580 Fifth Ave., New York 19, N. Y.
Electro Medical Lab. Inc., Holliston, Mass.

295

Chronoscopes

Rawson Electrical Instrument Co., 110 Pot- ter St., Cambridge 42, Mass.

296

Comparators

AUTOMATIC RESISTANCE COMPARATORS

Clippard Instrument Lab., 1440 Chase Ave., Cincinnati 23, Ohio

297

CRYSTAL COMPARATORS

Telicon Corp., 851 Madison Ave., New York 21, N. Y.

298

Decade Boxes

CAPACITY DECADE BOXES

Brown Engineering Co., 4635 S. E. Haw- thorne Blvd., Portland 15, Oregon
General Radio Co., 275 Mass. Ave., Cam- bridge 39, Mass.
Special Products Co., 9115 Brookville Rd., Silver Springs, Md.
Winslow Co., 9 Liberty St., Newark 5, N. J.

299

INDUCTANCE DECADE BOXES

Transformer Products Inc., 143 W. 51st St., New York, N. Y.

300

RESISTANCE DECADE BOXES

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
Brown Engineering Co., 4635 S. E. Haw- thorne Blvd., Portland 15, Oregon
Clarostat Mfg. Co., Inc., 285-7 6th St., Brooklyn, N. Y.
 See Advertisements on Pages 116, 117
Daven Co., 191 Central Ave., Newark 4, N. J.
 See Advertisement on Inside Back Cover
General Radio Co., 275 Mass. Ave., Cam- bridge 39, Mass.
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
MacLeod & Hanopol, 24 Chelsea St., Charles- town 29, Mass.

Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.
 See Advertisement on Page 215
Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.
 See Advertisement on Page 295
Special Products Co., 9115 Brookville Rd., Silver Spring, Md.
Tech. Laboratories, 7 Lincoln St., Jersey City, N. J.
 See Advertisement on Page 246
Transformer Products, Inc., 143 W. 51st St., New York, N. Y.
Winslow Co., 9 Liberty St., Newark 5, N. J.

301

Detectors

NULL DETECTORS

Freed Transformer Co., 72 Spring St., New York 12, N. Y.
General Radio Co., 275 Mass. Ave., Cam- bridge 39, Mass.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
Waterman Products Co., Inc., 2445-63 Em-erald St., Phila. 25, Pa.
 See Advertisement on Page 232

302

Forks, Tuning

ELECTRICALLY DRIVEN TUNING FORKS

Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago, Ill.

303

Generators

ELECTRONIC VARIABLE FREQUENCY GENERATORS

Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Radio-Television Institute, Inc., 480 Lex- ington Ave., New York 17, N. Y.

304

HARMONIC FREQUENCY GENERATORS

Boonton Radio Corp., Boonton, N. J.
 See Advertisement on Page 42
Lavole Labs., Morganville, N. J.

305

PULSE GENERATORS

Atomic Instruments Co., 160 Charles St., Boston, Mass.
 See Advertisement on Page 202
General Radio Co., 275 Mass. Ave., Cam- bridge 39, Mass.
Instrument Development Labs., 817 E. 55th St., Chicago 15, Ill.
Kay Electric Co., 8 Eaton Place, Newark, N. J.
 See Advertisement on Page 134
Measurements Corp., Boonton, N. J.
 See Advertisement on Page 194
Polarad Electronics Co., 135 Liberty St., New York 6, N. Y.
 See Advertisement on Page 229
Radar Engineers, 4004 Arcade Bldg., Seattle 1, Wash.
Remington Rand, Electronic Div., Middle- town, Conn.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
Waterman Products Co., Inc., 2445-63 Em-erald St., Phila. 25, Pa.
 See Advertisement on Page 232
Wilmette Mfg. Co., 1713 Kalorama Rd. N-W, Washington 9, D. C.
 See Advertisement on Page 281

ELECTRONIC and ALLIED PRODUCTS

306

SQUARE WAVE GENERATORS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
DeMornay-Budd Inc., 475 Grand Conc., New York, N. Y.
See Advertisement on Page 203
Electronic Measurements Co., Red Bank, N. J.
See Advertisement on Page 276
General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
See Advertisement on Page 113
Measurements Corp., Boonton, New Jersey
See Advertisement on Page 194
Reiner Electronics Co., 152 West 25th St., New York, N. Y.

307

ULTRASONIC GENERATORS

Electronic Tube Corp., 1200 E. Mermaid Ave., Phila. 18, Pa.
See Advertisement on Page 348
Teleso Products, Inc., 6533 N. Olmstead Ave., Chicago, Ill.

308

Generators, Signal

A. F. SIGNAL GENERATORS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
Boonton Radio Corp., Boonton, N. J.
See Advertisement on Page 42
Clough Brengle Co., 5501 N. Broadway, Chicago 22, Ill.
Communication Measurements Lab., 120 Greenwich St., New York, N. Y.
See Advertisements on Pages 201, 204
Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
See Advertisement on Page 278
Electronic Measurements Co., Red Bank, N. J.
See Advertisement on Page 276
Espey Mfg. Co., Inc., 33 W. 46th St., New York 19, N. Y.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Madison Electrical Products Corp., 74 Main St., Madison, N. J.
See Advertisement on Page 232
Measurements Corp., Boonton, N. J.
See Advertisement on Page 194
Philco Corp., Tioga & C Sts., Phila. 34, Pa.
Scientific Service Lab., Subsidiary Electronics Inc., 915 Meridian Ave., South Pasadena, Calif.
Simpson Elect. Co., 5218 W. Kinzie St., Chicago 44, Ill.
Supreme Instruments Corp., Greenwood, Miss.
Teleso Products Inc., 5433 N. Olmstead Ave., Chicago, Ill.
Tobe Deutschmann Corp., Filterette Div., Canton, Mass.
See Advertisements on Pages 91-98

309

FM SIGNAL GENERATORS

Boonton Radio Corp., Boonton, N. J.
See Advertisement on Page 42
Clough Brengle Co., 5501 N. Broadway, Chicago 22, Ill.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.

310

RF SIGNAL GENERATORS

Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.

Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
See Advertisement on Page 285
Boonton Radio Corp., Boonton, N. J.
See Advertisement on Page 42
Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
Burke Electric Co., 12th & Cranberry Sts., Erie, Pa.
See Advertisement on Page 228
Clough Brengle Co., 5501 N. Broadway, Chicago 22, Ill.
Dayton Acme Co., 930 York St., Cincinnati, Ohio
Electronic Mfg. Co., 714 Race St., Harrisburg, Pa.
Electronic Measurements Co., Red Bank, N. J.
See Advertisement on Page 276
Espey Mfg. Co., 33 W. 46th St., New York 19, N. Y.
Ferris Instrument Co., 110-112 Cornelia St., Boonton, N. J.
Freed Transformer Co., 72 Spring St., New York 12, N. Y.
Gem Radio & Telev. Co., 72 Cortlandt St., New York 6, N. Y.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
See Advertisement on Page 113
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Huber Radio Co., 260 S. Center St., Casper, Wyo.
Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
See Advertisement on Page 256
Jackson Elec. Instr. Co., 16 S. Patterson Blvd., Dayton 1, Ohio
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Madison Electrical Products Corp., Madison, N. J.
See Advertisement on Page 232
McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
Measurements Corp., Boonton, N. J.
See Advertisement on Page 194
Monarch Mfg. Co., 2014 N. Major Ave., Chicago 39, Ill.
Northeastern Engineering Inc., Manchester, N. H.
Philco Corp., Tioga & C Sts., Phila. 34, Pa.
Precision Apparatus Co., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., South Pasadena, Calif.
Simpson Elect. Co., 5218 W. Kinzie St., Chicago 44, Ill.
Superior Instruments Co., 227 Fulton St., New York 7, N. Y.
Supreme Instruments Corp., Greenwood, Miss.
Tobe Deutschmann Corp., Filterette Div., Canton, Mass.
See Advertisements on Pages 91-98

311

S.H.F. SIGNAL GENERATORS

Boonton Radio Corp., Boonton, N. J.
See Advertisement on Page 42
Browning Labs., Inc., 750 Main St., Winchester, Mass.
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

312

SWEEPING SIGNAL GENERATORS

Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
Kay Electric Co., 8 Eaton Pl., Newark, N. J.
See Advertisement on Page 134
Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
United States Television Mfg. Corp., 106 7th Ave., New York, N. Y.

313

TELEVISION SYNCHRONIZING SIGNAL GENERATORS

Polarad Electronics Co., 135 Liberty St., New York 6, N. Y.
See Advertisement on Page 229
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Telequip Radio Co., 1901 S. Washtenaw, Chicago, Ill.
Telicon Corp., 851 Madison Ave., New York 21, N. Y.

314

U.H.F. SIGNAL GENERATORS

Boonton Radio Corp., Boonton, N. J.
See Advertisement on Page 42
Ferris Instrument Co., 110-112 Cornelia St., Boonton, N. J.
General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
Measurements Corp., Boonton, N. J.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover

315

V.H.F. SIGNAL GENERATORS

Ferris Instrument Co., 110-112 Cornelia St., Boonton, N. J.
McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
Measurements Corp., Boonton, N. J.
See Advertisement on Page 194

316

Indicators

CAPACITOR LEAKAGE INDICATORS

Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.

317

GEIGER COUNTER INDICATORS

Geophysical Instrument Co., Key Blvd. & Nash St., Arlington, Va.

318

SHORTED TURN INDICATORS

General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Kartron Inc., c/o Starr & Tornbury, 4101 Rhodes Ave., North Hollywood, Calif.
Rubicon Co., 3751 Ridge Ave., Phila., Pa.
See Advertisement on Page 295

319

SOUND LEVEL & RECORDER INDICATORS

Sound Apparatus Co., 233 Broadway, New York 7, N. Y.
See Advertisement on Page 152
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

320

STRAIN INDICATORS

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Statham Labs., 8222 Beverly Blvd., Los Angeles 36, Calif.

321

VOLUME INDICATORS

Amplifier Co. of America, 396 Broadway, New York, N. Y.

Daven Co., 191 Central Ave., Newark 4, N. J.
 See Advertisement on Inside Back Cover
 General Electronics, Inc., 101 Hazel St., Paterson, N. J.
 Triplett Electrical Instrument Co., 386 Harmon Rd., Bluffton, Ohio
 See Advertisement on Page 275
 Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
 See Advertisement on Page 249

322

Instruments, Graphic Recording

Esterline-Angus Co. Inc., P. O. Box 597, Indianapolis, Ind.

323

Instruments, Supersonic

Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.

324

Integrators, Electronic

Commercial Research Labs. Inc., 20 Bartlett Ave., Detroit 3, Mich.
 See Advertisement on Page 126
 Saxl Instrument Co., 6 Linnaean St., Cambridge 38, Mass.

325

Magnetic Analysis Equip.

Magnetic Analysis Corp., 42-44 Twelfth St., Long Island City 1, N. Y.

326

Meters**AMMETERS**

Burlington Instrument Co., 214 North 4th St., Burlington, Iowa
 Burton-Rogers Co., 857 Boylston St., Boston 16, Mass.
 Control Corp., 718 Central Ave., Minneapolis 14, Minn.
 DeJur-Amsco Corp., Northern Blvd., at 45th St., Long Island City 1, N. Y.
 See Advertisements on Pages 46-47
 Electronic Development Co., 1336 North Saddle Creek Road, Omaha 3, Nebr.
 Electronic Labs. Inc., Indianapolis, Ind.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Electronics, Inc., 101 Hazel St., Paterson, N. J.
 Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 MB Manufacturing Co., New Haven, Conn.
 See Advertisements on Pages 140, 141, 193
 Marlon Electrical Instrument Co., Manchester, N. H.
 Norton Electrical Instr. Co., 59 Hilliard St., Manchester, Conn.
 Precision Apparatus Co., 92-27 Horace Harding Blvd., Elmhurst, L. I., N. Y.
 Reliance Instrument Co., 715 N. Kedzie Ave., Chicago, Ill.
 Roller-Smith, Bethlehem, Pa.
 Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., S. Pasadena, Calif.
 Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.
 Simpson Electric Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Sterling Mfg. Co., 9205 Detroit Ave., Cleveland, Ohio
 Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.

Sun Mfg. Co., 6323 Avondale Ave., Chicago 31, Ill.
 Supreme Instruments Corp., Greenwood, Miss.
 Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
 U. S. Gauge Co., Sellersville, Pa.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
 See Advertisement on Page 249
 Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill.

327

ATTENUATION METERS

Freed Transformer Co., 72 Spring St., New York 12, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Electronics, Inc., 101 Hazel St., Paterson, N. J.

328

CABLE TESTING AMMETERS

Columbia Elect. Mfg. Co., 4519 Hamilton Ave., N.E., Cleveland 14, Ohio
 Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N. Y.
 See Advertisement on Page 52

329

CRYSTAL VOLTMETERS

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

330

DECIBEL METERS

General Electronics, Inc., 101 Hazel St., Paterson, N. J.
 Precision Apparatus Co., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., South Pasadena, Calif.
 Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
 See Advertisement on Page 275
 Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
 See Advertisement on Page 249

331

DISTORTION & NOISE METERS

Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago, Ill.
 See Advertisement on Page 114
 Ferris Instrument Co., 110-112 Cornelia St., Boonton, N. J.
 General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
 Measurements Corp., Boonton, N. J.
 See Advertisement on Page 194
 Pickering and Co., Audio Labs., Oceanside, N. Y.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover

332

ELECTRODYNAMOMETERS

Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
 See Advertisement on Page 275

333

ELECTRONIC CAPACITANCE METERS

MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.

334

ELECTRONIC VOLTMETERS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Ballantine Labs. Inc., Boonton, N. J.
 See Advertisement on Page 124
 Barber Labs., Alfred W., 34-04 Francis Lewis Blvd., Flushing, N. Y.
 See Advertisement on Page 288
 Clippard Instrument Lab., 1440 Chase Ave., Cincinnati 23, Ohio
 Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
 Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
 See Advertisement on Page 278
 Electronic Development Co., 1336 North Saddle Creek Rd., Omaha 3, Nebr.
 Electronic Mfg. Co., 714 Race Street, Harrisburg, Pa.
 Freed Transformer Co., 72 Spring St., New York 12, N. Y.
 Gem Radio & Telev. Co., 72 Cortlandt St., New York 6, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Electronics, Inc., 101 Hazel St., Paterson, N. J.
 General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
 Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
 See Advertisement on Page 113
 Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
 Instrument Electronics, 253-21 Northern Blvd., Little Neck, L. I., N. Y.
 Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
 See Advertisement on Page 256
 Jackson Electrical Instrument Co., 16-18 S. Patterson Blvd., Dayton 1, Ohio
 MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
 Madison Electrical Products Corp., Madison, N. J.
 See Advertisement on Page 232
 Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn.
 Measurements Corp., Boonton, N. J.
 See Advertisement on Page 194
 National Technical Labs., 829 Mission St., South Pasadena, Calif.
 Precision Apparatus Co., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Radio City Products Co., 127 W. 26th St., New York, N. Y.
 Radio Corp. of America, RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Design Co., 1353 Sterling Pl., Brooklyn, N. Y.
 Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
 Reiner Electronics Co., 152 W. 25th St., New York, N. Y.
 Schottland, Frederick D., 32-62 Grenfell Ave., Kew Gardens, N. Y.
 Simpson Electric Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Sound Apparatus Co., 233 Broadway, New York 7, N. Y.
 See Advertisement on Page 152
 Standard Instruments Corp., 563 Prospect Ave., New York 55, N. Y.
 Superior Instrument Co., 227 Fulton St., New York 7, N. Y.
 Supreme Instruments Corp., Greenwood, Miss.
 Technical Devices Corp., Beaufort & Eagle Rock Ave., Roseland, N. J.
 Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y.
 Televiso Products, Inc., 6533 N. Olmstead Ave., Chicago, Ill.
 Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
 See Advertisement on Page 275
 Waterman Products Co., Inc., 2445-63 Emerald St., Phila. 25, Pa.
 See Advertisement on Page 232

335

ELECTROSTATIC VOLTMETERS

Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N. Y.
 See Advertisement on Page 52
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.

ELECTRONIC and ALLIED PRODUCTS

336

FIELD INTENSITY METERS

Brush Development Co., 3405 Perkins Ave., Cleveland 14, Ohio
See Advertisement on Page 137
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Ferris Instrument Co., 110-112 Cornelia St., Boonton, N. J.
General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
Measurements Corp., Boonton, N. J.
See Advertisement on Page 194
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Stoddart Aircraft Radio Co., 6644 Santa Monica Blvd., Hollywood 38, Calif.
Tobe Deutschmann Corp., Filterette Div., Canton, Mass.
See Advertisements on Pages 91-98

337

FLUXMETER

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Marion Electrical Instrument Co., Manchester, N. H.
Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.

338

FM DEVIATION METERS

Browning Laboratories, Inc., 750 Main St., Winchester, Mass.

339

FREQUENCY METERS

Aero Instrument Co., 3907 San Fernando Rd., Glendale 4, Calif.
Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
See Advertisement on Page 285
Biddle Co., James G., 1213 Arch St., Philadelphia, Pa.
Browning Laboratories, Inc., 750 Main St., Winchester, Mass.
Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
Collins Radio Co., 855-35th St., N. E., Cedar Rapids, Iowa
See Advertisements on Pages 105-107
Communication Measurements Lab., 120 Greenwich St., New York, N. Y.
See Advertisements on Pages 261, 294
Daven Co., 191 Central Ave., Newark 4, N. J.
See Advertisement on Inside Back Cover
Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago, Ill.
Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
See Advertisement on Page 278
General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
Gurley, W. & L. E., 514 Fulton St., Troy, N. Y.
Herbach & Rademan Co., Mfg. Div., 517 Ludlow St., Philadelphia, Pa.
Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
See Advertisement on Page 113
J-B-T Instruments, Inc., 441 Chapel St., New Haven 8, Conn.
See Advertisement on Page 293
Lampkin Laboratories, Bradenton, Fla.
See Advertisement on Page 294
Lavoie Laboratories, Mattawan-Freehold Rd., Morganville, N. J.
McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
See Advertisement on Page 220
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Roller-Smith, Bethlehem, Pa.
Tobe Deutschmann Corp., Filterette Div., Canton, Mass.
See Advertisements on Pages 91-98

340

GALVANOMETERS

Brush Development Co., 3405 Perkins Ave., Cleveland 14, Ohio
See Advertisement on Page 137
G-M Laboratories, Inc., 4313 N. Knox Ave., Chicago, Ill.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
See Advertisement on Page 210
J-B-T Instruments, Inc., 441 Chapel St., New Haven 8, Conn.
See Advertisement on Page 293
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.
See Advertisement on Page 295
Thwing-Albert Instrument Co., 5351 Pulaski Avenue, Philadelphia 44, Pa.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249
Winslow Co., 9 Liberty St., Newark 5, N. J.

341

HEARING AID METERS

Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn.

342

HIGH H PERMEAMETERS

Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.
See Advertisement on Page 295

343

MEGA MEGA OHMMETERS

Howe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.

344

MEGOHMMETERS

Biddle Co., Jas. G., 1213 Arch St., Philadelphia, Pa.
Communication Measurements Lab., 120 Greenwich St., New York, N. Y.
See Advertisements on Pages 261, 294
Delmhorst Instrument Co., 115 Cornelia St., Boonton, N. J.
Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebr.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
Measurements Corp., Boonton, N. J.
See Advertisement on Page 194

When Ordering or Inquiring
please mention the
**ELECTRONICS
BUYERS' GUIDE**

Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
Supreme Instruments Corp., Greenwood, Miss.
Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J.
Winslow Co., 9 Liberty St., Newark 5, N. J.

345

MICROAMMETERS

Burlington Instrument Co., 214 N. 4th St., Burlington, Iowa
Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebr.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
MB Mfg. Co., 1060 State St., New Haven, Conn.
See Advertisements on Pages 140, 141, 193
Marion Electrical Instrument Co., Manchester, N. H.
Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
Roller-Smith, Bethlehem, Pa.
Rowe Radio Research Lab. Co., 2422 N. Pulaski Rd., Chicago 39, Ill.
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., S. Pasadena, Calif.
Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.
Simpson Elect. Co., 5218 W. Kinzie St., Chicago 41, Ill.
Sun Mfg. Co., 6323 Avondale Ave., Chicago 31, Ill.
Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125
Triplett Electrical Instrument Co., 286 Harmon Road, Bluffton, Ohio
See Advertisement on Page 275
Welch Scientific Co., 1515 Sedgwick St., Chicago 10, Ill.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

346

MICROFARAD METERS

Breon Labs., 607 Rose St., Williamsport, Pa.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

347

MICRO-MICROAMMETERS

National Technical Lab., 820 Mission Street, South Pasadena, Calif.

348

MICRO-VOLTMETERS

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125
Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

349

MICROWAVE METERS

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
See Advertisement on Page 220
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

350

MILLIAMMETERS

Burlington Instrument Co., 214 N. 4th St., Burlington, Iowa

DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y.
See Advertisements on Pages 46, 47
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Marion Electrical Instrument Co., Manchester, N. H.
MB Manufacturing Co., Inc., 1060 State St., New Haven 11, Conn.
See Advertisements on Pages 140, 141, 193
Meters, Inc., 915 Riveria Dr., Indianapolis 5, Ind.
Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
Readrite Meter Wks., College Ave., Bluffton, Ohio
Roller-Smith, Bethlehem, Pa.
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., South Pasadena, Calif.
Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.
Simpson Elect. Co., 5218 W. Kinzie St., Chicago 44, Ill.
Sterling Mfg. Co., 9205 Detroit Ave., Cleveland, Ohio
Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
Sun Mfg. Co., 6323 Avondale Ave., Chicago 31, Ill.
Triplett Elec. Instr. Co., 286 Harmon Rd., Bluffton, Ohio
See Advertisement on Page 275
Welch Scientific Co., 1515 Sedgwick St., Chicago 10, Ill.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

351

MILLIVOLTMETERS

Burlington Instrument Co., 214 N. 4th St., Burlington, Iowa
General Electronics, Inc., 101 Hazel Street, Paterson, N. J.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Marion Electrical Instrument Co., Manchester, N. H.
MB Mfg. Co., 1060 State St., New Haven, Conn.
See Advertisements on Pages 140, 141, 193
Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
Roller-Smith, Bethlehem, Pa.
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., South Pasadena, Calif.
Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.
Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

352

MODULATION METERS

Waterman Products Co., Inc., 2445-63 Emerald St., Phila. 25, Pa.
See Advertisement on Page 232

353

OHMMETERS

Hiddle Co., James G., 1213 Arch St., Phila., Pa.
Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
Electronic Development Co., 1336 North Saddle Creek Rd., Omaha 3, Nebr.
Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
Radio Design Co., 1353 Sterling Pl., Brooklyn, N. Y.
Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
Scientific Service Lab., Subsidiary Electronics Inc., 915 Meridian Ave., South Pasadena, Calif.

Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
See Advertisement on Page 38
Sidward Products Co., 261 Broadway, New York, N. Y.
Simpson Electric Co., 5218 W. Kinzie St., Chicago 44, Ill.
Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
Supreme Instruments Corp., Greenwood, Miss.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

354

OUTPUT METERS

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

355

PHASE ANGLE METERS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
Andrew Co., 363 E. 75th St., Chicago 19, Ill.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

356

POWER FACTOR METERS

Roller-Smith, Bethlehem, Pa.

357

"Q" METERS

American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
See Advertisement on Page 231
Boonton Radio Corp., Boonton, N. J.
See Advertisement on Page 42
Communication Parts, 1101 N. Paulina St., Chicago 22, Ill.
Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
See Advertisement on Page 278
Electronic Measurements Co., Red Bank, N. J.
See Advertisement on Page 276
Freed Transformer Co., 72 Spring St., New York 12, N. Y.
Pan American Electric Co., Inc., 132 Front St., New York, N. Y.

358

R. F. AMMETERS

Andrew Co., 363 E. 75th St., Chicago 19, Ill.
Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
See Advertisement on Page 275

359

R.F. KILOVOLTMETERS

Ballantine Labs. Inc., Boonton, N. J.
See Advertisement on Page 124
Johnson Co., R. F., Waseca, Minn.

360

SOUND LEVEL METERS

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Rek-O-Kut Co., 143 Grand St., New York 13, N. Y.
See Advertisement on Page 265
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

Sound Apparatus Co., 233 Broadway, New York 7, N. Y.
See Advertisement on Page 152
Technology Instrument Corp., 1058 Main Street, Waltham, Mass.
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

361

THERMOCOUPLE METERS

Ballantine Labs. Inc., Boonton, N. J.
See Advertisement on Page 124
Bird Electronic Corp., 1800 E. 38th St., Cleveland 14, Ohio
See Advertisement on Page 227
Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebr.
Field Electric Instrument Co., 109 E. 184th St., New York 53, N. Y.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
J-B-T Instruments Inc., 441 Chapel St., New Haven 8, Conn.
See Advertisement on Page 293
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
MB Mfg. Co., 1060 State St., New Haven, Conn.
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., South Pasadena, Calif.
Tagliabue Div., C. J., Portable Products Corp., 550 Park Ave., Brooklyn 5, N. Y.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila. 44, Pa.
Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
See Advertisement on Page 275
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249
Winslow Co., 9 Liberty St., Newark 5, N. J.

362

THERMOCOUPLES—PYROMETRIC

General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Illinois Testing Labs. Inc., 420 N. La Salle St., Chicago 10, Ill.
Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.

363

VOLTMETERS

Ballantine Labs. Inc., Boonton, N. J.
See Advertisement on Page 124
Burlington Instrument Co., 214 North 4th St., Burlington, Iowa
Burton-Rogers Co., 857 Boylston St., Boston 16, Mass.
Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Control Corp., 718 Central Ave., Minneapolis 14, Minn.
Dayton Acme Co., 930 York St., Cincinnati, Ohio
DeJur-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y.
See Advertisements on Pages 46, 47
Dillon & Co., Inc., W. C., 5410 W. Harrison St., Chicago 44, Ill.
Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
Electronic Measurements Co., Red Bank, N. J.
See Advertisement on Page 276
Ferranti Electric, Inc., 30 Rockefeller Plaza, New York 20, N. Y.
See Advertisement on Page 52
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
J-B-T Instruments, Inc., 441 Chapel St., New Haven 8, Conn.
See Advertisement on Page 293
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
Marion Electrical Instrument Co., Manchester, N. H.
MB Manufacturing Co., 1060 State St., New Haven, Conn.
See Advertisements on Pages 140, 141, 193

ELECTRONIC and ALLIED PRODUCTS

Norton Electrical Ins. Co., 59 Hilliard St., Manchester, Conn.
Rawson Electrical Instrument Co., Inc., 110 Potter St., Cambridge 42, Mass.
Readrite Meter Works, College Ave., Bluffton, Ohio
Reliance Instrument Co., 715 N. Kedzie Ave., Chicago, Ill.
Roller-Smith, Bethlehem, Pa.
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., S. Pasadena, Calif.
Sensitive Research Instrument Co., 9 Elm St., Mt. Vernon, N. Y.
Shalleross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
See Advertisement on Page 38
Simpson Electric Co., 5218 W. Kinzie St., Chicago 44, Ill.
Sterling Mfg. Co., 9205 Detroit Ave., Cleveland, Ohio
Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.
Sun Mfg. Co., 6323 Avondale Ave., Chicago 31, Ill.
Supreme Instruments Corp., Greenwood, Miss.
Technical Devices Corp., Beaufort & Eagle Rock Ave., Roseland, N. J.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila. 44, Pa.
Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
See Advertisement on Page 275
U. S. Gauge Co., Sellersville, Pa.
Welch Scientific Co., W. M., 1515 Sedgewick St., Chicago 10, Ill.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

364

VOLT-OHM-MILLIAMMETERS

Dayton Acme Co., 930 York St., Cincinnati, Ohio
Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebr.
Espey Mfg. Co., Inc., 33 W. 46th St., New York 19, N. Y.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Jackson Electrical Instr. Co., 16 S. Patterson Blvd., Dayton 1, Ohio
Marion Electrical Instrument Co., Manchester, N. H.
McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
Meters, Inc., 915 Riveria Dr., Indianapolis 5, Ind.
Philco Corp., Tioga & C Sts., Phila., 34, Pa.
Precision Apparatus Co., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Rawson Electrical Instrument Co., 110 Potter St., Cambridge 42, Mass.
Robson-Burgess Co., 5002 N. 30th St., Omaha 11, Nebr.
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., S. Pasadena, Calif.
Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.
Simpson Elect. Co., 5218 W. Kinzie St., Chicago 44, Ill.
Superior Instruments Co., 227 Fulton St., New York 7, N. Y.
Sylvania Elec. Prods., Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125
Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
See Advertisement on Page 275
Triumph Mfg. Co., 913 W. Van Buren St., Chicago 7, Ill.

365

WATTMETERS

Daven Co., 191 Central Ave., Newark 4, N. J.
See Advertisement Inside Back Cover
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Rawson Electrical Instrument Co., Inc., 110 Potter St., Cambridge 42, Mass.
Reliance Instrument Co., 715 N. Kedzie Ave., Chicago, Ill.
Roller-Smith, Bethlehem, Pa.
Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.

Simpson Electric Co., 5218 W. Kinzie St., Chicago 44, Ill.
Waterman Products Co., Inc., 2445-63 Emerald St., Phila. 25, Pa.
See Advertisement on Page 232
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

366

WAVE METERS

Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.
Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
See Advertisement on Page 113
Lavole Labs., Morganville, N. J.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
See Advertisement on Page 220

367

Multipliers

METER MULTIPLIERS

Ballantine Labs., Inc., Boonton, N. J.
See Advertisement on Page 124
Barber Labs., A. W., 34-04 Francis Lewis Blvd., Flushing, N. Y.
See Advertisement on Page 288
Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Daven Co., 191 Central Ave., Newark 4, N. J.
See Advertisement Inside Back Cover
Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebr.
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Instrument Resistors Co., 25 Amity St., Little Falls, N. J.
See Advertisement on Page 127
Madison Electrical Products Corp., 74 Main St., Madison, N. J.
Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., South Pasadena, Calif.
Shalleross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
See Advertisement on Page 38
Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

368

Oscillators

AUDIO FORKED CONTROLLED OSCILLATORS

American Instrument Co., 8030 Georgia Ave., Silver Springs, Md.
American Time Products Inc., 580 Fifth Ave., New York 19, N. Y.
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

369

Oscillographs

DIRECT WRITING OSCILLOGRAPHS

Electro Medical Lab. Inc., Holliston, Mass.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Offner Electronics, Inc., 5320 N. Kedzie Avenue, Chicago 25, Ill.

370

MULTI-ELEMENT OSCILLOGRAPHS

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
See Advertisement on Page 210

371

RECORDING OSCILLOGRAPHS

Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
See Advertisement on Page 278
Engineering Lab. Inc., 602 E. 4th St., Tulsa 3, Okla.
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
See Advertisement on Page 210
Helland Research Corp., 130 E. 5th St., Denver 9, Colo.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio
Rahm Instruments Inc., 12 West Broadway, New York, N. Y.
Raytron, Inc., 407 N. Jackson St., Jackson, Mich.
Westinghouse Electric Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

372

TRANSIENT STUDY OSCILLOGRAPHS

Raytron, Inc., 407 N. Jackson St., Jackson, Mich.

373

Oscilloscopes

CATHODE-RAY INSTRUMENTS

Browning Labs., Inc., 750 Main St., Winchester, Mass.
Central Scientific Co., 1700 Irving Park Blvd., Chicago 13, Ill.
Commercial Research Labs., Inc., 20 Bartlett Ave., Detroit 3, Mich.
See Advertisement on Page 126
Dayton Acme Co., 930 York St., Cincinnati, Ohio
DuMont Laboratories, Inc., Allen B. 2 Main Ave., Passaic, N. J.
Electronic Tube Corp., 1200 E. Mermaid Ave., Phila. 18, Pa.
See Advertisement on Page 248
Espey Mfg. Co., Inc., 33 West 46th St., New York 19, N. Y.
General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Jackson Electrical Instrument Co., 16-18 S. Patterson Blvd., Dayton 1, Ohio
Madison Electrical Products Corp., Madison, N. J.
See Advertisement on Page 232
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
See Advertisement on Page 220
National Co., 61 Sherman St., Malden 48, Mass.
See Advertisement on Page 191
Radio Corp. of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Raytron, Inc., 407 N. Jackson Street, Jackson, Mich.
Reiner Electronics Co., 152 West 25th St., New York, N. Y.
Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
Supreme Instrument Corp., Greenwood, Miss.
Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
See Advertisement on Page 125
Waterman Products Co., Inc., 2445-63 Emerald St., Phila. 25, Pa.
See Advertisement on Page 232

374

Recorders

DIELECTRIC CONSTANT RECORDERS

Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

375

FREQUENCY RECORDERS

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
 Sound Apparatus Co., 233 Broadway, New York 7, N. Y.
 See Advertisement on Page 152
 Waugh Labs., 420 Lexington Ave., New York 17, N. Y.

376

POTENTIOMETER RECORDERS

Ess Instrument Co., 963 Washington St., Bergenfield, N. J.

377

TIME RECORDERS

Gibbs & Co., Thomas B., Div. of George W. Borg Corp., 814 Michigan St., Delavan, Wis.

378

Standards

CAPACITANCE STANDARDS

General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
 Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
 Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.

379

FREQUENCY STANDARDS

American Time Products, Inc., 580 Fifth Ave., New York 19, N. Y.
 Barker & Williamson, 255 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Breon Labs., 607 Rose St., Williamsport, Pa.
 Browning Labs., Inc., 750 Main St., Winchester, Mass.
 Ferris Instrument Co., 110-112 Cornelia St., Boonton, N. J.
 General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
 General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
 Gibbs & Co., Thomas B., Division of George W. Borg Corp., 814 Michigan St., Delavan, Wis.
 Herbach & Rademan Co., Mfg. Div., 517 Ludlow St., Philadelphia 6, Pa.
 Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
 See Advertisement on Page 113
 Knights Co., James, 131 S. Wells St., Sandwich, Ill.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
 Western Elec. Co. Inc., 120 Broadway, New York 5, N. Y.
 See Advertisement on Pages 182, 183

380

GAMMA RAY STANDARDS

Victoreen Instrument Co., 5806 Hough Ave., Cleveland 3, Ohio

381

INDUCTANCE STANDARDS

Communication Parts, 1101 N. Paulina St., Chicago 22, Ill.
 General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.

Industrial Transformer Corp., 2540 Belmont Ave., New York 58, N. Y.
 See Advertisements on Pages 235, 236, 237, 238
 Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
 Standard Instruments Corp., 568 Prospect Ave., New York 55, N. Y.
 S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
 United Transformer Corp., 150 Varick St., New York 13, N. Y.
 See Advertisement on Inside Front Cover

382

RESISTANCE STANDARDS

Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
 Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
 Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
 Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.
 See Advertisement on Page 295
 Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
 See Advertisement on Page 38

383

LABORATORY TIME STANDARDS

Standard Elect. Time Co., 89 Logan St., Springfield, Mass.

384

Synchronizers, Electronic

Burlington Instrument Co., 214 N. 4th St., Burlington, Iowa
 Electro Products Labs., 549 W. Randolph St., Chicago 6, Ill.
 See Advertisement on Page 278
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190-191

385

Syncroscopes

Lane-Wells Co., 5610 S. Soto St., Los Angeles 11, Calif.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 Polarad Electronics Co., 135 Liberty St., New York 6, N. Y.
 See Advertisement on Page 229
 Roller-Smith, Bethlehem, Pa.
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

386

Testers

BATTERY TESTERS

Chaslyn Co., The, 1952 Irving Park Bldg., Chicago 13, Ill.
 Precision Apparatus Co., 92-27 Horace Harding Blvd., Elmhurst, L. I., N. Y.
 Rectifier Engineering Co., 1809 E. 7th St., Los Angeles 21, Calif.
 Supreme Instruments Corp., Greenwood, Miss.

387

CAPACITOR TESTERS

Electric Heat Control Co., 9123 Inman Ave., Cleveland 5, Ohio
 Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebr.
 Interstate Mfg. Corp., 125 Sussex Ave., Newark, N. J.
 See Advertisement on Page 256

Jackson Electrical Instrument Co., 16-18 S. Patterson Blvd., Dayton 1, Ohio
 MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
 Radio City Products Co., 127 West 26th St., New York, N. Y.
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
 Tobe Deutschmann Corp., Filterette Div., Canton, Mass.
 See Advertisement on Page 91-98
 Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
 See Advertisement on Page 249

388

CIRCUIT TESTERS

Jackson Electrical Instr. Co., 16 S. Patterson Blvd., Dayton 1, Ohio
 Littelfuse Inc., 4755 Ravenswood Ave., Chicago, Ill.

389

COIL TESTERS

General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Wilmette Mfg. Co., 1713 Kalorama Rd., N-W, Washington 9, D. C.
 See Advertisement on Page 281

390

CONTINUITY TESTERS

Triplet Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
 See Advertisement on Page 275

391

CRYSTAL TESTING EQUIPMENT

Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.
 Telicon Corp., 851 Madison Ave., New York 21, N. Y.

392

INSULATION TESTERS

Amplifier Co. of America, 396 Broadway, New York, N. Y.
 Associated Research, Inc., 231 S. Green St., Chicago 7, Ill.
 Boonton Radio Corp., Boonton, N. J.
 See Advertisement on Page 42
 Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
 Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
 See Advertisement on Page 278
 Electro-Tech Equipment Co., 331 Canal St., New York 13, N. Y.
 Freed Transformer Co., 72 Spring St., New York 12, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Holtzer-Cabot, Div. of First Industrial Corp., 125 Amory St., Boston, Mass.
 Ideal Industries Inc., 1291 Park Ave., Sycamore, Ill.
 Industrial Transformer Corp., 2540 Belmont Ave., New York, N. Y.
 See Advertisements on Pages 235-238
 Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
 MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
 Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
 Northern Labs. Ltd., 3-01 27th Ave., Long Island City, N. Y.
 Radio City Products Co., 127 W. 26th St., New York, N. Y.
 Radio Development Labs., 362 Atlantic Ave., Brooklyn 2, N. Y.
 Rubicon Co., 3751 Ridge Ave., Phila., Pa.
 See Advertisement on Page 295
 S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
 Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
 See Advertisement on Page 38

ELECTRONIC and ALLIED PRODUCTS

Takk Corp., Newark, Ohio
Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J.
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

393

METER TESTERS

Marion Electrical Instrument Co., Manchester, N. H.
Rubicon Co., 3751 Ridge Ave., Phila., Pa.
See Advertisement on Page 295
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

394

MICROWAVE RADAR TESTING EQUIP.

Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

395

MULTITESTERS

Gem Radio & Telev. Co., 72 Cortlandt St., New York 6, N. Y.
Radio City Products Co., 127 W. 26th St., New York, N. Y.
Radio Design Co., 1353 Sterling Pl., Brooklyn, N. Y.
Supreme Instruments Corp., Greenwood, Miss.

396

PRODUCTION TUBE TESTING EQUIPMENT

Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
Measurements Corp., Boonton, N. J.

397

RADAR TUBE TESTERS

General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.

398

TELEVISION & FM TESTING EQUIP.

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Measurements Corp., Boonton, N. J.
See Advertisement on Page 194

399

TRANSCONDUCTANCE TUBE TESTERS

Triplet Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
See Advertisement on Page 275

400

TUBE AND SET TESTERS

Clough-Brengle Co., 5501 N. Broadway, Chicago 22, Ill.
Dayton Acme Co., 930 York St., Cincinnati, Ohio
Dilks, Inc., Norwalk, Conn.
Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebr.
Espey Mfg. Co., Inc., 33 W. 46th St., New York 19, N. Y.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
See Advertisements on Page 256
Jackson Electrical Instrument Co., 16-18 S. Patterson Blvd., Dayton 1, Ohio
MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.
Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Ill.
Philco Corp., Tioga & C Sts., Phila. 34, Pa.
Precision Apparatus Co., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Radio City Products Co., 127 W. 26th St., New York, N. Y.
Robson-Burgess Co., 5002 N. 30th St., Omaha 11, Nebr.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
Simpson Electric Co., 5218 W. Kinzie St., Chicago, Ill.
Superior Instruments Co., 227 Fulton St., New York 7, N. Y.

Supreme Instruments Corp., Greenwood, Miss.
Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125
Triplet Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
See Advertisement on Page 275
Universal Instrument Co., 306 E. McMillan St., Cincinnati 19, Ohio
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249

401

Tracers

CURVE TRACERS

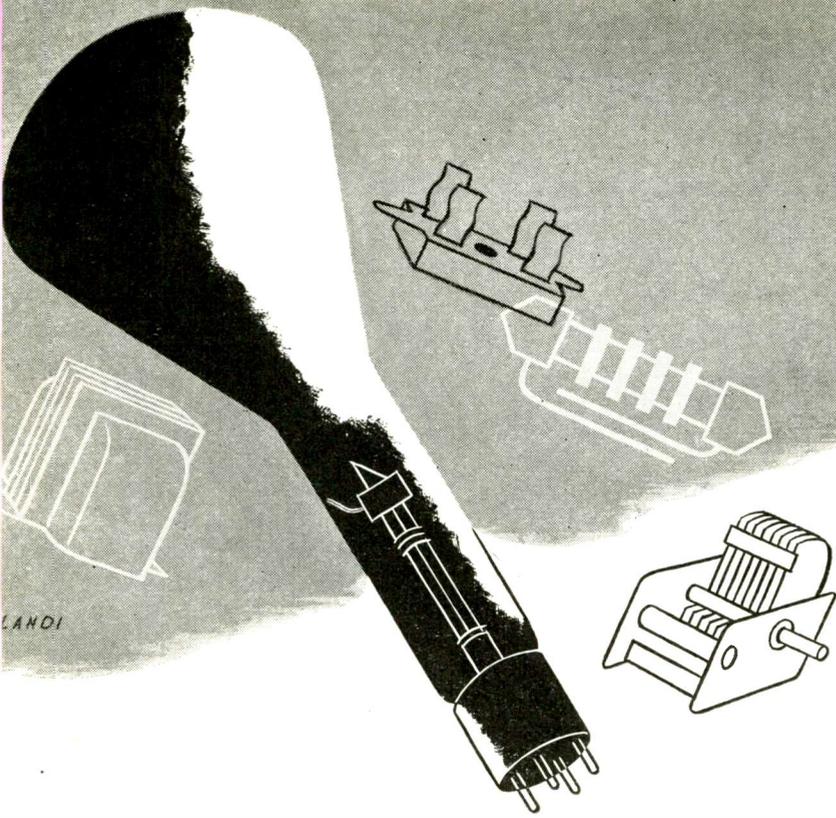
Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

402

SIGNAL TRACERS

Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
Dayton Acme Co., 930 York St., Cincinnati, Ohio
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio
H-W Mfg. Co., 3124 Larga Ave., Los Angeles, Calif.
Jackson Electrical Instr. Co., 16 S. Patterson Blvd., Dayton 1, Ohio
McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
Radio City Products Co., 127 W. 26th St., New York, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Robson-Burgess Co., 5002 N. 30th St., Omaha 11, Nebraska
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., South Pasadena, Calif.
Special Products Co., 9115 Brookville Rd., Silver Spring, Md.
Superior Instruments Co., 227 Fulton St., New York 7, N. Y.
Supreme Instruments Corp., Greenwood, Miss.
Waterman Products Co., Inc., 2445-63 Emerald St., Phila. 25, Pa.
See Advertisement on Page 232

COMPONENTS



SEE INDEX FOR ALL
PRODUCT LISTINGS

Listings of the manufacturers who supply the necessary component parts out of which all electronic equipment is made; also certain devices and sub-assemblies used in conjunction with complete electronic apparatus

403

Adaptors

BATTERY ADAPTORS

J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkwy.,
Brooklyn, N. Y.

404

FOREIGN ADAPTORS

Franklin Mfg. Co., A. W., 175 Varick Street,
New York, N. Y.
See Advertisement on Page 209

405

SHORT WAVE ADAPTORS FOR AUTO RADIO

ABC Radio Labs., 3334 N. New Jersey St.,
Indianapolis 5, Ind.

406

TEST ADAPTORS

Adrem Co., 143 Newbury Street, Boston 16,
Mass.
Alden Products Co., 117 No. Main St.,
Brockton 64, Mass.
Franklin Mfg. Co., A. W., 175 Varick Street,
New York, N. Y.
See Advertisement on Page 209

407

TUBE ADAPTORS

Adrem Co., 143 Newbury St., Boston 16,
Mass.
Alden Products Co., 117 No. Main St.,
Brockton 64, Mass.
American Phenolic Corp., 1830 S. 54th Ave.,
Chicago 50, Ill.
See Advertisements on Pages 110, 111
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkwy.,
Brooklyn, N. Y.

408

Amplifiers

DECADE AMPLIFIERS

Ballantine Labs. Inc., Boonton, N. J.
See Advertisement on Page 124
Freed Transformer Co., 72 Spring St., New
York 12, N. Y.

409

FACSIMILE AMPLIFIERS

Radio Inventions, Inc., Faximile, Inc., 155
Perry St., New York 14, N. Y.

410

KEYING AMPLIFIERS

Amplifier Co. of America, 396 Broadway,
New York, N. Y.
Sperry Gyroscope Co., Manhattan Bridge
Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

411

MEDICAL INSTRUMENT AMPLIFIERS

Amplifiers Co. of America, 396 Broadway,
New York, N. Y.
Dalmo, Victor, San Carlos, California

412

MICROWAVE RADAR AMPLIFIERS

Polarad Electronics Co., 135 Liberty St.,
New York 6, N. Y.
See Advertisement on Page 229

413

MUSICAL INSTRUMENT AMPLIFIERS

Audar Inc., Argos, Indiana
Quality Industries, Electronic Dept., 25 E.
Jackson Blvd., Chicago 4, Ill.

414

PHOTOCELL AMPLIFIERS

Hoffman Engineering Co., 458 Sexton Bldg.,
Minneapolis 4, Minn.
Tech Laboratories, 7 Lincoln St., Jersey
City, N. J.
See Advertisement on Page 246
Worner Electronic Devices, 609 W. Lake St.,
Chicago 6, Ill.

415

R. F. AMPLIFIERS

DeMornay-Budd Inc., 475 Grand Conc., New
York, N. Y.
See Advertisement on Page 203
Sylvania Electric Products, Inc., 500 5th
Ave., New York 18, N. Y.
See Advertisement on Page 125

416

STRAIN GAUGE AMPLIFIERS

Hathaway Instrument Co., 1315 S. Clarkson
St., Denver 10, Colo.
See Advertisement on Page 210
Televiso Products Inc., 6533 N. Olmstead
Ave., Chicago, Ill.
Trimount Instrument Co., 37 W. Van Buren,
Chicago 5, Ill.
Westinghouse Elec. Corp., East Pittsburgh,
Pa.
See Advertisements on Pages 17-20; 190, 191

417

TELEVISION AMPLIFIERS

Lyman Electronic Corp., 12 Cass Street,
Springfield, Mass.
Polarad Electronics Co., 135 Liberty St.,
New York 6, N. Y.
See Advertisement on Page 229
Radio Corp. of Amer., RCA Victor Div.,
Camden, N. J.
See Advertisement on Back Cover

418

ULTRA-SONIC AMPLIFIERS

Amplifier Co. of America, 396 Broadway,
New York, N. Y.

1946-1947 DIRECTORY of ELECTRONIC and ALLIED PRODUCTS

419

VIBRATION PICKUP AMPLIFIERS

Offner Electronics, Inc., 5320 N. Kedzie Avenue, Chicago 25, Ill.

420

WIDE BAND AMPLIFIERS

Amplifier Co. of America, 396 Broadway, New York, N. Y.
Atomc Instruments Co., 160 Charles St., Boston, Mass.
See Advertisement on Page 202
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
Ripley Co., Torrington, Co.
See Advertisement on Pages 30; 108, 109
Vibratloc Mfg. Co., 3597 Mission St., San Francisco, Calif.

421

Antenna Fairleads

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Aeronautical Radio Mfg. Co., 155 First St., Mineola L. I., N. Y.
Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
See Advertisement on Page 283
Telephonics Corp., 350 W. 31st St., New York 1, N. Y.

422

Antenna Feed Systems

Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
See Advertisement on Page 283

423

Antenna Pedestals, Radar

GEAR DRIVEN RADAR ANTENNA PEDESTALS

Foot Bros., Gear & Machine Corp., 5225 S. Western Blvd., Chicago 9, Ill.

424

Antenna Reels

Aeronautical Radio Mfg. Co., 155 First St., Mineola, L. I., N. Y.
Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.

425

Antenna Reflectors

RADAR PARABOLIC REFLECTORS

Gray Mfg. Co., 16-30 Arbor St., Hartford, Conn.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
See Advertisement on Page 289

426

Antenna Tuning Units

Andrew Co., 363 E. 75th St., Chicago 19, Ill.
Press Wireless Mfg. Corp., 1475 Broadway, New York City 18, N. Y.
See Advertisement on Pages 69-80

427

Antennae

AIRBORNE RADAR SPINNER ANTENNAE

Gray Mfg. Co., 16-30 Arbor St., Hartford, Conn.

428

AIRCRAFT TYPE ANTENNAE

Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
Bendix Radio Corp., Baltimore 4, Md.
Communication Equipment & Engrg. Co., 5646 W. Race St., Chicago 44, Ill.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Premax Products Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls 2, N. Y.
See Advertisement on Page 68
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Western Electric Co. Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183
Workshop Associates, 66 Needham St., Newton Highlands 61, Mass.

429

ALL WAVE RECEIVING ANTENNAE

Alpha Wire Corp., 50 Howard St., New York, N. Y.
American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
Bendix Radio Corp., Baltimore 4, Md.
Brach Mfg. Corp., L. S., 55 Dickerson St., Newark 4, N. J.
Burton-Rogers Co., 857 Boylston St., Boston 16, Mass.
Columbia Wire & Supply Co., 4106 N. Pulaski Rd., Chicago 41, Ill.
See Advertisement on Page 126
Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
Cornish Wire Co., 15 Park Row, New York, N. Y.
See Advertisement on Page 148
DX Radio Prods. Co. Inc., 1200 N. Claremont Ave., Chicago 22, Ill.
Dielectric Prods. Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
Elkay Radio Products, 305 E. Walnut St., Oglesby, Ill.
Fishwick Radio Co., 430 Colorado Bldg., Washington, D. C.
Fleron & Son Inc., M. M., 113 N. Broad St., Trenton, N. J.
Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
See Advertisement on Page 192
Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
See Advertisement on Page 256
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Milwaukee Resistor Co., 748 W. Virginia St., Milwaukee 4, Wisc.
Polytron Corp., 401 Broadway, New York 13, N. Y.
Premax Products Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls 2, N. Y.
See Advertisement on Page 68
Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
Snyder Mfg. Co., 22nd & Ontario Sts., Phila. 40, Pa.
Stanwyck Winding Co., 102 S. Lander St., Newburgh, N. Y.
Technical Appliance Corp., 41-06 DeLong St., Flushing, N. Y.

430

AUTO ANTENNAE

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111

Andrew Co., 363 E. 75th St., Chicago 19, Ill.
Brach Mfg. Corp., L. S., 55 Dickerson St., Newark 4, N. J.
Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
Doolittle Radio, Inc., 7421 Loomis Bldg., Chicago, Ill.
See Advertisement on Page 114
Fishwick Radio Co., 430 Colorado Bldg., Washington, D. C.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
See Advertisement on Page 192
Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
See Advertisement on Page 256
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
La Magna Mfg. Co., Inc., East Rutherford, N. J.
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Philson Mfg. Co. Inc., 156 Chambers Street, New York, N. Y.
Premax Products Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls 2, N. Y.
See Advertisement on Page 68
Radiart Corp., 3571 W. 62nd St., Cleveland, Ohio
Snyder Mfg. Co., 22nd & Ontario Sts., Phila. 40, Pa.
Special Products Co., 9115 Brookville Rd., Silver Spring, Md.
Spirling Prods. Co., Inc., 64 Grand St., New York 13, N. Y.
Ward Products Corp., 1523 E. 45th St., Cleveland 3, Ohio
See Advertisement on Page 188

431

BROADCAST STATION VERTICAL RADIATORS

American Bridge Co., Frick Bldg., Pittsburgh, Pa.
American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Amy, Aceves & King Inc., 11 W. 42nd St., New York 18, N. Y.
Blaw-Knox Co., Farmers Bank Bldg., Pittsburgh, Pa.
See Advertisement on Page 115
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Lehigh Structural Steel Co., 17 Battery Pl., New York 4, N. Y.
Lingo & Son, Inc., John E., 28th St. & Buren Avenue, Camden, N. J.
Premax Products Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls 2, N. Y.
See Advertisement on Page 68
Western Electric Co. Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182-183

432

DIPOLE ANTENNAE

Amy, Aceves & King Inc., 11 W. 42nd St., New York 18, N. Y.
Andrew Co., 363 E. 75th St., Chicago 19, Ill.
Diamond Instrument Co., North Ave., Wakefield, Mass.
Kings Electronics Co., 372 Classon Ave., Brooklyn 5, N. Y.
See Advertisement on Page 270

433

DIRECTIONAL ANTENNAE COUPLING & PHASING UNITS

Johnson Co., E. F., Waseca, Minn.

434

DUMMY LOADS

Bird Electronic Corp., 1800 E. 38th St., Cleveland 14, Ohio
See Advertisement on Page 227

Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.
See Advertisement on Page 215

435

FIXED STATION ANTENNAE SYSTEMS

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Andrew Co., 363 E. 75th St., Chicago 19, Ill.
Dielectric Prods. Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
Erco Radio Labs. Inc., Fenimore Ave., Hempstead, N. Y.
See Advertisement on Page 280
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
Johnson Co., E. F. Waseca, Minn.
Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
Technical Appliance Corp., 41-06 DeLong St., Flushing, N. Y.
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

436

F. M. ANTENNA ISO-COUPPLERS

Johnson Co., E. F., Waseca, Minn.

437

GROUND PLANE ANTENNAE

Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover

438

INTRA VIDEO TELEVISION ANTENNAE & F. M. SYSTEMS

Telicon Corp., 851 Madison Ave., New York 21, N. Y.

439

ANTENNA KITS

Alpha Wire Corp., 50 Howard St., New York 13, N. Y.
American Communications Corp., 306 Broadway, New York, N. Y.
Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
See Advertisement on Page 285
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
Birnback Radio Co., Inc., 145 Hudson St., New York, N. Y.
Columbia Wire & Supply Co., 4106 N. Pulaski Rd., Chicago 41, Ill.
See Advertisement on Page 126
Cornish Wire Co., 15 Park Row, New York, N. Y.
See Advertisement on Page 148
Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
Elkay Radio Products, 305 E. Walnut St., Oglesby, Ill.
Garner Electronics Corp., 1100 W. Washington Blvd., Chicago 7, Ill.
Insuline Corp. of America, 3602-35th Avenue, Long Island City, N. Y.
See Advertisement on Page 192
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
La Magna Mfg. Co., Inc., East Rutherford, N. J.
Premax Prods. Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls 2, New York
See Advertisement on Page 68
Spirling Prods. Co., Inc., 64 Grand St., New York 13, N. Y.
Standard Engineering Labs., 40 S. Oak Knoll Ave., Pasadena 1, Calif.
Technical Appliance Corp., 41-06 DeLong St., Flushing, New York
Workshop Associates, 66 Needham Street, Newton Highlands 61, Mass.

440

LOOP ANTENNAE

Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
American Coil & Engineering Co., 1271 N. Hermitage Ave., Chicago 22, Ill.
American Communications Corp., 306 Broadway, New York, N. Y.
Bassett Inc., Rex, 500 S. E. 2nd St., Ft. Lauderdale, Fla.
Bittermann Elec. Co., 50 Henry St., Brooklyn, N. Y.
Essex Electronics, 1060 Broad St., Newark 2, N. J.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
Franklin Airloop Corp., 175 Varick St., New York 14, N. Y.
See Advertisement on Page 129
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
Madison Electrical Products Corp., 74 Main St., Madison, N. J.
See Advertisement on Page 232
Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
Polytron Corp., 401 Broadway, New York 13, N. Y.
Precise Electronics, 614 W. 49th St., New York, N. Y.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
Traveler Karenola Radio & Telev. Corp., 571 W. Jackson Blvd., Chicago 6, Ill.

441

MARINE ANTENNAE

Airadio Inc., Melrose Ave. & Battery Pl., Stamford, Conn.
Brach Mfg. Corp., L. S., 55 Dickerson St., Newark 4, N. J.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
Islip Radio Mfg. Co., Beech St., Islip, N. Y.
Jefferson-Travis Radio Mfg. Corp., 245 E. 23rd St., New York 10, N. Y.
Premax Products Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls, 2, N. Y.
See Advertisement on Page 68
Snyder Mfg. Co., 22nd & Ontario Sts., Phila. 40, Pa.

442

MICROWAVE ANTENNAE

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Selectar Mfg. Co., 21-10 49th Ave., Long Island City, N. Y.
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160
Workshop Associates, 66 Needham St., Newton Highlands 61, Mass.

443

PARABOLIC ANTENNAE

Dalmo, Victor, San Carlos, California
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
See Advertisement on Page 289
Skydyne Inc., River Rd., Port Jervis, N. Y.
See Advertisement on Page 142
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

444

PORTABLE RADIO TELESCOPIC ANTENNAE

Brach Mfg. Corp., L. S., 55 Dickerson St., Newark 4, N. J.
Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
Philson Mfg. Co., Inc., 156 Chambers St., New York, N. Y.
Premax Products Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls 2, N. Y.
See Advertisement on Page 68
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Workshop Associates, 66 Needham St., Newton Highlands 61, Mass.

445

RADAR RECEIVING ANTENNAE

Brach Mfg. Corp., L. S., 55 Dickerson St., Newark 4, N. J.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Vendo Co., 1907 Grand Ave., Kansas City 8, Mo.
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

446

RADAR TRANSMITTING ANTENNAE

Brach Mfg. Corp., L. S., 55 Dickerson St., Newark 4, N. J.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Vendo Co., 1907 Grand Ave., Kansas City 8, Mo.
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183
Workshop Associates, 66 Needham St., Newton Highlands 61, Mass.

447

RAILROAD ANTENNAE

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Bendix Radio Corp., Baltimore 4, Md.
Farnsworth Television & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.
Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
Premax Products Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls 2, N. Y.
See Advertisement on Page 68
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

448

ROTARY BEAM ANTENNAE

Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.

449

TELESCOPIC ANTENNAE

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
Jefferson-Travis Radio Mfg. Corp., 245 E. 23rd St., New York 10, N. Y.
Kings Electronics Co., 372 Classon Ave., Brooklyn 5, N. Y.
See Advertisement on Page 262

ELECTRONIC and ALLIED PRODUCTS

Premax Products Div., Chisholm Ryder Co.,
College & Highland Ave., Niagara Falls
2, N. Y.
See Advertisement on Page 68

450

TELEVISION & FM ANTENNAE

Aero Communications, Inc., 231 Main St.,
Hempstead, L. I., N. Y.
American Phenolic Corp., 1830 S. 54th Ave.,
Chicago 50, Ill.
See Advertisements on Pages 110, 111
Amy, Aceves & King Inc., 11 W. 42nd St.,
New York 18, N. Y.
Brach Mfg. Corp., L. S., 55 Dickerson St.,
Newark 4, N. J.
Dielectric Prods. Co., Inc., 125 Virginia Ave.,
Jersey City 5, N. J.
Farnsworth Television & Radio Corp., 3700
Pontiac St., Ft. Wayne, Ind.
Federal Telephone & Radio Corp., 591 Broad
St., Newark, N. J.
See Advertisements on Pages 299-302
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Gordon Specialties Co., 823 S. Wabash Ave.,
Chicago 5, Ill.
Hallcrafters Co., 2611 S. Indiana Ave.,
Chicago, Ill.
Insuline Corp. of Amer., 3602-35th Ave.,
L. I. City, N. Y.
See Advertisement on Page 192
Interstate Mfg. Corp., 125 Sussex Ave.,
Newark 4, N. J.
See Advertisement on Page 256
Kings Electronics Co., 372 Classon Ave.,
Brooklyn 5, N. Y.
See Advertisement on Page 262
Lingo & Son, John E., Inc., 28th St. & Buren
Ave., Camden, N. J.
Philson Mfg. Co., Inc., 156 Chambers St.,
New York, N. Y.
Premax Products Div., Chisholm Ryder Co.,
College & Highland Ave., Niagara Falls
2, N. Y.
See Advertisement on Page 68
Radio Corp. of Amer., RCA Victor Div.,
Camden, N. J.
See Advertisement on Back Cover
Radio Engineering Labs, Inc., 35-54 36th
St., Long Island City, N. Y.
Shur-Antenna-Mount Inc., Seacliffe, L. I.,
N. Y.
Technical Appliance Corp., 41-06 DeLong
St., Flushing, N. Y.
Telicon Corp., 851 Madison Ave., New York
21, N. Y.
Thermionic Engineering Corp., 32 W. 12th
St., Bayonne, N. J.
Western Electric Co., Inc., 120 Broadway
New York 5, N. Y.
See Advertisements on Pages 182, 183
Westinghouse Elec. Corp., 2519 Wilkens
Ave., Baltimore 3, Md.
See Advertisements on Pages 17-20; 190-191
Winchager Corp., 7th & Division Sts.,
Sioux City, Iowa
See Advertisement on Page 142
Workshop Associates, 66 Needham St.,
Highlands 61, Mass.

451

U. H. F. & V. H. F. ANTENNAE

Aero Communications, Inc., 231 Main Street,
Hempstead, L. I., N. Y.
Air Associates Inc., 5827 W. Century Blvd.,
Los Angeles 45, Calif.
Bendix Radio Corp., Baltimore 4, Md.
Farnsworth Television & Radio Corp., 3700
Pontiac St., Ft. Wayne, Ind.
Federal Tel. & Radio Corp., 591 Broad St.,
Newark, N. J.
See Advertisements on Pages 299-302
General Communication Co., 530 Common-
wealth Ave., Boston 15, Mass.
Gross Communication Prods., 1865-71 Pros-
pect Ave., Cleveland 15, Ohio
See Advertisement on Page 214
Hallcrafters Co., 2611 S. Indiana Ave.,
Chicago, Ill.
Premax Products Div., Chisholm Ryder Co.,
College & Highland Ave., Niagara Falls
2, N. Y.
See Advertisement on Page 68
Radio Corp. of Amer., RCA Victor Div.,
Camden, N. J.
See Advertisement on Back Cover
Schuttig & Co., 9th & Kearney Sts. N. E.,
Washington 17, D. C.
Selectar Mfg. Co., 21-10 49th Ave., Long
Island City, N. Y.

Western Electric Co., Inc., 120 Broadway,
New York 5, N. Y.
See Advertisements on Pages 182, 183
Workshop Associates, 66 Needham St., New-
ton Highlands 61, Mass.

452

Arrestors, Lightning

Alpha Wire Corp., 50 Howard St., New
York, N. Y.
Brach Mfg. Corp., L. S., 55 Dickerson St.,
Newark 4, N. J.
Consolidated Wire & Associated Corps.,
1635 S. Clinton St., Chicago 16, Ill.

453

Baffles

MICROPHONE BAFFLES

Electro Voice Inc., 1239 S. Bend Ave., South
Bend, Ind.
See Advertisement on Page 181
Rauland Corp., 4245 N. Knox Avenue, Chi-
cago 41, Ill.

454

SPEAKER BAFFLES

American Communications Corp., 306 Broad-
way, New York, N. Y.
Atlas Sound Corp., 1443 39th St., Brooklyn,
N. Y.
See Advertisement on Page 244
Castlewood Mfg. Co., 12th & Burnett Sts.,
Louisville, Ky.
Fairfield Lumber Co., 1700 Post Rd., Fair-
field, Conn.
Hadley Co., Robert M., 711 E. 61st St., Los
Angeles, Calif.
Illinois Wood Products Corp., 2512 S. Da-
men Ave., Chicago 8, Ill.
McElroy Mfg. Corp., 82 Brookline Ave.,
Boston 15, Mass.
Oxford-Tartak Corp., 3911 S. Michigan Ave.,
Chicago 15, Ill.
Radio Mdse. Sales, 550 Westchester Ave.,
New York 55, N. Y.
See Advertisement on Page 284
Radio Corp. of Amer., RCA Victor Div.,
Camden, N. J.
See Advertisement on Back Cover
Rauland Corp., 4245 N. Knox Ave., Chicago
41, Ill.
Simpson Mfg. Co., Inc., 188 W. 4th St., New
York 14, N. Y.
Watterson Radio Mfg. Co., P. O. Box 54,
Dallas 1, Texas

455

Bases, Chassis

STEEL CHASSIS BASES

Bud Radio Inc., 2118 E. 55th St., Cleveland
3, Ohio
Gardner Mfg. Co., 2711 Union St., Oakland
7, Calif.
Hadley Co., Robert M., 711 E. 61st St., Los
Angeles, Calif.
Hawley Prods. Co., St. Charles, Ill.

456

WOOD CHASSIS BASES

Fairfield Lumber Co., 1700 Post Rd., Fair-
field, Conn.

457

Bases, Relay

Electronic Mechanics Inc., 70 Clifton Blvd.,
Clifton, N. J.
See Advertisement on Page 201

458

Batteries

DRY BATTERIES

Acme Battery Corp., 59 Pearl St., Brooklyn,
N. Y.
Admiral Corp., 3800 W. Cortland St., Chi-
cago, Ill.
Bond Electric Corp., Div. of Olin Industries,
Inc., New Haven 4, Conn.
Bowers Battery & Spark Plug Co., Reading,
Pa.
Bright Star Battery Co., 200 Crooks Ave.,
Clifton, N. J.
Burgess Battery Co., Handicraft Div., Vibro
Tool Dept., 180 N. Wabash Ave., Chi-
cago 1, Ill.
Carbone Corp., Myrtle Ave., Boonton, N. J.
General Dry Batteries, Inc., 13000 Athens
Ave., Cleveland, Ohio
Magnavox Co., The, 2131 Bueter Rd., Ft.
Wayne 4, Ind.
Mallory & Co., Inc., P. R., 3029 E. Washing-
ton St., Indianapolis 6, Ind.
See Advertisements on Pages 296, 297
Marathon Battery Co., Wausau, Wisc.
National Union Radio Corp., 15 Washing-
ton St., Indianapolis 6, Ind.
See Advertisement on Page 61
Radio Corp. of Amer., RCA Victor Div.,
Camden, N. J.
See Advertisement on Back Cover
Ray-O-Vac Co., Madison, Wisc.
Southern Battery Co., Appomattox, Va.
Transelectric Mfg. Co., Oxford, Pa.
United States Electric Mfg. Corp., 222 W.
14th St., New York, N. Y.
Western Cable Battery Co., Inc., 395 Sibley
St., St. Paul, Minn.
Willard Storage Battery Co., 246 E. 131st
St., Cleveland 1, Ohio

459

STANDARD CELL BATTERIES

Acme Battery Corp., 59 Pearl St., Brooklyn,
N. Y.
Burgess Battery Co., Handicraft Div., Vibro
Tool Dept., 180 Wabash Ave., Chicago 1,
Ill.
Eppley Lab. Inc., Newport, R. I.
National Carbon Co., Inc., 30 E. 42nd St.,
New York, N. Y.
See Advertisement on Page 207
Sturges Battery Co., Inc., 260 W. Bdway,
New York, N. Y.

460

STORAGE BATTERIES

Bowers Battery & Spark Plug Co., Reading,
Pa.
Edison Storage Battery Div., Thomas A.
Edison Inc., Main St. at Lakeside Ave.,
W. Orange, N. J.
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.,
Depey, N. Y.
Prest-O-Lite Battery Co., Inc., 4500 W. 16th
St., Box 1655, Indianapolis, Ind.
Solar Corp., 1000 W. Bruce St., Milwaukee
4, Wis.
Universal Battery Co., 3410 S. La Saile St.,
Chicago, Ill.
Western Cable Co., Inc., 395 Sibley St., St.
Paul, Minn.
Willard Storage Battery Co., 246 E. 131st
St., Cleveland 1, Ohio

461

STORAGE—NON-SPILL—BATTERIES

Automatic Electrical Devices Co., 324 E. 3rd
St., Cincinnati 2, Ohio
Carpenter Mfg. Co., Master Light Bldg.,
Boston 45, Mass.
Centralab Div. of Globe-Union, Inc., 900 E.
Keefe Ave., Milwaukee 1, Wis.
See Advertisement on Page 146
Electric Storage Battery Co., 19th St. &
Allegheny Ave., Phila. 32, Pa.
Kellogg Switchboard & Supply Co., 6650 S.
Cicero Ave., Chicago 38, Ill.

Prest-O-Lite Battery Co., Inc., P. O. Box 1655, Indianapolis, Ind.
 Sturges Battery Co., Inc., 260 W. Broadway, New York, N. Y.
 Willard Storage Battery Co., 246-286 E. 131st St., Cleveland 1, Ohio

462

Bearings, Miniature

Bound Brook Oil-less Bearing Co., Bound Brook, N. J.
 Fafnir Bearing Co., Booth Street, New Britain, Conn.
 Keystone Carbon Co., Inc., 1935 State St., St. Marys, Pa.
 Landis & Gyr, Inc., 104 Fifth Ave., New York, N. Y.
 Miniature Precision Bearings, Keene, N. H.

463

Bellows

Chicago Metal Hose Corp., 1309 S. Third Ave., Maywood, Ill.
 Clifford Mfg. Co., 564 E. First, Boston, Mass.
 Fulton Sylphon Co., Knoxville, Tenn.
 Technographics, Inc., 1457 W. Diversity Blvd., Chicago 14, Ill.

464

Belts

DIAL DRIVE BELTS

J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
 Ton-Text Corp., 245 Pearl St., Grand Rapids, Mich.

465

Blocks

FUSE BLOCKS & HOLDERS

Alden Products Co., 117 N. Main St., Brockton 64, Mass.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.
 Dante Elect. Mfg. Co., Bantam, Conn.
 General Electric Co., Schenectady 5, N. Y. See Advertisements on Pages 204, 212
 Insuline Corp. of America, 3602-35th Ave., L. I. City, N. Y. See Advertisement on Page 192
 Johnson Co., E. F., Waseca, Minn.
 Jones, Howard B., 2460 W. George St., Chicago 18, Ill.
 Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J.
 Penn-Union Elec. Corp., 315 State St., Erie, Pa.
 Rhodes Mfg. Co., 1753 N. Honore St., Chicago, Ill.
 Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.

466

Boards, Resistor

Edin Electronics Co., 207 Main Street, Worcester, Mass.

467

Booms

MICROPHONE BOOMS

Olesen Co., Otto K., 1560 Vine St., Hollywood 28, Calif.

468

Brackets

Cambridge Thermonic Corp., 445 Concord Ave., Cambridge, Mass. See Advertisement on Page 67

Edin Electronics Co., 207 Main Street, Worcester, Mass.
 Electronic Supply Co., 207 Main St., Worcester, Mass.
 Garrett Co., Inc., G. K., 1421 Chestnut St., Phila. 2, Pa.

469

FM & TELEVISION ANTENNA BRACKETS

Tower and Antenna Div., Wind Turbine Co., West Chester, Pa.

470

Breakers

CIRCUIT BREAKERS (for electronic applications)

General Electric Co., Schenectady 5, N. Y.
 Heinemann Circuit Breaker Co., 97 Plum St., Trenton 2, N. J. See Advertisement on Page 196
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Phila. 30, Pa.
 Spencer Thermostat Co., Attleboro, Mass.
 Square D Co., 6060 Rivard St., Detroit 11, Mich.
 Sundt Engineering Co., 4757 Ravenswood Ave., Chicago, Ill.
 Trumbull Electric Mfg. Co., Plainville, Conn.
 Westinghouse Electric Corp., East Pittsburgh, Pa. See Advertisements on Pages 17-20; 190-191

471

Brushes

CARBON & GRAPHITE BRUSHES

Becker Brothers Carbon Co., 3450 S. 52nd Ave., Chicago, Ill.
 Carbone Corp., Myrtle Ave., Boonton, N. J.
 Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia, Pa.
 Graphite Metallizing Corp., 1055 Nepperhan Ave., Yonkers 3, N. Y. See Advertisement on Page 114
 Helwig Co., 2544 North 30th St., Milwaukee 10, Wisc.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland, Ohio
 Pittsburgh Carbon Brush Co., 811 Fulton St., Pittsburgh 12, Pa.
 St. Mary's Carbon Co., St. Marys, Pa.
 Seager Carbon Co., 68 Barclay St., New York 7, N. Y.
 Southern Carbon Brush Co., P. O. Box 2021, 109 N. 11th St., Birmingham 1, Ala.
 Speer Carbon Co., Lincoln Ave., St. Marys, Pa.
 Superior Carbon Products, Inc., 9112 George Ave., Cleveland, Ohio
 United States Graphite Co., 1621 Holland Ave., Saginaw, Mich.

472

METAL-GRAPHITE BRUSHES

Graphite Metallizing Corp., 1055 Nepperhan Ave., Yonkers 3, N. Y. See Advertisement on Page 114
 Helwig Co., 2544 N. 30th St., Milwaukee 10, Wisc.
 Keystone Carbon Co., Inc., 1935 State Street, St. Marys, Pa.
 St. Mary's Carbon Co., St. Marys, Pa.
 Seager Carbon Co., 68 Barclay St., New York 7, N. Y.
 Southern Carbon Brush Co. Inc., P. O. Box 2021, Birmingham, Ala.
 Speer Carbon Co., Lincoln Ave., St. Marys, Pa.

When Ordering or Inquiring please mention the ELECTRONICS BUYERS' GUIDE

473

Bus Bars

BUS BAR SYSTEMS

Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
 Trumbull Elec. Mfg. Co., Plainville, Conn.

474

SOLDERLESS BUS BARS

Aircraft-Marine Prods., Inc., 1523 No. 4th St., Harrisburg, Pa.

475

Bushings

HERMETICALLY SEALED BUSHINGS

General Ceramics & Steatite Corp., Keasbey, N. J. See Advertisement on Page 189
 Wheaton Co., T. C., Industrial Division, Millville, N. J.

476

NON-METALLIC BUSHINGS

American Lava Corp., Kruesl Bldg., Chattanooga 5, Tenn. See Advertisement on Page 21
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 Auburn Mfg. Co., 110 Stack St., Middletown, Conn.
 Corning Glass Works, Corning, N. Y.
 Creative Plastics Corp., 963 Kent Ave., Brooklyn, N. Y.
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y. See Advertisement on Page 192
 Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
 Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
 Locke Insulator Corp., P. O. Box 57, Baltimore 3, Md.
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. See Advertisement on Page 220
 National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del. See Advertisement on Page 33
 Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
 Printloid Inc., 95 Mercer St., New York, N. Y.
 Saxonburg Potteries, Saxonburg, Pa.
 Stupakoff Ceramic & Mfg. Co., Latrobe, Pa. See Advertisement on Page 118
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

477

Cabinets

METAL CABINETS

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
 Caswell Runyon Co., Huntington, Ind.
 Cole Steel Equip., 349 Broadway, New York 13, N. Y.
 Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa See Advertisements on Pages 105-107
 Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.
 Edin Electronics Co., 207 Main St., Worcester, Mass.
 Electronic Supply Co., 207 Main St., Worcester, Mass.
 Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
 Hadley Co., Robert M., 711 E. 61st St., Los Angeles, Calif.
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y. See Advertisement on Page 192

ELECTRONIC and ALLIED PRODUCTS

Jacksonville Metal Mfg. Co., 247 Riverstide Ave., Jacksonville 4, Fla.
 Johnson Co., E. F., Waseca, Minn.
 Karp Metal Prods. Co., Inc., 129-30th St., Brooklyn, N. Y.
 See Advertisement on Page 65
 Lindsay & Lindsay, 222 W. Adams St., Chicago 6, Ill.
 Lindsay & Thomas, Inc., 60 E. 42nd St., New York 17, N. Y.
 Lorentzen, H. K., Inc., 391 W. Broadway, New York 12, N. Y.
 McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 Par-Metal Prods. Corp., 32-62 49th St., L. I. City 3, N. Y.
 See Advertisement on Page 256
 Porter Metal Prods., 121 Ingraham St., Brooklyn 6, N. Y.
 Racon Elec. Co., 52 E. 19th St., New York 3, N. Y.
 See Advertisement on Page 289
 Standard Engineering Labs., 40 S. Oak Knoll Ave., Pasadena 1, Calif.
 Trav-ler Karenola Radio & Telev. Corp., 571 W. Jackson Blvd., Chicago 6, Ill.

478

PLASTIC CABINETS

Consolidated Molded Products Corp., 309 Cherry St., Scranton 2, Pa.
 See Advertisement on Page 131
 G. Felsenthal & Sons, 4122 W. Grand Ave., Chicago 51, Ill.
 Hawley Products Co., St. Charles, Ill.
 Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
 Richardson Co., The, Melrose Park, Ill.
 See Advertisement on Page 271
 Tri-United Plastics Corp., 390 Nye Ave., Irvington, N. J.
 Victory Mfg. Co., 1722 W. Arcade Pl., Chicago 2, Ill.
 Watertown Mfg. Co., Watertown, Conn.

479

WOOD CABINETS

Air-King Prods., Co., Inc., 1523-63rd St., Brooklyn, N. Y.
 Castlewood Mfg. Co., 12th & Burnett Sts., Louisville, Ky.
 Delaware Industries Inc., Middletown, Delaware
 Garrard Sales Corp., 401 Broadway, New York 13, N. Y.
 Hollywood Radio Cab. Co., 924 N. Formosa Ave., Hollywood, Calif.
 Illinois Wood Products Corp., 2512 S. Damen Avenue, Chicago 8, Ill.
 Purves Mfg. Corp., Cambridge City, Ind.
 Radio Merchandise Sales, 550 Westchester Ave., New York 55, N. Y.
 See Advertisement on Page 284
 Steger Furniture Mfg. Co., Steger, Ill.
 U. S. Trunk Co., Inc., 951 Broadway, Fall River, Mass.
 Wallace Mfg. Co., Wm. T., Chill & Madison Ave., Peru, Ind.
 Watterson Radio Mfg. Co., P. O. Box 54, Dallas 1, Tex.
 Woodcraft Corp., 501 Salzburg Ave., Bay City, Mich.

480

Cabinet Backs

Pierce Paper Products Co., Rockford, Ill.

481

Cable

CABLE ASSEMBLIES

Alden Prods. Co., 117 N. Main St., Brockton 64, Mass.
 American Electric Cable Co., Holyoke, Mass.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Banks Mfg. Co., 1105 W. Lawrence Ave., Chicago 40, Illinois

Buggie Co., H. H., Toledo, Ohio
 Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Kraft & Kraft, Hicksville, N. Y.
 Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
 Whitaker Cable Corp., Kansas City 16, Mo.

482

COAXIAL CABLE

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Andrew Co., 363 East 75th St., Chicago 19, Ill.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Columbia Electronics Inc., 185 E. 122nd St., New York 35, N. Y.
 Communication Products Co., Route 36, Palmer Avenue, Keansburg, N. J.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Geophysical Instrument Co., Key Blvd. & Nash St., Arlington, Va.
 Gits Molding Corp., 4600 Huron St., Chicago, Ill.
 Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
 Johnson Co., E. F., Waseca, Minn.
 Okonite Co., Canal St., Passaic, N. J.
 Precision Tube Co., 3828 Terrace St., Philadelphia 28, Pa.
 See Advertisement on Page 298
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183

483

INSULATED CABLE

American Electric Cable Co., Holyoke, Mass.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 American Steel & Wire Co., Rockefeller Bldg., Cleveland 13, Ohio
 Ansonia Elec. Co., The, Ansonia, Conn.
 Boston Insulated Wire & Cable Co., 65 Bay St., Dorchester, Boston, Mass.
 See Advertisement on Page 34
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., P. O. Box 61, Pawtucket, R. I.
 Electric Auto Lite Co., Toledo 1, Ohio
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Insulated Wire Wks. Inc., 69 Gordon Ave., Providence 5, R. I.
 Hazard Insulated Wire Wks., Okonite Co. Div., Wilkes Barre, Pa.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 4, Ill.
 Okonite Co., Canal St., Passaic, N. J.
 Plastold Corp., 19 W. 44th St., New York 18, N. Y.
 See Advertisement on Page 264
 Rockbestos Products Corp., 308 Nicoll St., New Haven 4, Conn.
 Roebing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 Suprenant Electrical Insulation Co., 84 Purchase St., Boston 10, Mass.
 See Advertisement on Page 228
 Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Calif.
 Whittaker Cable Corp., North Kansas City, Mo.

484

MICROPHONE CABLE

Alpha Wire Corp., 50 Howard St., New York, N. Y.

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Blrnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Cornish Wire Co., 15 Park Row, New York, N. Y.
 General Insulated Wire Wks. Inc., 69 Gordon Ave., Providence 5, R. I.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 4, Ill.
 Plastic Wire & Cable Corp., Norwich, Conn.
 Roebing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 White Elec. Cable Co., Maple Ave., Haverstraw, N. Y.

485

SHIELDED CABLE

Alpha Wire Corp., 50 Howard St., New York, N. Y.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 American Steel & Wire Co., Rockefeller Bldg., Cleveland 13, Ohio
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Cornish Wire Co., 15 Park Row, New York, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 4, Ill.
 Okonite Co., Canal St., Passaic, N. J.
 Rockbestos Products Corp., 308 Nicoll St., New Haven 4, Conn.
 Roebing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.

486

TRANSMISSION LINE CABLE

Alpha Wire Corp., 50 Howard St., New York, N. Y.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Diamond Wire & Cable Co., 128 E. 16th St., Chicago Heights, Ill.
 Dielectric Prods. Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
 Doolittle Radio, 7421 Loomis Bldg., Chicago 36, Ill.
 See Advertisement on Page 114
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Plastic Wire & Cable Corp., Norwich, Conn.
 Precision Tube Co., 3828 Terrace St., Phila. 28, Pa.
 See Advertisement on Page 298
 Snyder Mfg. Co., 22nd & Ontario Sts., Phila. 40, Pa.
 Suprenant Electric Insulation Co., 84 Purchase St., Boston 10, Mass.
 See Advertisement on Page 228
 White Electric Cable Co., Maple Ave., Haverstraw, N. Y.

487

U.H.F. CABLE

Alpha Wire Corp., 50 Howard St., New York, N. Y.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Okonite Co., Canal St., Passaic, N. J.

Plastic Wire & Cable Corp., Norwich, Conn.
Suprenant Electrical Insulation Co., 84
Purchase St., Boston 10, Mass.
See Advertisement on Page 228

488

Cans

Erie Can Co., 816 W. Erie St., Chicago 22,
Ill.
Worcester Pressed Steel Co., 100 Barber
Ave., Worcester, Mass.

489

HERMETICALLY SEALED CANS

Cincinnati Electric Products Co., Carthage
at Hannaford, Cincinnati 12, Ohio

490

Capacitors

CERAMIC FIXED & TRIMMER CAPACITORS

Automatic Mfg. Co., 900 Passaic Ave., E.
Newark, N. J.
See Advertisement on Page 119
Centralab Div., Globe Union, Inc., 900 Keefe
Ave., Milwaukee 1, Wisc.
See Advertisement on Page 146
Crystal Research Labs. Inc., 29 Allyn St.,
Hartford, Conn.
Electrical Reactance Corp., Franklinville,
N. Y.
See Advertisement on Page 210
Erie Resistor Corp., 644 W. 12th St., Erie,
Pa.
See Advertisement on Page 147
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Guthman, Inc., E. 1, 15 S. Throop St., Chi-
cago, Ill.
Herlec Corp., The, 422 N. Fifth St., Mil-
waukee 3, Wis.
See Advertisement on Page 142
Melssner Mfg. Div., Maguire Industries,
Inc., Mt. Carmel, Ill.
Micamold Radio Corp., 1087 Flushing Ave.,
Bklyn. 6, N. Y.
Molded Insulation Co., Aircraft Control
Div., 335 E. Price St., Phila., Pa.
Muter Co., 1255 S. Michigan Ave., Chicago,
Ill.
Schottland, Frederic D., 82-62 Grenfell Ave.,
Keu Gardens, N. Y.

491

COMPRESSED GAS CAPACITORS

Lapp Insulator Co., 31 Gilbert St., Le Roy,
N. Y.
See Advertisements on Pages 54, 55

492

DIODE FILTER CAPACITORS

Automatic Mfg. Co., 900 Passaic Ave., E.
Newark, N. J.
See Advertisement on Page 119
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212

493

ELECTROLYTIC CAPACITORS

Aerovox Corp., 740 Belleville Ave., New
Bedford, Mass.
Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150-151
American Condenser Co., 4410 Ravenswood
Ave., Chicago, Ill.
Atlas Condenser Products Co., 548 West-
chester Ave., Bronx, N. Y.
Capacitron Co., 849 No. Kedzie Ave., Chi-
cago 51, Ill.
Condenser Corp. of Amer., 1000 Hamilton
Blvd., S. Plainfield, N. J.
Consolidated Wire & Associated Corps.,
1635 S. Clinton St., Chicago 16, Ill.

Cornell Dubilier Elect. Corp., 1000 Hamil-
ton Blvd., South Plainfield, N. J.
Dumont Elec. Co., 34 Hubert St., New York,
N. Y.

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Illinois Condenser Co., 1160 N. Howe St.,
Chicago, Ill.
Industrial Condenser Corp., 3243 No. Calif.
Ave., Chicago 18, Ill.
Intex Co., 303 W. 42nd St., New York 18,
N. Y.

See Advertisement on Page 260
Magnavox Co., The, Fort Wayne 4, Indiana
Mallory & Co., Inc., P. R., 3029 E. Wash-
ington Street, Indianapolis 6, Ind.
See Advertisements on Pages 296, 297
Micamold Radio Corp., 1087 Flushing Ave.,
Brooklyn 6, N. Y.
Polymet Condenser Co., 699 E. 135th St.,
New York, N. Y.
Pyramid Elec. Co., 415-421 Tonnille Ave.,
Jersey City 6, N. J.
Sangamo Electric Co., Springfield, Illinois
Solar Mfg. Corp., 285 Madison Ave., New
York 17, N. Y.

See Advertisement on Page 302
Sprague Elec. Co., 189 Beaver St., North
Adams, Mass.

See Advertisement on Page 61
Tobe Deutschmann Corp., Filterette Div.,
Canton, Mass.

See Advertisements on Pages 91-98
Walker-Jimieson, 311 S. Western Ave., Chi-
cago 12, Ill.

See Advertisement on Page 59
Westinghouse Elec. Corp., East Pittsburgh,
Pa.

See Advertisements on Pages 17-20; 190, 192

494

FIXED CAPACITORS

Aerovox Corp., 740 Belleville Ave., New
Bedford, Mass.
Air Associates Inc., 5827 W. Century Blvd.,
Los Angeles, Calif.
Cardwell Mfg. Corp., Allen D., 97 Whiting
Street, Plainville, Conn.
Consolidated Wire & Associated Corps., 1635
S. Clinton St., Chicago 16, Ill.
Corning Glass Works, Corning, N. Y.
Electric Auto-Lite Co., The, Toledo 1, Ohio
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Illinois Condenser Co., 1160 N. Howe St.,
Chicago, Ill.
Industrial Condenser Corp., 3243 No. Calif.
Ave., Chicago 18, Ill.
Johnson Co., E. F., Waseca, Minn.
Kellogg Switchboard & Supply Co., 6650 S.
Cicero Ave., Chicago 38, Ill.
Magnavox Co., The, Fort Wayne 4, Indiana
Stackpole Carbon Co., St. Marys, Pa.
Telecon Condenser Co., 3757 W. North Ave-
nue, Chicago 47, Ill.
United Condenser Corp., 422 E. 138th Street,
New York 54, New York
Western Condenser Co., E. Walnut St.,
Watska, Ill.

495

MICA FIXED CAPACITORS

Aerovox Corp., 740 Belleville Ave., New
Bedford, Mass.
Brown Engineering Co., 4635 S. E. Haw-
thorne Blvd., Portland 15, Oregon
Crystal Research Labs. Inc., 29 Allyn St.,
Hartford, Conn.
Condenser Corp. of Amer., 1000 Hamilton
Blvd., S. Plainfield, N. J.
Cornell Dubilier Elect. Corp., 1000 Hamil-
ton Blvd., South Plainfield, N. J.
Electro Motive Mfg. Co., Willmantic, Conn.
See Advertisement on Page 195
Erie Resistor Corp., 644 W. 12th St., Erie,
Pa.
See Advertisement on Page 147
Micamold Radio Corp., 1086 Flushing Ave.,
Brooklyn 6, N. Y.
Noma Electric Corp., 55 W. 13th St., New
York 11, N. Y.
Sangamo Elec. Co., Springfield, Illinois
Solar Mfg. Corp., 285 Madison Ave., New
York 17, N. Y.
See Advertisement on Page 302
Sprague Elec. Co., 189 Beaver St., North
Adams, Mass.
See Advertisement on Page 61
Tobe Deutschmann Corp., Filterette Div.,
Canton, Mass.
See Advertisements on Pages 91-98

496

MICA TRANSMITTING CAPACITORS

Aerovox Corp., 740 Belleville Ave., New
Bedford, Mass.
Andrew Co., 363 E. 75th St., Chicago 19,
Ill.
Radio Corp. of Amer., RCA Victor Div.,
Camden, N. J.
See Advertisement on Back Cover

497

MICA TRIMMER CAPACITORS

Aerovox Corp., 740 Belleville Ave., New
Bedford, Mass.
Automatic Mfg. Co., 900 Passaic Ave., E.
Newark, N. J.
See Advertisement on Page 119
Crystal Research Labs. Inc., 29 Allyn St.,
Hartford, Conn.
Erie Resistor Corp., 644 W. 12th St., Erie,
Pa.
See Advertisement on Page 147
National Co., 61 Sherman St., Malden 48,
Mass.
See Advertisement on Page 291
Sickles Co., F. W., 165 Front St., Chicopee,
Mass.
Telerradio Engineering Corp., 99 Wall St.,
New York 5, N. Y.

498

NEUTRALIZING CAPACITORS

Automatic Mfg. Corp., 900 Passaic Ave.,
East Newark, N. J.
Barker & Williamson, Upper Darby, Pa.
Bud Radio, Inc., 2118 E. 55th St., Cleveland
3, Ohio
Cardwell Mfg. Corp., Allen D., 81 Prospect
St., Brooklyn 1, N. Y.
Hammalund Mfg. Co., Inc., 460 W. 34th
St., New York 1, N. Y.
Hudson American Corp., 25 W. 43rd St.,
New York 18, N. Y.
Johnson Co., E. F., Waseca, Minn.
Lapp Insulator Co., Inc., 24 Craigie St., Le
Roy, N. Y.
Millen Mfg. Co., Inc., James, 150 Exchange
St., Malden 48, Mass.
National Co., Inc., 61 Sherman St., Malden
48, Mass.
Philco Corp., Tioga & "C" Sts., Phila. 34,
Pa.

499

OIL IMPREGNATED CAPACITORS

Aerovox Corp., 740 Belleville Ave., New
Bedford, Mass.
Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150, 151
Capacitron Co., 849 No. Kedzie Ave., Chi-
cago 51, Ill.
Centralab Div., Globe Union, Inc., 900
Keefe Ave., Milwaukee 1, Wisc.
See Advertisement on Page 146
Chicago Condenser Corp., 3255 W. Armitage
Ave., Chicago 47, Ill.
Condenser Corp. of Amer., 1000 Hamilton
Blvd., S. Plainfield, N. J.
Condenser Products Co., 1375 N. Branch
St., Chicago, Ill.
Cornell Dubilier Elect. Corp., 1000 Hamilton
Blvd., S. Plainfield, N. J.
Fast & Co., John E., 3101 N. Pulaski Rd.,
Chicago 41, Ill.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Girard-Hopkins, 1000 40th Ave., Oakland
1, Calif.
Illinois Condenser Co., 1160 N. Howe St.,
Chicago, Ill.
Industrial Condenser Corp., 3243 No. Calif.
Ave., Chicago 18, Ill.
Micamold Radio Corp., 1087 Flushing Ave.,
Brooklyn 6, N. Y.
Potter Co., 1850 Sheridan Rd., No. Chicago,
Ill.
Sangamo Elec. Co., Springfield, Illinois
Solar Mfg. Corp., 285 Madison Ave., New
York 17, N. Y.
See Advertisement on Page 302
Telecon Condenser Co., 3757 W. North
Avenue, Chicago 47, Ill.

ELECTRONIC and ALLIED PRODUCTS

Tobe Deutschmann Corp., Filterette Div., Canton, Mass.
See Advertisements on Pages 91-98
 United Condenser Corp., 422 East 138th St., New York 54, New York
 Walker-Jimieson, 311 S. Western Ave., Chicago 12, Ill.
See Advertisement on Page 59

500

PADDER CAPACITORS

Electro Motive Mfg. Co., Willimantic, Conn.
See Advertisement on Page 195
 General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212

501

PAPER CAPACITORS

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 American Condenser Co., 4410 Ravenswood Ave., Chicago, Ill.
 Chicago Condenser Corp., 3255 W. Armitage Ave., Chicago 47, Ill.
 Condenser Corp. of America, 1000 Hamilton Blvd., South Plainfield, N. J.
 Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio
 Cornell Dubilier Elec. Corp., 1000 Hamilton Blvd., South Plainfield, N. J.
 Dine & Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
 Dumont Elec. Co., 34 Hubert St., New York, N. Y.
 Ecco High Frequency Elec. Corp., 7020 Hudson Blvd., North Bergen, N. J.
 Electric Auto-Lite Co., The Toledo 1, Ohio
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
 Girard-Hopkins, 1000-40th Ave., Oakland 1, Calif.
 Illinois Condenser Co., 1160 N. Howe St., Chicago, Ill.
 Intex Co., 303 W. 42nd St., New York 18, N. Y.
See Advertisement on Page 260
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
See Advertisements on Pages 296, 297
 Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y.
 Nord Mfg. Co., 205 Spruce Street, Bridgeport, Conn.
 O'Donnell & Sons, J. P., 316 Stuart St., Boston 16, Mass.
 Potter Co., 1850 Sheridan Rd., No. Chicago, Ill.
 Polymet Condenser Co., 699 E. 135th St., New York, N. Y.
 Sangamo Elec. Co., Springfield, Ill.
 Solar Mfg. Corp., 285 Madison Ave., New York 17, N. Y.
See Advertisement on Page 302
 Sprague Elec. Co., 189 Beaver St., North Adams, Mass.
See Advertisement on Page 61
 Telecon Condenser Co., 3757 W. North Ave., Chicago 47, Ill.
 United Condenser Corp., 422 E. 138th St., New York 54, New York

502

PLASTIC DIELECTRIC CAPACITORS

Fast & Co., John E., 3101 N. Pulaski Rd., Chicago 41, Ill.
 United Condenser Corp., 422 East 138th St., New York 54, N. Y.

503

PRECISION AIR CAPACITORS

General Radio Co., 272 Mass. Ave., Cambridge 39, Mass.

504

SILVERED MICA CAPACITORS

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Automatic Mfg. Co., 900 Passaic Avenue, E. Newark, N. J.
See Advertisement on Page 119

Centralab Div., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis.
See Advertisement on Page 146
 Cornell Dubilier Elect. Corp., 1000 Hamilton Blvd., South Plainfield, N. J.
 Crystal Research Labs., Inc., 29 Allyn St., Hartford 3, Conn.
 Dumont Electric Co., 34 Hubert St., New York 13, N. Y.
 Eitel-McCullough, Inc., San Bruno, Calif.
 Electrical Reactance Corp., Franklinville, N. Y.
 Erie Resistor Corp., 644 W. 12th St., Erie, Pa.

See Advertisement on Page 147
 Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y.
 Philco Corp., Tioga & "C" Sts., Phila. 34, Pa.
 Ross Mfg. Co., 2241 S. Indiana Ave., Chicago 27, Ill.
 Sangamo Elec. Co., Springfield, Ill.
 Sickles Co., F. W., 165 Front St., Chicopee, Mass.
 Solar Capacitor Sales Corp., 285 Madison Ave., New York 17, N. Y.
 Sprague Elec. Co., 189 Beaver St., North Adams, Mass.
 Sprague Prods. Co., 89 Marshall St., North Adams, Mass.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Winslow Co., 9 Liberty St., Newark, N. J.

505

SMALL HIGH VOLTAGE CAPACITORS

Aircraft-Marine Prods., Inc., 1523 No. 4th St., Harrisburg, Pa.
 Centralab Div., Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wis.
See Advertisement on Page 146
 Electric Auto-Lite Co., The Toledo 1, Ohio

506

TRIMMER RECEIVING CAPACITORS

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Automatic Mfg. Co., 900 Passaic Ave., E. Newark, N. J.
See Advertisement on Page 119
 Corning Glass Works, Corning, N. Y.
 Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
 Electro Motive Mfg. Co., Willimantic, Conn.
See Advertisement on Page 195
 Madison Electrical Corp., 74 Main St., Madison, N. J.
See Advertisement on Page 232
 Sickles Co., F. W., 165 Front St., Chicopee, Mass.
 Special Products Co., 9115 Brookville Rd., Silver Spring, Md.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

507

VACUUM CAPACITORS

Amperex Electronic Corporation, 25 Washington St., Brooklyn 1, N. Y.
 Eitel-McCullough Inc., San Bruno, Calif.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
 General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
 Gilundun Electronics, 14 Union Ave., Campbell, Calif.
 Industrial & Commercial Electronics, Belmont, Calif.
 Jennings Radio Mfg. Co., 1098 E. William St., San Jose 12, Calif.
See Advertisement on Page 250
 Raytheon Mfg. Co., Power Tube Div., Waltham 54, Mass.
See Advertisement on Page 135
 United Electronics Co., 42 Spring St., Newark 2, N. J.
See Advertisement on Page 32

508

VARIABLE FLUID CAPACITORS

Timing Instrument Co., Inc., 106 Spring St., New York 12, N. Y.

509

VARIABLE RECEIVER TUNING CAPACITORS

Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
 Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150, 151
 Baldwin Instrument Co., Oceanside, N. Y.
 Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
 General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J.
See Advertisement on Page 57
 Hammarlund Mfg. Co., Inc., 460 W. 34th St., New York 1, N. Y.
 Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.
 Insuline Corp. of America, 36-02 35th Ave., Long Island City, N. Y.
See Advertisement on Page 192
 Johnson Co., E. F., Waseca, Minn.
 Kings Electronics Co., 372 Classon Ave., Brooklyn 5, N. Y.
See Advertisement on Page 262
 McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
See Advertisement on Page 220
 National Co., Inc., 61 Sherman St., Malden 48, Mass.
See Advertisement on Page 291
 Radio Condenser Co., Camden, N. J.
 Searle Aero Industries, Inc., Orange, Calif.
 Technical Radio Co., 275 Ninth St., San Francisco 3, Calif.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Waterproof Electric Co., 73 E. Verdugo Ave., Burbank, Calif.

510

VARIABLE TRANSMITTER TUNING CAPACITORS

Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150, 151
 Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
See Advertisement on Page 285
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio
 Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
 Collins Radio Co., 855-35th St., N. E., Cedar Rapids, Iowa
See Advertisements on Pages 105-107
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
 Hammarlund Mfg. Co., Inc., 460 W. 34th St., New York 1, N. Y.
 Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.
 Johnson Co., E. F., Waseca, Minn.
 Kings Electronics Co., 372 Classon Ave., Brooklyn 5, N. Y.
See Advertisement on Page 262
 McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
See Advertisement on Page 220
 National Co., Inc., 61 Sherman St., Malden 48, Mass.
See Advertisement on Page 291
 Peerless Labs., 461-467 10th Ave., New York 18, N. Y.
 Technical Radio Co., 275 Ninth St., San Francisco 3, Calif.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Walker-Jimieson, 311 S. Western Ave., Chicago 12, Ill.
See Advertisement on Page 59

511

WAX IMPREGNATED CAPACITORS

Atlas Condenser Products Co., 548 Westchester Avenue, Bronx, N. Y.
 Capacitron Co., 849 No. Kedzie Ave., Chicago 51, Ill.
 Chicago Condenser Corp., 3255 W. Armitage Ave., Chicago 47, Ill.

Electric Auto-Lite Co., The, Toledo 1, Ohio
 Girard-Hopkins, 1000 40th Ave., Oakland 1,
 Calif.
 Industrial Condenser Corp., 3243 No. Calif.
 Ave., Chicago 18, Ill.
 Potter Co., 1850 Sheridan Rd., No. Chicago,
 Ill.

512

Cases, Portables

PORTABLE CASES (for Radios, Phonographs,
 Amplifiers etc.)

Abel & Bach, 1000 W. St. Paul Ave., Mil-
 waukee, Wis.
 Atlas Sound Corp., 1443 39th St., Brooklyn,
 N. Y.
 See Advertisement on Page 244
 Gardner Mfg. Co., 2711 Union St., Oakland
 7, Calif.
 Garrard Sales Corp., 401 Broadway, New
 York 13, N. Y.
 Hollywood Radio Cab. Co., 924 N. Formosa
 Ave., Hollywood, Calif.
 Milwaukee Stamping Co., 824 S. 72nd St.,
 Milwaukee, Wisc.
 Purves Mfg. Corp., Cambridge City, Ind.
 Radio Merchandise Sales, 550 Westchester
 Ave., New York 55, N. Y.
 See Advertisement on Page 284
 Skydne Inc., River Rd., Port Jervis, N. Y.
 See Advertisement on Page 142

513

Changers

AUTOMATIC RECORD CHANGERS

Admiral Corp., 3800 W. Cortland St., Chi-
 cago 47, Ill.
 Crescent Industries, Inc., 4140 Belmont
 Ave., Chicago 41, Ill.
 Erwood Co., 223 W. Erie St., Chicago, Ill.
 Farnsworth Television & Radio Corp.,
 3702 Pontiac St., Fort Wayne, Ind.
 Garrard Sales Corp., 401 Broadway, New
 York 13, N. Y.
 General Instrument Corp., 829 Newark Ave.,
 Elizabeth 3, N. J.
 See Advertisement on Page 57
 Lear, Inc., 110 Ionia Ave., N. W., Grand
 Rapids 2, Mich.
 Maguire Industries, Inc., Electronics Dept.,
 Bridgeport, Conn.
 Micro-Sonic Corp., 44 West 18th St., New
 York, N. Y.
 Milwaukee Stamping Co., 824 S. 72nd St.,
 Milwaukee, Wisc.
 Ray-Dyne Mfg. Corp., 141 West 24th St.,
 New York 11, N. Y.
 Rexon, Inc. (Thorens), 295 Fifth Ave., New
 York 16, N. Y.
 See Advertisement on Page 40
 Russell Electric Co., 340 W. Huron St.,
 Chicago 10, Ill.
 Sparkes Mfg. Co., 318 Jefferson St., Newark,
 N. J.
 V-M Corp., Benton Harbor, Mich.
 Webster Chicago Corp., Electronics Div.,
 3825 Armitage Ave., Chicago 47, Ill.

514

Changers, Frequency

515

VIBRATORS

American Television & Radio Co., 300 E.
 Fourth St., St. Paul, Minn.
 See Advertisement on Page 272
 Cover Dual Signal Systems, Inc., Div. of
 Electra Voice Corp., 5215-25 Ravens-
 wood Ave., Chicago 40, Ill.
 Electronic Labs., Inc., Indianapolis, Ind.
 Electronic Products Co., 19 No. First St.,
 Geneva, Ill.
 Electronic Products Mfg. Co., 7300 Huron
 River Dr., Dexter, Mich.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisement on Pages 204, 212
 Maguire Industries Inc., Electronics Dept.,
 Bridgeport, Conn.

Mallory & Co., Inc., P. R., 3029 E. Washing-
 ton St., Indianapolis 6, Ind.
 See Advertisements on Pages 296, 297
 National Co., 61 Sherman St., Malden 48,
 Mass.
 See Advertisement on Page 291
 Radiart Corp., 3571 W. 62nd St., Cleveland
 2, Ohio
 Raytron, Inc., 407 N. Jackson St., Jackson,
 Mich.
 Senn Corp., New Augusta, Ind.
 Sherron Electronics Co., 1201 Flushing Ave.,
 Brooklyn 6, N. Y.
 Utah Radio Prods. Co., 820 Orleans St., Chi-
 cago, Ill.
 Vibrapower Co., James, 1551 Thomas St.,
 Chicago 22, Ill.
 Vokar Corp., 7300 Huron River Dr., Dexter,
 Mich.

516

MULTIVIBRATORS

Electronic Engineers, 611 E. Garfield Ave.,
 Glendale 5, Calif.
 General Radio Co., 275 Mass. Ave., Cam-
 bridge 39, Mass.

517

Chassis

ALUMINUM CHASSIS

American Communications Corp., 306
 Broadway, New York, N. Y.
 Caswell Runyon Co., Huntington, Ind.
 Cole Steel Equip., 349 Broadway, New York
 13, N. Y.
 Columbia Metal Box Co., 260 E. 143rd
 Street, New York, N. Y.
 Edin Electronics Co., 207 Main Street, Wor-
 cester, Mass.
 Electronic Supply Co., 207 Main St., Wor-
 cester, Mass.
 Ferranti Electric Inc., 30 Rockefeller Plaza,
 New York 20, N. Y.
 See Advertisement on Page 52
 Garrett Co., Inc., G. K., 1421 Chestnut
 St., Phila. 2, Pa.
 Insuline Corp. of Amer., 3602-35th Ave.,
 L. I. City, N. Y.
 See Advertisement on Page 192
 Karp Metal Prods. Co., Inc., 129-30th St.,
 Brooklyn, N. Y.
 See Advertisement on Page 65
 La Magna Mfg. Co., Inc., East Rutherford,
 N. J.
 Lorentzen, H. K., Inc., 391 W. Broadway,
 New York 12, N. Y.
 McMurdo Silver Co., 1240 Main St., Hart-
 ford 3, Conn.
 Millen Mfg. Co., James, 150 Exchange St.,
 Malden, Mass.
 See Advertisement on Page 220
 Par-Metal Prods. Corp., 32-62 49th St.,
 L. I. City 3, N. Y.
 See Advertisement on Page 256
 Paul & Beekman Div., Portable Products
 Corp., 1801 Cortland St., Phila. 40, Pa.
 Porter Metal Prods., 121 Ingraham St.,
 Brooklyn 6, N. Y.
 Stamford Metal Specialty Co., 428 Broad-
 way, New York 13, N. Y.
 See Advertisement on Page 246
 Standard Engineering Labs., 40 S. Oak
 Knoll Ave., Pasadena 1, Calif.
 United Radio Mfg. Co., 191 Greenwich St.,
 New York, N. Y.
 Worcester Pressed Steel Co., 100 Barber
 Avenue, Worcester, Mass.

518

Chokes

AUDIO AND POWER CHOKES

Aircraft Radio Corp., Boonton, N. J. (Audio)
 See Advertisements on Pages 150, 151
 Airdesign Inc., 241 Fairfield Ave., Upper
 Darby, Pa. (Audio & Power)
 Allied Control Co. Inc., 2 East End Ave.,
 New York 21, N. Y. (Audio & Power)
 See Advertisements on Pages 28, 29
 Altec Lansing Corp., 1161 N. Vine St., Holly-
 wood 38, Calif. (Audio)
 American Coil & Engineering Co., 1271 N.
 Hermitage Ave., Chicago 22, Ill. (Audio
 & Power)

American Television & Radio Co., 300 E.
 Fourth St., St. Paul 1, Minn. (Audio &
 Power)
 See Advertisement on Page 272
 American Transformer Co., 178 Emmett St.,
 Newark, N. J. (Audio & Power)
 See Advertisement on Page 223
 Anco Products Corp., Paterson, N. J. (Audio
 & Power)
 Audio Development Co., 2833 13th Ave. S.,
 Minneapolis 7, Minn. (Audio & Power)
 Burnett Radio Lab., Wm. W. L., 4814 Idaho
 St., San Diego, Calif. (Audio)
 Chicago Transformer Div. Essex Wire Corp.,
 3501 W. Addison St., Chicago 18, Ill.
 (Audio & Power)
 Control Corp., 718 Central Ave., Minneapolis
 14, Minn. (Power)
 Electricoil Transformer Co., 421 Canal St.,
 New York 13, N. Y. (Audio & Power)
 Electronic Components, 423 N. Western Ave.,
 Los Angeles 4, Calif. (Audio & Power)
 Electronic Controls Inc., 144 Summer Ave.,
 Newark, N. J. (Audio)
 Electronic Transformer Co., 207 W. 25th
 St., New York, N. Y. (Audio & Power)
 Ferranti Electric Inc., 30 Rockefeller Plaza,
 New York 20, N. Y. (Audio & Power)
 See Advertisement on Page 52
 Freed Transformer Co., 72 Spring St., New
 York 12, N. Y. (Power)
 General Transformer Corp., 1250 W. Van
 Buren St., Chicago 7, Ill. (Audio &
 Power)
 Hadley Co., Robert M., 711 E. 61st St.,
 Los Angeles, Calif. (Audio & Power)
 Halldorson Co., The, 4500 Ravenswood Ave.,
 Chicago 28, Ill. (Audio & Power)
 Hollywood Transformer Co., 11034 Blix St.,
 North Hollywood, Calif. (Audio &
 Power)
 Jefferson Electric Co., Bellwood, Ill. (Audio
 & Power)
 Kenyon Transformer Co., 840 Barry St.,
 New York 59, N. Y. (Audio & Power)
 See Advertisement on Page 273
 Magnetic Devices Corp., 76-14 Woodside
 Ave., Jackson Heights, N. Y. (Audio
 & Power)
 Magnetic Windings Co., Div. Essex Wire
 Corp., 416 S. 16th St., Easton, Pa.
 (Audio & Power)
 Maguire Industries Inc., Electronics Dept.,
 Bridgeport, Conn. (Audio & Power)
 Malco Co. Inc., 25 N. 3rd St., Minneapolis.
 Minn. (Audio)
 Merit Coil & Transformer Corp., 4427 N.
 Clark St., Chicago 40, Ill. (Audio &
 Power)
 Miller Co., B. F., Trenton 4, N. J. (Audio
 & Power)
 Nothelfer Winding Labs., 111 Albemarle
 Ave., Trenton, N. J. (Power)
 Ohmite Mfg., 4835 W. Flournoy St., Chi-
 cago 44, Ill. (Power)
 See Advertisement on Page 215
 Pickering and Co., Audio Labs., Ocean-
 side, N. Y. (Audio)
 Raytheon Mfg. Co., Electronic Equip. Div.,
 Waltham 54, Mass. (Audio)
 See Advertisement on Page 135
 Smith Mfg. Co., N. R., 105 Pasadena Ave.,
 So. Pasadena, Calif. (Audio)
 Sorensen & Co., 375 Fairfield Ave., Stam-
 ford, Conn. (Audio & Power)
 See Advertisement on Page 247
 Standard Transformer Corp., 1500 N. Hal-
 sted St., Chicago, Ill. (Audio & Power)
 Stockwell Transformer Co., 295 N. State
 St., Concord, New Hampshire (Audio
 & Power)
 Superior Electric Co., 83 Laurel St., Bristol,
 Conn. (Power)
 Swain Nelson Co., 2320 Glenview Rd., Glen-
 view, Ill. (Audio & Power)
 Technology Instrument Corp., 1058 Main St.,
 Waltham, Mass. (Audio & Power)
 Transformer Products Inc., 143 W. 51st St.,
 New York, N. Y. (Audio & Power)
 United Transformer Corp., 150 Varick St.,
 New York 13, N. Y. (Audio & Power)
 See Advertisement Inside Front Cover
 Walsh Engineering Co., 34 De Hart Pl.,
 Elizabeth, N. J. (Audio & Power)

519

FILTER CHOKES

Acme Electric & Mfg. Co., 31 Water St.,
 Cuba, N. Y.
 Allied Control Co., Inc., 2 East End Ave.,
 New York 21, N. Y.
 See Advertisements on Pages 28-29

ELECTRONIC and ALLIED PRODUCTS

American Transformer Co., 178 Emmett St., Newark, N. J.
 See Advertisement Page 223
 Audio Development Co., 2833 13th Ave. S., Minneapolis 7, Minn.
 Chicago Transformer Div. Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
 Columbus Process Co., Inc., State & Maple St., East Columbus, Ind.
 Dinton Coil Co., Inc., Caledonia, N. Y.
 Eisler Engrg. Co., 740 S. 13th St., Newark 3, N. J.
 Electrical Specialty Co., 2304 Washington St., Boston, Mass.
 Electriccoil Transformer Co., 421 Canal St., New York 13, N. Y.
 Electronic Transformer Co., 207 W. 25th St., N. Y., N. Y.
 Ferranti Electric Inc., 30 Rockefeller Plaza New York 20, N. Y.
 See Advertisement Page 52
 Freed Transformer Co., 72 Spring St., New York 12, N. Y.
 General Transformer Corp., 1250 W. Van Buren St., Chicago 7, Ill.
 Magnetic Devices Corp., 76-14 Woodside Ave., Jackson Heights, N. Y.
 Miller Co., B. F., Trenton 4, N. J.
 Newark Transformer Co., 17 Frelinghuysen Ave., Newark 5, N. J.
 New York Transformer Co., 26 Waverly Pl., New York 3, N. Y.
 Peerless Electrical Prod. Co., 6920 McKinley Ave., Los Angeles 1, Calif.
 Raytheon Mfg. Co., Electronic Equip. Div., Waltham 54, Mass.
 See Advertisement on Page 135
 Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
 Stamford Electric Products Co., Inc., Sunnyside Ave., Stamford, Conn.
 Standard Transformer Corp., 1500 N. Halsted St., Chicago, Ill.
 United Transformer Corp., 150 Varick St., New York 13, N. Y.
 See Advertisement on Inside Front Cover
 Utah Radio Prods. Co., 820 Orleans St., Chicago, Ill.

520

HERMETICALLY SEALED CHOKES

Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N. Y.
 See Advertisement on Page 52
 Hanovia Chemical & Mfg. Co., 233 N. J. RR Ave., Newark, N. J.
 See Advertisement on Page 218

521

R. F. AND I. F. CHOKES

Aircraft Radio Corp., Boonton, N. J.
 See Advertisements on Pages 150-151
 Albion Coil Co., Albion, Ill.
 American Transformer Co., 178 Emmett St., Newark, N. J.
 See Advertisement on Page 223
 Bridgeport Mfg. Co., Bridgeport, Ill.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio
 Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
 Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
 Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
 Communication Parts, 1101 N. Paulina St., Chicago 22, Ill.
 Freed Transformer Co., 72 Spring St., New York 12, N. Y.
 General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
 Gold Shield Products, 25 W. Broadway, New York 7, N. Y.
 Hanovia Chemical & Mfg. Co., 233 N. J. RR R.R. Ave., Newark, N. J.
 Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
 Insuline Corp. of America, 36-02 35th Ave., Long Island City, N. Y.
 See Advertisement on Page 192
 Islip Radio Mfg. Co., Beech St., Islip, N. Y.
 Jefferson Electric Co., Bellwood, Ill.
 Johnson Co., E. F., Waseca, Minn.
 Madison Electrical Products Corp., Madison, N. J.
 See Advertisement on Page 232
 Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
 National Co., Inc., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291

Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.
 See Advertisement on Page 215
 Precision Tube Co., 3828 Terrace St., Phila. 28, Pa.
 See Advertisement on Page 298
 Radio Labs. Inc., 2701 Calif. Ave., Seattle 6, Wash.
 Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
 See Advertisement on Page 38
 Standard Transformer Corp., 1500 N. Halsted St., Chicago, Ill.
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125
 Transformer Products Inc., 145 51st Street, New York, N. Y.

522

Clips and Clamps

TEST & TUBE CLIPS AND CLAMPS

Alden Products Co., 117 N. Main St., Brockton 64, Mass.
 Alpha Wire Corp., 50 Howard St., New York, N. Y.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.
 Bircher Corp., 5087 Huntington Dr., Los Angeles 32, Calif.
 Cannon Electric Develop Co., 3209 Humboldt St., Los Angeles 31, Calif.
 See Advertisement on Page 60
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.
 Cornish Wire Co., 15 Park Row, New York, N. Y.
 See Advertisement on Page 146
 Federal Electric Prods. Co. Inc., 50 Paris St., Newark, N. J.
 Frankel Connector Co., 177 Hudson St., New York, N. Y.
 Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
 Gregory Mfg. Co., 67 Franklin St., New Haven 11, Conn.
 Insuline Corp. of America, 36-02 35th Ave., Long Island City, N. Y.
 See Advertisement on Page 192
 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.
 Littelfuse Inc., 4755 Ravenswood Ave., Chicago, Ill.
 Manufacturers Screw Prods., 270 W. Hubbard St., Chicago, Ill.
 Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
 See Advertisement on Page 290
 Morse Co., Frank W., 301 Congress St., Boston 10, Mass.
 Mueller Electric Co., 1583 E. 31st St., Cleveland 14, Ohio
 National Co., Inc., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 292
 Penn-Union Elec. Corp., 315 State St., Erie, Pa.
 Rapid Specialties Co., 327-9 W. Huron St., Chicago, Ill.
 Reliable Spring & Wire Forms Co., 3167 Fulton Rd., Cleveland 9, Ohio
 See Advertisement on Page 221
 Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
 Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.
 Thompson Corp., Geo. S., 5240 Huntington Dr., Los Angeles 32, Calif.
 Tinnerman Products Inc., 2106 Fulton Rd., Cleveland 13, Ohio
 Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wisc.
 Zierick Mfg. Corp., 385 Gerard Ave., New York, N. Y.

523

Coils

ANTENNA COILS

Automatic Mfg. Co., 900 Passaic Ave., E. Newark, N. J.
 See Advertisement on Page 119

Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
 Essex Electronics, 1060 Broad St., Newark 2, N. J.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, L. I., N. Y.
 See Advertisement on Page 293
 Johnson Co., E. F., Waseca, Minn.
 Madison Electrical Products Corp., 74 Main St., Madison, N. J.
 See Advertisement on Page 232
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Monroe Coil Co., 2659 W. 19th St., Chicago, Ill.
 Precise Electronics, 614 W. 49th St., New York, N. Y.
 Radio Craftsmen, 1341 S. Michigan Ave., Chicago 5, Ill.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 18, Ill.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

524

CHOKE COILS

American Communications Corp., 306 Broadway, New York, N. Y.
 Automatic Mfg. Co., 900 Passaic Ave., E. Newark, N. J.
 See Advertisement on Page 119
 Bittermann Elec. Co., 50 Henry St., Brooklyn, N. Y.
 Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
 Coto-Coil Co. Inc., 65 Pavillon Ave., Providence, R. I.
 Electrical Reactance Corp., Franklinville, N. Y.
 See Advertisement on Page 210
 Electronic Controls Inc., 44 Summer Ave., Newark, N. J.
 Fast & Co., John E., 3101 N. Pulaski Rd., Chicago 41, Ill.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisement on Pages 299-302
 Gramer Co., The, 2736 N. Pulaski Rd., Chicago 39, Ill.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, L. I., N. Y.
 See Advertisement on Page 293
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 Monroe Coil Co., 2659 W. 19th St., Chicago, Ill.
 Precision Transformer Co., 733 W. Ohio St., Chicago 10, Ill.
 Sickles Co., F. W., 165 Front St., Chicopee, Mass.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

525

COIL ASSEMBLIES

American Coil & Engineering Co., 1271 N. Hermitage Ave., Chicago 22, Ill.
 Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
 Electronic Winding Co., 5031 Broadway, Chicago 40, Ill.
 Freed Transformer Co., 72 Spring St., New York 12, N. Y.
 Harnett Elec. Corp., 138 Haven Ave., Port Washington, L. I., N. Y.
 See Advertisement on Page 293
 Monroe Coil Co., 2659 W. 19th St., Chicago, Ill.
 National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 Precise Electronics Co., 614 W. 49th St., New York, N. Y.
 Prestole Div., Detroit Harvester Co., 4500 Detroit Ave., Toledo 12, Ohio
 Sickles Co., F. W., 165 Front St., Chicopee, Mass.

526

ELECTRONIC HEATING INDUCTORS

Johnson Co., E. F., Waseca, Minn.

527

MAGNET COILS

Acme Wire Co., New Haven 14, Conn.
 Anaconda Wire & Cable Co., 25 Broadway,
 New York 4, N. Y.
 Bittermann Elec. Co., 50 Henry St.,
 Brooklyn, N. Y.
 Cook Elec. Co., 2700 Southport Ave., Chi-
 cago, Ill.
 Electrical Coil Winding Co., 2733 Saunders
 St., Camden, N. J.
 Gramer Co., The, 2736 N. Pulaski Rd.,
 Chicago 39, Ill.
 Smith Mfg. Co., Nathan R., 105 Pasadena
 Ave., So Pasadena, Calif.

528

MOTOR & GENERATOR FIELD COILS

Bittermann Elec. Co., 50 Henry St.,
 Brooklyn, N. Y.
 Gramer Co., The, 2736 N. Pulaski Rd.,
 Chicago 39, Ill.

529

MULTIPLE WOUND COILS

Cook Elec. Co., 2700 Southport Ave., Chi-
 cago, Ill.
 Harnett Elec. Corp., 138 Haven Ave., Port
 Washington, L. I., N. Y.
 See Advertisement on Page 293
 Magnetic Windings Co., Div. Essex Wire
 Corp., 416 S. 16th St., Easton, Pa.

530

PICKUP COILS

Leotone Radio Co., 65 Dey St., New York
 7, N. Y.

531

POWER AND A. F. COILS AND
 WINDINGS

Assembly Prods., Inc., Chagrin Falls, Ohio
 See Advertisement on Page 294
 Barker & Williamson, 235 Fairfield Ave.,
 Upper Darby, Pa.
 See Advertisement on Page 285
 Best Mfg. Co., Inc., 1200 Grove St., Irving-
 ton 11, N. J.
 Bittermann Electric Co., 50 Henry St.,
 Brooklyn, N. Y.
 Communication Parts, 1101 N. Paulina St.,
 Chicago 22, Ill.
 Davis & Co., Dean W., Kentland, Ind.
 Dinton Coil Co., Inc., Caledonia, N. Y.
 Electrical Specialty Co., 2304 Washington
 St., Boston, Mass.
 Electrical Windings, Inc., 2015 N. Kolmar
 Ave., Chicago 39, Ill.
 Electriccoil Transformer Co., 421 Canal St.,
 New York 13, N. Y.
 Electronic Transformer Co., 207 West 25th
 St., New York, N. Y.
 Essex Electronics, 1060 Broad St., Newark
 2, N. J.
 Federal Telephone & Radio Corp., 591
 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Industrial Transformer Corp., 2540 Belmont
 Ave., New York, N. Y.
 See Advertisements on Pages 235-238
 Johnson Co., E. F., Waseca, Minn.
 Kellogg Switchboard & Supply Co., 6650
 S. Cicero Ave., Chicago 38, Ill.
 Madison Electrical Products Corp., 74 Main
 St., Madison, N. J.
 See Advertisement on Page 232
 Meissner Mfg. Div., Maguire Industries,
 Inc., Mt. Carmel, Ill.
 Monroe Coil Co., 2659 W. 19th St., Chicago,
 Ill.
 New York Transformer Co., 26 Waverly Pl.,
 New York 3, N. Y.
 Oxford-Tartak Corp., 3911 S. Michigan Ave.,
 Chicago 15, Ill.
 Pilot Electric Co., 29 S. Broadway, Long
 Branch, N. J.
 Precise Electronics Co., 614 W. 49th St.,
 New York, N. Y.
 Raytheon Mfg. Co., Electronic Equipment
 Div., Waltham 54, Mass.
 See Advertisement on Page 135

S-W Inductor Co., 1056 N. Wood St.,
 Chicago, Ill.
 Smith Mfg. Co., Nathan R., 105 Pasadena
 Ave., South Pasadena, Calif.
 Standard Transformer Corp., 1500 N. Hal-
 sted St., Chicago, Ill.
 Stockwell Transformer Co., 295 N. State St.,
 Concord, New Hampshire
 Traveler Karenola Radio & Telev. Corp.,
 571 W. Jackson Blvd., Chicago 6, Ill.
 United Transformer Corp., 150 Varick St.,
 New York 13, N. Y.
 See Advertisement on Inside Front Cover
 Walsh Engineering Co., 34 DeHart Place,
 Elizabeth, N. J.

532

R. F. and I. F. RECEIVING or
 TRANSMITTING COILS

Air Associates Inc., 5827 W. Century Blvd.,
 Los Angeles 45, Calif.
 Albion Coil Co., Albion, Ill.
 American Coil & Engineering Co., 1271 N.
 Hermitage Ave., Chicago 22, Ill.
 American Communications Corp., 306
 Broadway, New York, N. Y.
 Andrew Co., 363 E. 75th St., Chicago 19, Ill.
 Automatic Mfg. Co., 900 Passaic Ave., E.
 Newark, N. J.
 See Advertisement on Page 119
 Barker & Williamson, 235 Fairfield Ave.,
 Upper Darby, Pa.
 See Advertisement on Page 285
 Bittermann Electric Co., 50 Henry St.,
 Brooklyn, N. Y.
 Boonton Radio Corp., Boonton, N. J.
 See Advertisement on Page 42
 Bridgeport Mfg. Co., Bridgeport, Ill.
 Bud Radio Inc., 2118 E. 55th St., Cleveland
 3, Ohio
 Carron Mfg. Co., 415 S. Aberdeen St.,
 Chicago, Ill.
 Clippard Instrument Lab., 1440 Chase Ave.,
 Cincinnati 23, Ohio
 Consolidated Wire & Associated Corp., 1635
 S. Clinton St., Chicago 16, Ill.
 DX Radio Prods. Co. Inc., 1200 N. Clare-
 mont Ave., Chicago 22, Ill.
 Electronic Winding Co., 5031 Broadway,
 Chicago 40, Ill.
 Essex Electronics, 1060 Broad St., Newark
 2, N. J.
 Federal Instrument Corp., 3609 Vernon
 Blvd., L. I. City 1, N. Y.
 Federal Telephone & Radio Corp., 591
 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Freed Transformer Co., 72 Spring St., New
 York 12, N. Y.
 Guthman & Co., E. I., 15 So. Throop St.,
 Chicago, Ill.
 Hammarlund Mfg. Co. Inc., 460 W. 34th
 St., New York 1, N. Y.
 Harnett Elec. Corp., 138 Haven Ave., Port
 Washington, L. I., N. Y.
 See Advertisement on Page 293
 Instrument Resistors Co., 25 Amity St.,
 Little Falls, N. J.
 See Advertisement on Page 127
 Johnson Co., E. F., Waseca, Minn.
 Kellogg Switchboard & Supply Co., 6650 S.
 Cicero Ave., Chicago 38, Ill.
 Kraft & Kraft, Hicksville, N. Y.
 Madison Electrical Products Corp., Madison,
 N. J.
 See Advertisement on Page 232
 Maguire Industries, Inc., Electronics Dept.,
 Bridgeport, Conn.
 Meissner Mfg. Div., Maguire Industries,
 Inc., Mount Carmel, Ill.
 Millen Mfg. Co., James, 150 Exchange St.,
 Malden, Mass.
 See Advertisement on Page 220

Miller Co., J. W., 5917 S. Main St., Los
 Angeles, Calif.
 Monarch Mfg. Co., 2014 N. Major Ave.,
 Chicago, Ill.
 Monroe Coil Co., 2659 W. 19th St., Chicago,
 Ill.
 Muter Co., 1255 S. Michigan Ave., Chicago,
 Ill.
 National Co., Inc., 61 Sherman St., Malden
 48, Mass.
 See Advertisement on Page 291
 New York Transformer Co., 26 Waverly
 Pl., New York 3, N. Y.
 Polytron Corp., 401 Broadway, New York
 13, N. Y.
 Precise Electronics, 614 W. 49th St., New
 York, N. Y.
 Precision Tube Co., 3828 Terrace St., Phila.
 28, Pa.
 See Advertisement on Page 298
 Radio Coils Inc., 48 Merritt Ave., White
 Plains, N. Y.
 Radio Craftsmen, 1341 So. Michigan Ave.,
 Chicago 5, Ill.
 Radio Labs. Inc., 2701 Calif. Ave., Seattle
 6, Wash.
 Ross Mfg. Co., 2241 S. Indiana Ave., Chi-
 cago 27, Ill.
 S-W Inductor Co., 1056 N. Wood St., Chi-
 cago, Ill.
 Sickles Co., F. W., 165 Front St., Chicopee,
 Mass.
 Small Motors, Inc., 1322 Elston Ave., Chi-
 cago 22, Ill.
 Standard Coil Products Co., 2329 N. Pulaski
 Rd., Chicago 18, Ill.
 Standard Winding Corp., 44-62 Johnes St.,
 Newburgh, N. Y.
 Stanwyck Winding Co., 102 South Lander
 St., Newburgh, N. Y.
 Super Elec. Prods. Corp., 1057 Summit
 Ave., Jersey City, N. J.
 Teleradio Engineering Corp., 99 Wall St.,
 New York 5, N. Y.
 Traveler Karenola Radio & Telev. Corp.,
 571 W. Jackson Blvd., Chicago 6, Ill.

533

RELAY & SOLENOID COILS

Acme Wire Co., New Haven 14, Conn.
 American Coil & Engineering Co., 1271
 N. Hermitage Ave., Chicago 22, Ill.
 Bittermann Elec. Co., 50 Henry St.,
 Brooklyn, N. Y.
 Cook Elec. Co., 2700 Southport Ave., Chi-
 cago, Ill.
 Coto-Coil Co., Inc., 65 Pavilion Ave., Provi-
 dence, R. I.
 Electric Heat Control Co., 9123 Inman Ave.,
 Cleveland 5, Ohio
 Electriccoil Transformer Co., 421 Canal St.,
 New York 13, N. Y.
 Electronic Winding Co., 5031 Broadway,
 Chicago 40, Ill.
 Gramer Co., 2734 N. Pulaski Rd., Chicago
 39, Ill.
 Madison Electrical Products Corp., Madison,
 N. J.
 See Advertisement Page 232
 Magnetic Products Corp., Norwalk, Conn.
 Magnetic Windings Co., Div. of Essex Wire
 Corp., 416 South 16th St., Easton, Pa.
 Radio Coils Inc., 48 Merritt Ave., White
 Plains, N. Y.
 Smith Mfg. Co., Nathan R., 105 Pasadena
 Ave., South Pasadena, Calif.
 United Transformer Corp., 150 Varick St.,
 New York 13, N. Y.
 See Advertisement on Inside Front Cover

534

SPEAKER COILS

Hawley Products Co., St. Charles, Ill.
 Leotone Radio Co., 65 Dey St., New York
 7, N. Y.
 Operadio Mfg. Co., 135th & Indiana Sts.,
 St. Charles, Ill.

535

TELEVISION FOCUSING COILS

Bittermann Elec. Co., 50 Henry St.,
 Brooklyn, N. Y.
 Freed Transformer Co., 72 Spring St.,
 New York 12, N. Y.
 Harnett Elec. Corp., 138 Haven Ave., Port
 Washington, L. I., N. Y.
 See Advertisement on Page 293

When Ordering or Inquiring
 please mention the
ELECTRONICS
BUYERS' GUIDE

ELECTRONIC and ALLIED PRODUCTS

United States Television Mfg. Corp., 106-7th Ave., New York, N. Y.

536

TRANSFORMER COILS & WINDINGS

Coto-Coil Co. Inc., 65 Pavilion Ave., Providence, R. I.
Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
Gramer Co., The, 2736 N. Pulaski Rd., Chicago 39, Ill.
Magnetic Windings Co., Div. Essex Wire Corp., 416 S. 16th St., Easton, Pa.

537

Cones

SPEAKER CONES

Aireon Mfg. Corp., Fairfax and Funston Rds., Kansas City 15, Kansas
See Advertisement on Page 130
Atlas Sound Corp., 1443 39th St., Brooklyn, N. Y.
See Advertisement on Page 244
Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
Hawley Products Co., St. Charles, Ill.
Jensen Radio Mfg. Co., 6601 S. Laramie Ave., Chicago, Ill.
See Advertisement on Page 36
Leotone Radio Co., 65 Dey St., New York 7, N. Y.
National Moldite Co., 2141 W. Washington Blvd., Los Angeles 7, Calif.
Operadio Mfg. Co., 135th & Indiana Sts., St. Charles, Ill.
Oxford Tartak Corp., 3911 S. Michigan Ave., Chicago 15, Ill.
Radio Corp. of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Stromberg-Carlson Co., Rochester, N. Y.

538

Connectors

CABLE CONNECTORS and COUPLINGS

Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150-151
Aircraft-Marine Prods. Inc., 1523 N. Fourth St., Harrisburg, Pa.
Alden Products Co., 117 North Main St., Brockton 64, Mass.
American Chain & Cable Co., Bridgeport 2, Conn.
American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Atlas Sound Corp., 1443 39th St., Brooklyn, N. Y.
See Advertisement on Page 244
Euggie Co., H. H., Toledo, Ohio
Burndy Engineering Co., 107 Bruckner Blvd., New York 54, N. Y.
Cannon Electric Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
See Advertisement on Page 60
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.
Eastern Specialty Co., 3617 N. 8th St., Phila. 40, Pa.
Eby, Inc., Hugh H., 18 W. Chelton Ave., Phila. 13, Pa.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Frankel Connector Co., 177 Hudson St., New York, N. Y.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Hadden Co., The, 17 Academy St., Newark 2, N. J.
IlSCO Copper Tube & Product Inc., Mariemont Ave., Mariemont 27, Ohio
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
See Advertisement on Page 283
Johnson Co., E. F., Waseca, Minn.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
Penn-Union Electric Corp., 315 State St., Erie, Pa.
Radio Development & Research Co., 26 Cornellison Ave., Jersey City, N. J.

Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.
Special Electric Labs., 7657 S. Central Ave., Los Angeles 1, Calif.
Telegraph Apparatus Co., 325 W. Huron St., Chicago, Ill.
Thomas & Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J.

539

CABLE HOOKS

Burndy Engrg. Co., 107 Bruckner Blvd., New York 54, N. Y.
Minerallac Electric Co., 25 N. Peoria St., Chicago, Ill.
O. Z. Electrical Mfg. Co., 262 Bond St., Brooklyn, N. Y.

540

CERAMIC CABLE CONNECTORS

Eagle Elec. Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
Johnson Co., E. F., Waseca, Minn.
Lapp Insulator Co., 31 Gilbert St., LeRoy, N. Y.
See Advertisements on Pages 54-55

541

COAXIAL CABLE CONNECTORS

Andrew Co., 363 E. 75th St., Chicago 19, Ill.
Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
See Advertisement on Page 285
Bird Electronic Corp., 1800 E. 38th St., Cleveland 14, Ohio
See Advertisement on Page 227
Cannon Electric Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
See Advertisement on Page 60
Communication Prods. Co., Inc., Route 36, Palmer Ave., Keansburg, N. J.
Diamond Instrument Co., North Ave., Wakefield, Mass.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Geophysical Instrument Co., Key Blvd. & Nash St., Arlington, Va.
Industrial Prods. Co., Danbury, Conn.
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
See Advertisement on Page 283
Johnson Co., E. F., Waseca, Minn.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Kings Electronics Co., 372 Classon Ave., Bklyn. 5, N. Y.
See Advertisement on Page 262
Locke Insulator Corp., P. O. Box 57, Baltimore 3, Md.
Mendelsohn Speedgum Co., Inc., 457 Bloomfield Ave., Bloomfield, N. J.
Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
Selector Mfg. Co., 21-10 49th Ave., Long Island City, N. Y.
Thomas & Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J.

542

CONNECTOR INSERTS

Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.

543

RECEPTACLE CONNECTORS

Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150, 151
American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Arrow-Hart & Hegeman Elec. Co., 103 Hawthorn St., Hartford 6, Conn.
Cannon Elec. Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
See Advertisement on Page 60

Eby, Inc., Hugh H., 18 W. Chelton Ave., Phila. 13, Pa.
Electrix Corp., 150 Middle St., Pawtucket, R. I.
Hubbell Inc., Harvey, Bridgeport 2, Conn.
Jones, Howard B., 2460 W. George St., Chicago 18, Ill.
Lapp Insulator Co., 31 Gilbert St., LeRoy, N. Y.
See Advertisements on Pages 54, 55
Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn.
Morse Co., Frank W., 301 Congress St., Boston 10, Mass.
Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.
Remler Co. Ltd., 2101 Bryant Ave., Chicago 51, Ill.
Russell & Stoll Co., 125 Barclay St., New York 7, N. Y.

544

STAND-OFF & CONE CONNECTORS

Lapp Insulator Co., 31 Gilbert St., LeRoy, N. Y.
See Advertisements on Pages 54, 55

545

Contactors

Arrow-Hart & Hegeman Elec. Co., 103 Hawthorn St., Hartford, Conn.
Automatic Switch Co., 41 E. 11th St., New York 3, N. Y.
Cutler-Hammer Inc., 315 North 12th St., Milwaukee 1, Wisc.
Guardian Electric Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.
Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
See Advertisement on Page 290
R. B. M. Div., Essex Wire Corp., Logansport, Ind.
Tork Clock Co., 1 Grove St., Mt. Vernon, N. Y.
Ward Leonard Electric Co., 31 South St., Mt. Vernon, N. Y.
See Advertisements on Pages 198, 199
Winchester Co., The, 6 E. 46th St., New York 17, N. Y.
Zenith Electric Co., 152 W. Walton St., Chicago, Ill.

546

Controls

ATTENUATORS

Audio Products Co., 2101 W. Olive Ave., Burbank, Calif.
See Advertisement on Page 270
Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Clarostat Mfg. Co., Inc., 285-7 6th St., Brooklyn, N. Y.
Collins Radio Co., 855-35th St. N.E., Cedar Rapids, Iowa
Daven Co., 191 Central Ave., Newark 4, N. J.
See Advertisement on Inside Back Cover
Electro Prods Labs., 549 W. Randolph St., Chicago 6, Ill.
See Advertisement on Page 278
General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
See Advertisement on Page 113
Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.
See Advertisement on Page 215
Radio Corp. of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover

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Rowe Radio Research Laboratory Co., 2422 N. Pulaski Rd., Chicago 39, Ill.
 Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
 See Advertisement on Page 38
 Tech Laboratories, 7 Lincoln St., Jersey City, N. J.
 See Advertisement on Page 246
 Utah Radio Products Co., 820 Orleans St., Chicago, Ill.

547

AUTOMATIC TUNING CONTROLS

Yardeny Laboratories, Inc., 105 Chambers St., New York 7, New York

548

AUTO RADIO REMOTE CONTROLS

Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 Shakespeare Prods. Co., 241 E. Kalamazoo Ave., Kalamazoo, Mich.

549

MOTOR & GENERATOR CONTROLS

Control Corp., 718 Central Ave., Minneapolis 14, Minn.
 Controls Labs. Inc., 98 Union St., Worcester 8, Mass.
 Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wisc.
 Electron Equipment Corp., 917 Meridian Ave., South Pasadena, Calif.
 Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
 Electronic Products Co., 19 No. First St., Geneva, Ill.
 Fairchild Camera & Instrument Corp., 475-10th Ave., New York 18, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Hertner Elec. Co., 12690 Elmwood Ave., Cleveland 11, Ohio
 Hetherington & Son Inc., Robert. Sharon Hill, Pa.
 Holtzer-Cabot, Div. of First Industrial Corp., 125 Amory Street, Boston, Mass.
 Lyman Electronic Co., 12 Cass St., Springfield, Mass.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
 Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
 See Advertisement on Page 290
 Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill.
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
 Submarine Signal Co., 160 State, Boston, Mass.
 Task Electronics Co., 245 W. 54th St., New York, N. Y.
 Vendo Co., 1907 Grand Ave., Kansas City 8, Mo.
 Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
 See Advertisements on Pages 198-199
 Weltronic Co., 3080 E. Outer Drive, Detroit 17, Mich.
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17, 18, 19, 20, 190, 191

550

MECHANICAL SWITCH CONTROLS

Arens Controls Inc., 2253 S. Halsted St., Chicago 8, Ill.

551

RADIO REMOTE CONTROLS

Banks Mfg. Co., 1105 W. Lawrence Ave., Chicago 40, Ill.
 Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, North Hollywood, Calif.
 Bogen Co., Inc., David, 663 Bdway, New York 12, N. Y.
 Breco Corp., 55 Van Dam St., New York 13, N. Y.

Cline Electric Mfg. Co., 4550 W. Lexington Ave., Chicago, Ill.
 Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105, 106, 107
 Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Cover Dual Signal Systems, Inc., Div. Electra-Voice Corp., 5215-25 N. Ravenswood Ave., Chicago 40, Ill.
 Croname Inc., 3701 Ravenswood Ave., Chicago 13, Ill.
 See Advertisement on Page 197
 Dalmo, Victor, San Carlos, Calif.
 Eastern Amplifier Corp., 794 E. 140th St., New York 54, N. Y.
 Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
 Erwood Co., 223 W. Erie St., Chicago 10, Ill.
 Gates Radio Co., 200 Hampshire St., Quincy, Ill.
 Gentleman Prods., Div. Henney Motor Co., 1702 Cumming St., Omaha, Nebr.
 Harvey Machine Co., Inc., 6200 Avalon Blvd., Los Angeles 3, Calif.
 Haydon Co., A. W., The, Waterbury 32, Conn.
 Higgins Industries, Inc., 2221 Warwick Ave., Santa Monica, Calif.
 Holland Sound Engineering, 3730 Division St., Chicago, Ill.
 Hudson-American Corp., 25 W. 43rd St., New York 18, N. Y.
 Langevin Co., Inc., 37 W. 65th St., New York 23, N. Y.
 See Advertisements on Pages 175, 176, 177, 178
 Loge Sound Engineers, J. M., 986 S. Western Ave., Los Angeles 6, Calif.
 Miles Reproducer Co., Inc., 812 Bdway, New York 3, N. Y.
 See Advertisement on Page 294
 Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phil. 44, Pa.
 Newcomb Audio Prods Co., 2815 S. Hill St., Los Angeles 7, Calif.
 North Electric Mfg. Co., 501 S. Market St., Gallon, Ohio
 Operadio Mfg. Co., 135th & Indiana Sts., St. Charles, Ill.
 Philharmonic Radio Corp., 528 E. 72nd St., New York 21, N. Y.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Simpson Mfg. Co., Mark, 188 W. 4th St., New York 14, N. Y.
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
 Transmitter-Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Yardeny Labs., Inc., 105 Chambers St., New York 7, N. Y.

552

SOUND SYSTEMS CONTROLS

Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.

553

TORQUE UNITS

Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.

554

VOLUME & TONE CONTROLS

Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.
 Chicago Telephone Supply Co., 1142 W. Beardsley Ave., Elkhart, Ind.
 Cinema Eng. Co., 1508 W. Verdugo Ave., Burbank, Calif.

Clarostat Mfg. Co. Inc., 285-7 6th St., Brooklyn, N. Y.
 See Advertisements on Pages 116, 117
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Daven Co., 191 Central Ave., Newark 4, N. J.
 See Advertisement on Inside Back Cover
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
 International Resistance Co., 401 N. Broad St., Phila. 8, Pa.
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Mallory & Co., Inc., P. R., 2039 E. Washington St., Indianapolis 6, Ind.
 See Advertisements on Pages 296, 297
 Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
 See Advertisement on Page 38
 Stackpole Carbon Co., St. Marys, Pa.
 Utah Radio Prods. Co., 820 Orleans St., Chicago, Ill.

555

Converters

FM CONVERTERS

Fisher Radio Co., 41 E. 47th St., New York, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

556

FREQUENCY SHIFT CONVERTERS

Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
 See Advertisements on Pages 69-80

557

LOW FREQUENCY CONVERTERS

Amplifier Co. of America, 396 Broadway, New York, N. Y.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212

558

VIBRATOR TYPE CONVERTERS

Electronic Labs. Inc., Indianapolis, Ind.
 Radio Mfg. Engineers Inc., 304 First Ave., Peoria, Ill.
 Technical Devices Corp., Beaufort & Eagle Rock Ave., Roseland, N. J.

559

Cords

CORD SETS

A B C Products, Inc., 2131-35 Stoner Ave., W. Los Angeles 25, Calif.
 Alpha Wire Corp., 50 Howard St., New York, N. Y.
 American Electric Cable Co., Holyoke, Mass.
 Banks Mfg. Co., 1105 W. Lawrence Ave., Chicago 40, Ill.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Columbia Wire & Supply Co., 4106 N. Pulaski Rd., Chicago 41, Ill.
 See Advertisement on Page 126
 Connecticut Cable Corp., The, Jewett City, Conn.
 Cornish Wire Co., 15 Park Row, New York, N. Y.
 See Advertisement on Page 148
 Diamond Wire & Cable Co., 128 E. 16th St., Chicago Heights, Ill.
 Elkay Radio Products, 305 E. Walnut St., Oglesby, Ill.
 Haft & Sons Inc., 79 Third St., Brooklyn, N. Y.
 Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
 See Advertisement on Page 256
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.

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ELECTRONIC and ALLIED PRODUCTS

Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago, Ill.
Lowell Insulated Wire Co., Lowell, Mass.
Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
Winslow Co., 9 Liberty St., Newark 5, N. J.

560

DIAL CORDS & CABLES

Englewood Electrical Supply Co., 5801 S. Halsted St., Chicago, Ill.
Flexo Wire Co., 638 Genesee St., Syracuse, N. Y.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
See Advertisement on Page 290
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
New England Electrical Wks. Inc., 365 Main St., Lisbon, N. H.
Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

561

LINE CORDS

Accurate Insulated Wire Corp., 25 Fox St., New Haven 1, Conn.
American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Aviometer Corp., 370 West 35th St., New York 1, N. Y.
See Advertisement on Page 226
Bruce Electronics Co., 1478 Coney Island Ave., Brooklyn 30, N. Y.
Collyer Insulated Wire Co., 249 Roosevelt Ave., P. O. Box 61, Pawtucket, R. I.
Connecticut Cable Corp., The, Jewett City, Conn.
Cornish Wire Co., 15 Park Row, New York, N. Y.
See Advertisement on Page 148
Diamond Wire & Cable Co., 128 E. 16th St., Chicago Heights, Ill.
Eagle Elec. Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
Englewood Electrical Supply Co., 5801 S. Halsted St., Chicago, Ill.
Essex Wire Corp., 1601 Wall St., Ft. Wayne, Ind.
Gem Radio & Telev. Co., 72 Cortlandt St., New York 6, N. Y.
General Cable Corp., 420 Lexington Ave., New York, N. Y.
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Lowell Insulated Wire Co., Lowell, Mass.
Okonite Co., Canal St., Passaic, N. J.
Philadelphia Insulated Wire Co., 200 N. 3rd St., Phila., Pa.
Plastic Wire & Cable Corp., Norwich, Conn.
Roebelin's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
Rome Cable Corp., 330 Ridge St., Rome, N. Y.
See Advertisement on Page 41
Runzel Cord & Wire Co., 4731 W. Montrose Ave., Chicago, Ill.
Rupp's Assembling & Mfg. Works, 2341 N. Seminary Ave., Chicago 14, Ill.
Whitney Blake Co., New Haven, Conn.

562

LINE CORDS RESISTANCE

Columbia Wire & Supply Co., 4106 N. Pulaski Rd., Chicago 41, Ill.
See Advertisement on Page 126
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.

563

PATCH CORDS

Audio Development Co., 2833 13th Avenue S., Minneapolis 7, Minn.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Wynn Mfg. Div., Hudson Supply Co., 401 N. 27th St., Richmond, Va.

564

Cores

COMPLETE LAMINATED CORES

Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.
Ross Mfg. Co., 2241 S. Indiana Ave., Chicago 27, Ill.

565

HIPERSIL CORES

Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

566

POWDERED IRON CORES

Aladdin Radio Industries, Inc., 501 W. 35th St., Chicago 16, Ill.
Crowley & Co. Inc., Henry L., 1 Central Ave., West Orange, N. J.
Pyroferic Corp., 175 Varick St., New York, N. Y.
See Advertisement on Page 68
Stackpole Carbon Co., St. Marys, Pa.

567

IRON CORES

Speer Resistor Corp., St. Marys, Pa.

568

SLUG TUNING UNITS

American Coil & Engineering Co., 1271 N. Hermitage Ave., Chicago 22, Ill.
Micro Ferrocart Prods. Div., Maguire Industries Inc., Greenwich, Conn.
National Moldite Co., 23 Montgomery St., Hillside 5, N. J.
See Advertisement on Page 134

569

Couplings, Shaft

RIGID and FLEXIBLE SHAFT COUPLINGS

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
National Co., 61 Sherman Street, Malden 48, Mass.

570

REDUCERS & EXTENSIONS

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio

571

Crystal Cartridges

Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.
Holtzer-Cabot, Div. of First Industrial Corp., 125 Amory St., Boston, Mass.
Shure Bros., 225 W. Huron St., Chicago, Ill.
See Advertisement on Page 208
Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125
Tibbetts Industries, Camden, Maine
Webster Elec. Co., 1900 Clark St., Racine, Wis.

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572

Crystals

IF FILTER CRYSTALS

Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.
Elkay Radio Products, 305 E. Walnut St., Oglesby, Ill.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Monitor Piezo Products Co., 815 Fremont St., So. Pasadena, Calif.
Scientific Radio Products Co., 738 W. Broadway, Council Bluffs, Iowa
Valpey Crystals, Highland St., Holliston, Mass.
Westline Crystal Co., 10860 Santa Monica Blvd., Los Angeles 25, Calif.

573

FREQUENCY STANDARD CRYSTALS

Billey Electric Co., Union Station Bldg., Erie, Pa.
See Advertisement on Page 112
Commercial Equipment Co., 1416 McGee Street, Kansas City, Mo.
Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.
DX Radio Products Co. Inc., 1200 N. Claremont Ave., Chicago 22, Ill.
"Eidson's", 1309 N. Second St., Temple, Texas
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Hunt Corp., The, Carlisle, Pa.
Peterson Radio Co., 2800 W. Broadway, Council Bluffs, Iowa
Telicon Corp., 851 Madison Ave., New York 21, N. Y.
Valpey Crystals, Highland St., Holliston, Mass.
Westline Crystal Co., 10860 Santa Monica Blvd., Los Angeles 25, Calif.

574

FREQUENCY MULTIPLIERS

Telicon Corp., 851 Madison Ave., New York 21, N. Y.

575

QUARTZ CRYSTALS and HOLDERS

American Gem & Pearl Co., 6 West 48th St., New York 19, N. Y.
Bassett, Inc., Rex, 500 S. E. Second St., Fort Lauderdale, Fla.
Billey Electric Co., Erie, Pa.
See Advertisement on Page 112
Breon Labs., 607 Rose St., Williamsport, Pa.
Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
C. W. Mfg., 3800 Brooklyn Ave., Los Angeles 33, Calif.
Cambridge Thermanic Corp., 1445 Concord Ave., Cambridge, Mass.
See Advertisement on Page 67
Commercial Equipment Co., 1416 McGee St., Kansas City, Mo.
Commercial Radio Equip. Co., 321 East Gregory Blvd., Kansas City 5, Mo.
Crystal Products Co., 1519 McGee St., Kansas City 8, Mo.
Crystal Research Labs., Inc., 29 Allyn St., Hartford, Conn.
Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
Dine and Co., Inc., F. E., 2221 Warwick Ave., Santa Monica, Calif.
DX Radio Prods. Co., Inc., 1200 N. Claremont Ave., Chicago 22, Ill.
"Eidson's", 1309 N. Second St., Temple, Texas
Elkay Radio Products, 305-309 E. Walnut St., Oglesby, Ill.
Federal Telephone and Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 299-302
Hipower Crystal Co., 2033 W. Charleston St., Chicago, Ill.
Hoffman Co., P. R., 321 Cherry St., Carlisle, Pa.

Hollister Crystal Co., Boulder, Colo.
 Jefferson Inc., Ray, 40 E. Merrick Rd., Freeport, Long Island, N. Y.
 Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
 Kemlite Labs., 1809 N. Ashland Ave., Chicago, Ill.
 Knights Co., James, 131 S. Wells St., Sandwich, Ill.
 Leuck Crystal Lab., 245 S. 11th St., Lincoln, Neb.
 Miller, August E., 9226 Hudson Blvd., North Bergen, N. J.
 Monitor Piezo Products Co., 815 Fremont St., South Pasadena, Calif.
 Nat'l Electronic Corp., 22-78 Steinway St., L. I. City, N. Y.
 Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn, N. Y.
Petersen Radio Co., 2800 W. Broadway, Council Bluffs, Iowa
 See Advertisement on Page 206
 Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.
 Premier Crystal Labs., Inc., 63 Park Row, New York, N. Y.
 Radio Specialty Mfg. Co., 2023 S. E. 6th St., Portland 14, Oregon
 Ross Mfg. Co., 2241 S. Indiana Ave., Chicago 27, Ill.
 Scientific Radio Products Co., 738 W. Broadway, Council Bluffs, Iowa
 Scientific Radio Service, 4301 Sheriden St., University Park, Md.
 Sentry Crystal Co., 206 S. W. Washington St., Portland 4, Ore.
 Somers Lab., 306 Valleybrook Ave., Lyndhurst, N. J.
Standard Piezo Co., Woolworth Bldg., Carlisle, Pa.
 See Advertisement on Page 214
 Telicon Corp., 851 Madison Ave., New York, N. Y.
 Valpey Crystals, Highland St., Holliston, Mass.
 Western Electric Co., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183
 Westline Crystal Co., 10860 Santa Monica Blvd., Los Angeles 25, Calif.

576

QUARTZ CRYSTAL ULTRASONIC

Bliley Electric Co., Union Station Bldg., Erie, Pa.
 See Advertisement on Page 112
 Kemlite Labs., 1809 N. Ashland Ave., Chicago, Ill.

577

RECEIVER CONTROL CRYSTALS

"Eldson's", 1309 N. Second St., Temple, Texas

578

ROCHELLE SALT CRYSTALS

Commercial Equipment Co., 1416 McGee St., Kansas City, Mo.
 Tibbetts Industries, Camden, Maine

579

SUPERSONIC CRYSTALS

Telicon Corp., 851 Madison Ave., New York 21, N. Y.

580

TOURMALINE CRYSTALS

Commercial Equipment Co., 1416 McGee St., Kansas City, Mo.

581

Detectors, Crystal

Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

582

GALENA DETECTORS

Elkay Radio Products, 305 E. Walnut St., Oglesby, Ill.
Stellar Mfg. Co., 1312 McGee St., Kansas City 6, Mo.
 See Advertisement on Page 290

583

GERMANIUM CRYSTAL DETECTORS

Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

584

SILICON CRYSTAL DETECTORS

Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

585

Dial Crystals

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 See Advertisement on Page 197
 Crystal Labs., 801 West Maple St., Wichita 12, Kansas
 Emeloid Co., Inc., 291 Laurel Ave., Arlington, N. J.
Erie Resistor Corp., 644 W. 12th St., Erie, Pa.
 See Advertisement on Page 147
 Etched Prods. Corp., 39-01 Queens Blvd., Long Island City, N. Y.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Felsenthal & Sons, G., 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.
 See Advertisement on Page 290
General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Goodall Electric Mfg. Co., Third & Main St., Ogallala, Neb.
 Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
 Kilburn Glass Co., Inc., J. R., 22 S. Worcester St., Chartley, Mass.
 La Magna Mfg. Co., Inc., East Rutherford, N. J.
 Pan Electronics Labs., Inc., 500 Spring St., N. W., Atlanta, Ga.
 Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
 Plastic Fabricators Co., 440 Sansome Street, San Francisco, Calif.
 Premier Crystal Labs., 63 Park Row, New York 7, N. Y.
Printoid Inc., 95 Mercer St., New York, N. Y.
 See Advertisement on Page 230
 Sillcocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.

586

Dials

Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
 American Communications Corp., 306 Broadway, New York, N. Y.
 American Emblem Co., Utica, N. Y.
 Ansonia Clock Co., Inc., 103 Lafayette St., New York 13, N. Y.
 Austin Co., O., 42 Greene St., New York, N. Y.
 B. & C. Insulation Products, Inc., 261 Fifth Ave., New York 16, N. Y.
Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Browning Labs., Inc., 750 Main, Winchester, Mass.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio
 Cinema Engineering Co., 1503 W. Verdugo Ave., Burbank, Calif.
Consolidated Molded Prods. Corp., 309 Cherry St., Scranton 2, Pa.
 See Advertisement on Page 131
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 See Advertisement on Page 197
Daven Co., 191 Central Ave., Newark 4, N. J.
 See Advertisement on Inside Back Cover
 Emeloid Co., 291 Laurel Ave., Arlington, N. J.
 Etched Products Corp., 39-01 Queens Blvd., Long Island City, N. Y.
 Felsenthal & Sons, G., 4122 W. Grand Ave., Chicago 51, Ill.
 Gemloid Corp., 79-10 Albion Ave., Elmhurst, N. Y.
General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
 Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.
 Grammes & Sons, Inc., L. F., 389 Union St., Allentown 2, Pa.
 Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.
 Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
 LaMagna Mfg. Co., East Rutherford, N. J.
 Long Island Engraving Co., 19 West 21st St., New York 10, N. Y.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 National Co., 61 Sherman St., Malden 48, Mass.
 New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
 New England Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.
 Plastic Fabricators Co., 440 Sansome St., San Francisco 11, Calif.
 Premier Crystal Labs., Inc., 63 Park Row, New York, N. Y.
Printoid, Inc., 95 Mercer St., New York, N. Y.
 See Advertisement on Page 230
Richardson Co., The, Melrose Park, Ill.
 See Advertisement on Page 271
Shallcross Mfg. Co., 10 Jackson Ave., Collierville, Pa.
 See Advertisement on Page 38
 Sillcocks-Miller Co., 10 Parker Ave., W., South Orange, N. J.
 Technical Plastics Co., 618 Clyde St., Pittsburgh 13, Pa.
 Technical Radio Co., 275 Ninth St., San Francisco 3, Calif.
 Victory Mfg. Co., 1722 W. Arcade Pl., Chicago 2, Ill.

587

INSTRUMENT DIALS

Austin Co., O., 42 Greene St., New York, New York
Consolidated Molded Prods. Corp., 309 Cherry St., Scranton 2, Pa.
 See Advertisement on Page 131
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
 Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn, N. Y.
Premier Metal Etching Co., 21-03 44th Ave., Long Island City, N. Y.
 See Advertisement on Page 260
 Sillcocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.
 U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

588

PRECISION DIALS

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

589

Diaphragms

Hawley Products Co., St. Charles, Ill.

ELECTRONIC and ALLIED PRODUCTS

590

Dies

Ace Mfg. Corp., 1255 E. Erie Ave., Phila. 24, Pa.
Acme Tool & Die Co., 426 Ingle St., Evansville 8, Ind.
Aeromark Co., 9-13 Morrell St., Elizabeth 4, N. J.
Andrews & Perillo, 3930 Crescent St., Long Island City, N. Y.
Arnessen Electric Co., Inc., 116 Broad St., New York 4, N. Y.
Congress Tool & Die Co., Congress Die Casting Div., 3750 E. Outer Dr., Detroit, Mich.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
Dayton Acme Co., 930 York St., Cincinnati 14, Ohio
Do-All Co., 1301 Washington Ave. S., Minneapolis 4, Minn.
Doehler-Jarvis Corp., Robertson St., Batavia, N. Y.
Edwards, T. J., Inc., 210 South St., Boston 5, Mass.
Harvey Machine Co. Inc., 6200 Avalon Blvd., Los Angeles 3, Calif.
Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke, Mich.
Hydraulic Tool & Die Corp., 4625 Third Ave., New York 57, N. Y.
Kollath Mfg. Co., 4601 W. Addison Street, Chicago, Ill.
North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Quad Mfg. Co., 462 N. Parkside Ave., Chicago 44, Ill.
Simonds Machine Co., Inc., 246-48 Worcester St., Southbridge, Mass.
Smith, Nathan R. Mfg. Co., 105 Pasadena Ave., South Pasadena, Calif.
Sperman Metal Specialties, 2199 E. 21st St., Brooklyn 29, N. Y.
Swanson Tool & Machine Prods., 810-14 E. 8th St., Erie, Pa.
Thomas & Skinner Steel Prods. Co., 1120 E. 23rd St., Indianapolis 5, Ind.
See Advertisement on Page 278
Whistler, S. B. & Sons, Inc., 752 Military Rd., Buffalo 17, N. Y.

591

Drag Units, Antenna

Aeronautical Radio Mfg. Co., 155 First St., Mineola, L. I., N. Y.

592

Drivers

RECORDING DRIVERS

Press Wireless Mfg. Co., 1475 Broadway, New York 18, N. Y.
See Advertisements on Pages 69-80

593

Drives

ANTENNA MECHANICAL DRIVES

Foot Bros. Gear & Machine Corp., 5225 S. Western Blvd., Chicago 9, Ill.

594

SMALL ELECTRIC DRIVE MECHANISMS

Price Electric Corp., East Church and 2nd St., Frederick, Md.
See Advertisement on Page 26
Submarine Signal Co., 160 State St., Boston, Mass.

595

Elements, Heating

CRYSTAL OVEN HEATING ELEMENTS

Landis & Gyr, Inc., 104 Fifth Ave., New York, N. Y.

596

Fasteners & Fastening Devices

Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150, 151
American Screw Co., Providence, R. I.
Automatic Nut Co., Inc., Lebanon, Pa.
Camloc Fastener Corp., 420 Lexington Ave., New York 17, N. Y.
Central Screw Co., 3511 Shields Ave., Chicago 9, Ill.
Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
Corbin Screw Div., American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.
Dzus Fasteners Co., Inc., Box 605, Babylon, Long Island, N. Y.
See Advertisement on Page 267
Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
Hassall Inc., 150 Clay St., Brooklyn 22, N. Y.
See Advertisement on Page 272
Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.
See Advertisement on Page 53
Penn Engineering & Mfg. Corp., Box 311, Doylestown, Pa.
Prestole Div., Detroit Harvester Co., 4500 Detroit Ave., Toledo 12, Ohio
Publix Metal Prods., Inc., 100-6th Ave., New York 13, N. Y.
Russell, Burdsall & Ward Bolt & Nut Co., Midland Ave., Port Chester, N. Y.
Scovill Mfg. Co., Waterville Screw Prods. Div., Waterville, Conn.
Shakeproof Inc., Div. of Ill. Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
Simmons Fastener Corp., North Broadway, Albany 1, N. Y.
Tinnerman Products, Inc., 2106 Fulton Rd., Cleveland 13, Ohio

597

Filters

ANTENNA FILTERS

Lavoie Labs., Morganville, N. J.
McLaughlin, J. L. A., P. O. Box 529, La Jallo, Calif.
See Advertisement on Page 294

598

BAND ELIMINATION FILTERS

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Freed Transformer Co., 72 Spring St., New York 12, N. Y.

599

BAND PASS FILTERS

Airdesign & Fabrication Inc., 241 Fairfield Ave., Upper Darby, Pa.
Audio Development Co., 2833 13th Ave. S., Minneapolis 7, Minn.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Freed Transformer Co., 72 Spring St., New York 12, N. Y.
Hollywood Transformer Co., 11034 Blix Street, North Hollywood, Calif.
International Transformer Co., 396 Broadway, New York, N. Y.
Stevens Arnold Co., 22 Elkins St., So. Boston, Mass.
Tobe Deutschmann Corp., Filterette Div., Canton, Mass.
See Advertisements on Pages 91-98
United Transformer Corp., 150 Varick St., New York 13, N. Y.
See Advertisement on Inside Front Cover

600

DETONATION FILTERS

Rowe Radio Research Labs., 2422 N. Paulski Rd., Chicago 39, Ill.

601

ELECTRIC WAVE SECTION FILTERS

American Television & Radio Co., 300 E. Fourth St., St. Paul 1, Minn.
See Advertisement on Page 272
Andrew Co., 363 E. 75th St., Chicago 19, Ill.
Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
See Advertisement on Page 285
Commercial Research Labs, Inc., 20 Bartlett Ave., Detroit 3, Mich.
See Advertisement on Page 126
Communication Equipment & Engrg. Co., 5645 W. Race St., Chicago 44, Ill.
Communication Parts, 1101 N. Paulina St., Chicago 22, Ill.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Freed Transformer Co., 72 Spring St., New York 12, N. Y.
General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
Gold Shield Products, 25 W. Broadway, New York 7, N. Y.
Kartron Inc., 821 A South 4th St., Alhambra, Calif.
Kenyon Transformer Co., 840 Barry St., New York 59, N. Y.
See Advertisement on Page 273
Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
See Advertisements on Pages 69-80
S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
Stamford Electric Prods. Co., Inc., Sunnyside Ave., Stamford, Conn.
United Transformer Corp., 150 Varick St., New York 13, N. Y.
See Advertisement on Inside Front Cover
Valpey Crystals, Highland St., Holliston, Mass.

602

EQUALIZER FILTERS

Air Associates Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Collins Radio Co., 855-35th St., N. E., Cedar Rapids, Iowa
See Advertisements on Pages 105, 106, 107
Daven Co., 191 Central Ave., Newark 4, N. J.
See Advertisement on Inside Back Cover
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
Favorite Mfg. Co., 105 E. 12th St., New York 3, N. Y.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Presto Recording Corp., 242 West 55th St., New York 19, N. Y.
See Advertisements on Pages 48-49
S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
Shalleross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
See Advertisement on Page 38
United Transformer Corp., 150 Varick St., New York 13, N. Y.
See Advertisement on Inside Front Cover

603

LIGHTING FILTERS FOR RADIO TOWERS

Andrew Co., 363 E. 75th St., Chicago 19, Ill.
Wincharger Corp., 7th & Division Sts., Sioux City, Iowa
See Advertisement on Page 142

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604

NEEDLE SCRATCH FILTERS

Gold Shield Products, 25 W. Broadway, New York 7, N. Y.

605

NOISE FILTERS

Aeronautical Radio Mfg. Co., 155 First St., Mineola, L. I., N. Y.
 Atlas Condenser Prods. Co., 548 Westchester Ave., Bronx, N. Y.
 Communication Parts, 1101 N. Paulina St., Chicago 22, Ill.
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Continental Carbon Inc., 13300 Lorain Ave., Cleveland 11, Ohio
 Electronic Devices Co., 601 W. 26th St., New York, N. Y.
 Insuline Corp. of Amer., 36-02 35th Ave., Long Island City, N. Y.
 See Advertisement on Page 192
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 See Advertisements on Pages 296, 297
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 Pyramid Elec. Co., 415-421 Tonnele Ave., Jersey City 6, N. J.
 S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
 Solar Mfg. Corp., 285 Madison Ave., New York 17, N. Y.
 See Advertisement on Page 302
 Spragne Electric Co., 189 Beaver St., North Adams, Mass.
 See Advertisement on Page 61
 Technical Appliance Corp., 41-06 DeLong Street, Flushing, New York
 Technology Instr. Corp., 1058 Main St., Waltham, Mass.
 Tobe Deutschmann Corp., Filterette Div., Canton, Mass.
 See Advertisements on Pages 91-98
 United Transformer Corp., 150 Varick St., New York 13, N. Y.
 Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183

606

U. H. F. & V. H. F. FILTERS

Bird Electronic Corp., 1800 E. 38th St., Cleveland 14, Ohio
 See Advertisement on Page 227

607

Forms

ANTENNA FORMS

Rogers Corporation, Manchester, Conn.

608

CHOKE FORMS

Stackpole Carbon Co., St. Marys, Pa.
 Steward Mfg. Co., D. M. E., 36th St., Chattanooga, Tenn.

609

COIL FORMS

Alden Products Co., 117 N. Main St., Brockton 64, Mass.
 American Lava Corp., Kruesl Bldg., Chattanooga 5, Tenn.
 See Advertisement on Page 21
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Auburn Mfg. Co., 110 Stack St., Middletown, Conn.

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
 Buggie Co., H. H., Toledo, Ohio
 Centralab Div. of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wis.
 See Advertisement on Page 146
 Consolidated Molded Prods. Corps., 309 Cherry St., Scranton 2, Pa.
 See Advertisement on Page 131
 Continental-Diamond Fibre Co., 16 Chapel St., Newark, Del.
 Corning Glass Works, Corning, N. Y.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Electronic Mechanics, Inc., 70 Clifton Blvd., Clifton, N. J.
 See Advertisement on Page 201
 Erie Resistor Corp., 644 W. 12th St., Erie, Pa.
 See Advertisement on Page 147
 General Ceramics & Steatite Corp., Keasbey, N. J.
 See Advertisement on Page 189
 Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.
 Insulating Fabricators of New England, Inc., 22 Elkins St., S. Boston, Mass.
 Insuline Corp. of Amer., 36-02 35th Ave., Long Island City, N. Y.
 See Advertisement on Page 192
 Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
 Joyner Corp., The, 462 N. Parkside Ave., Chicago 44, Ill.
 Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
 Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 See Advertisement on Page 33
 New England Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.
 Pierce Paper Products Co., Rockford, Ill.
 Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
 Precision Paper Tube Co., 2033 W. Charleston St., Chicago 47, Ill.
 Printoid Inc., 95 Mercer St., New York, N. Y.
 See Advertisement on Page 230
 Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry, Pa.
 Speer Resistor Corp., St. Marys, Pa.
 Standard Molding Corp., Dayton, Ohio
 Steward Mfg. Co., D. M. E., 36th St., Chattanooga, Tenn.
 Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.
 Victory Manufacturing Co., 1722 W. Arcade Place, Chicago 12, Ill.

610

RESISTOR FORMS

Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
 Saxonburg Potteries, Saxonburg, Pa.
 Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118

611

WIRE FORMS

Art Wire & Stamping Co., 227 High St., Newark 2, N. J.
 Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.
 Cuyahoga Spring Co., 10272 Berea Rd., Cleveland, Ohio
 Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.

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Hubbard Spring Co., M. D., Central Ave., Pontiac, Mich.
 Hunter Pressed Steel Co., Lansdale, Penna.
 Reliable Spring & Wire Furns Co., 3167 Fulton Rd., Cleveland 9, Ohio
 See Advertisement on Page 221

612

Fuses

Bussmann Mfg. Co., University at Jefferson, St. Louis 7, Mo.
 Chase-Shawmut Co., Newburyport, Mass.
 Commercial Enclosed Fuse Co. of N. J., 1317 Willow Ave., Hoboken, N. J.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
 Electro Motive Mfg. Co., South Park & John St., Willimantic, Conn.
 See Advertisement on Page 195
 General Electric Co., Bridgeport, Conn.
 See Advertisements on Pages 204, 212
 Kirkman Engrg. Corp., 121 6th Ave., New York 13, N. Y.
 Littelfuse, Inc., 4755 Ravenswood Ave., Chicago, Ill.
 Pierce Renewable Fuses Inc., 211 Hertel Ave., Buffalo 7, N. Y.
 Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.

613

Gaskets

Aldine Paper Co., Inc., 535 Fifth Ave., New York 17, N. Y.
 American Felt Co., Glenville, Conn.
 Armstrong Cork Co., Lancaster, Pa.
 Auburn Mfg. Co., 110 Stack St., Middletown, Conn.
 Cardy-Lundmark Co., 1801 W. Byron St., Chicago 13, Ill.
 G. Felsenthal & Sons, 4122 W. Grand Ave., Chicago 51, Ill.
 Headen Co., The, 17 Academy St., Newark 2, N. J.
 Melrath Supply & Gasket Co., Tioga St. & Aramingo Ave., Philadelphia, Pa.
 Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
 Penn Fibre & Specialty Co., 2030 E. Moreland St., Phila. 44, Pa.
 Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

614

Gears

PRECISION GEARS

Ace Mfg. Corp., 1255 E. Erie Ave., Phila., Pa.
 Beaver Gear Works Inc., Rockford, Ill.
 Boston Gear Wks., Inc., 14 Hayward St., N. Quincy 71, Mass.
 Foote Bros. Gear & Machine Corp., 5225 S. Western Blvd., Chicago 9, Ill.
 Gear Specialties, 2635 W. Medill Ave., Chicago 47, Ill.
 See Advertisement on Page 31
 Quaker City Gear Works, 1910-32 N. Front St., Philadelphia, Pa.
 Technical Radio Co., 275 Ninth St., San Francisco 3, Calif.
 Teleoptic Co., 1241 Mound Ave., Racine, Wis.

615

Generators

GAS ENGINE DRIVEN GENERATORS

Atlas Aircraft Products Corp., 405 E. 42nd St., New York 17, N. Y.
 Carson Machine & Supply Co., Box 4547, Oklahoma City 9, Okla.
 Climax Engineering Co., Clinton, Iowa
 Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester 1, N. Y.
 Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
 Homelite Corp., Port Chester, N. Y.

ELECTRONIC and ALLIED PRODUCTS

Jacobsen Mfg. Corp., 747 Washington Ave., Racine, Wis.
 Kato Engineering Co., 530 N. Front St., Mankato, Minn.
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Kohler Co., Kohler, Wis.
 Master Vibrator Co., 200 Davis Ave., Dayton 1, Ohio
 Midco Mfg. & Distr. Co., S. 13th & Kentucky Ave., Sheyboygen, Wis.
 Onan & Sons, D. W., 3264 Royalston Ave., Minneapolis 5, Minn.
 Pioneer Elec. Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
 Pioneer Gen-E-Motor Corp., 5841 W. Dickens Ave., Chicago 39, Ill.
 Ready Power Co., 3826 Grand River Ave., Detroit, Mich.
 Universal Motor Co., 186 Harrison St., Oshkosh, Wis.

616

HAND DRIVEN GENERATORS

Atlas Aircraft Products Corp., 405 E. 42nd St., New York 17, N. Y.
 Carter Motor Co., 1606 Milwaukee Ave., Chicago 47, Ill.
 Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester, N. Y.

617

INDUCTION & DIELECTRIC HEATING GENERATORS

Lepel High Frequency Labs., 39 W. 60th St., New York, N. Y.
 Radio Corp of America, RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Radio Receptor Co., 251 W. 19th St., New York, N. Y.
 See Advertisement on Page 26
 Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
 See Advertisements on Pages 17-20; 190, 191

618

POWER GENERATORS

Buda Co., Harvey, Illinois
 Burke Electric Co., 12th & Cranberry St., Erie, Pa.
 See Advertisement on Page 228
 Carson Machine & Supply Co., Box 4547, Oklahoma City 9, Okla.
 Carter Motor Co., 1606 Milwaukee Ave., Chicago 47, Ill.
 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., 325 Ferry St., Newark 5, N. J.
 Crocker-Wheeler Elec. Mfg. Co., Div. of Joshua Hendy Iron Works, Ampere, N. J.
 Dalmo, Victor, San Carlos, California
 Diehl Mfg. Co., FINDERNE Plant, Somerville, N. J.
 Eicor Inc., 1501 W. Congress St., Chicago 7, Ill.
 Electric Indicator Co., 21 Parker Ave., Stamford, Conn.
 See Advertisement on Page 253
 Electric Products Co., 1725 Clarkstone Road, Cleveland 12, Ohio
 Electric Specialty Co., 211 South St., Stamford, Conn.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Ad ertisements on Pages 299-302
 Fidelity Electric Co., 332 No. Arch St., Lancaster, Pa.
 Gaston Power Tools, 2659 W. 95th St., Chicago 42, Ill.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Geophysical Instrument Co., Key Blvd., & Nast St., Arlington, Va.
 Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill.
 Hertner Elec. Co., 12690 Elmwood Ave., Cleveland 11, Ohio
 Homelite Corp., Port Chester, N. Y.
 Janette Mfg. Co., 556 W. Monroe St., Chicago 61, Ill.
 Kato Engineering Co., 530 N. Front St., Mankato, Minn.

Kollsman Instrument Div. of Square D Co., 80-03 45th Ave., Elmhurst, N. Y.
 Leland Electric Co., 1501 Webster St., Dayton, Ohio
 Master Vibrator Co., 200 Davis Ave., Dayton 1, Ohio
 Onan & Sons, D. W., 3264 Royalston Ave., Minneapolis 5, Minn.
 Pioneer Gen-E-Motor Corp., 5841 W. Dickens Ave., Chicago 39, Ill.
 Robbins & Myers, 1345 Lagonda Ave., Springfield, Ohio
 Small Motors, Inc., 1322 Elston Ave., Chicago 22, Ill.
 Star Electric Motor Co., 200 Bloomfield Ave., Bloomfield, N. J.
 Superior Electric Co., 1901 Indiana Ave., Chicago 16, Ill.
 See Advertisements on Pages 5-16
 Westinghouse Electric Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191
 Wincharger Corp., 7th & Division Sts., Sioux City, Iowa
 See Advertisement on Page 142

619

WINDDRIVEN GENERATING EQUIPMENT

Wincharger Corp., 7th & Division Sts., Sioux City, Iowa
 See Advertisement on Page 142

620

Grommets

Creative Plastics Corp., 963 Kent Ave., Brooklyn, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 See Advertisement on Page 290
 Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.
 Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
 Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill.
 Plume & Atwood Mfg. Co., 470 Bank St., Waterbury, Conn.
 Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
 Stimpson Co., Inc., Edwin B., 74 Franklin Avenue, Brooklyn 5, New York
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

621

Harnesses

WIRE HARNESES

Aircraft-Marine Products, Inc., 1523 N. Fourth St., Harrisburg, Pa.
 American Electric Cable Co., Holyoke, Mass.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Connecticut Cable Corp., The, Jewett City, Conn.
 Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
 See Advertisement on Page 256
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Sittler Mfg. Corp., 18 N. Ada St., Chicago 7, Ill.
 Whittaker Cable Corp., North Kansas City, Mo.
 Winslow Co., 9 Liberty St., Newark 5, N. J.

622

Headphones & Headsets

Astatic Corp., Conneaut, Ohio
 See Advertisement on Page 66
 Avimeter Corp., 370 West 35th St., New York 1, N. Y.
 See Advertisement on Page 226
 Bendix Radio Corp., Baltimore 4, Md.
 Brush Development Co., 3405 Perkins Ave., Cleveland 14, Ohio
 See Advertisement on Page 137

Cannon Co., C. F., Springwater, N. Y.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Eby Co., Hugh H., 18 W. Chelton Ave., Phila. 13, Pa.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Miles Reproducer Co., Inc., 812 Broadway, New York, N. Y.
 See Advertisement on Page 294
 Murdock Mfg. Co., William J., Chelsea, Mass.
 Permoflux Corp., 4900 W. Grand Ave., Chicago, Ill.
 Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif.
 Telex Products Co., Telex Park, Minneapolis, Minn.
 See Advertisement on Page 266
 Telephonics Corp., 350 West 31st St., New York, N. Y.
 Trimm, Inc., 1770 W. Berteau Ave., Chicago 13, Ill.
 U. S. Instrument, 19 S. Harrison St., East Orange, N. J.
 See Advertisement on Page 282
 Western Electric Co. Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183
 Winslow Co., 9 Liberty St., Newark 5, N. J.

623

Heads, Recording

Allied Recording Products Co., 21-09 43rd Ave., Long Island City, N. Y.
 See Advertisement on Page 268
 Astatic Corp., Conneaut, Ohio
 Brush Development Co., 3405 Perkins Ave., Cleveland, Ohio
 See Advertisement on Page 137
 Caltron Co., Div. Frank Rieber, Inc., Los Angeles 34, Calif.
 Diacoustic Lab., 1678 Channing Way, Pasadena 3, Calif.
 Duotone Co., 799 Broadway, New York 3, N. Y.
 Miles Reproducer Co. Inc., 812 Broadway, New York 3, N. Y.
 See Advertisement on Page 294
 Presto Recording Corp., 242 W. 55th St., New York 19, N. Y.
 See Advertisements on Pages 48, 49
 Universal Microphone, 424 Warren Lane, Inglewood, Calif.
 Webster Elec. Co., 1900 Clark St., Racine, Wis.

624

Hearing Aid Components

BATTERIES

Burgess Battery Co., Handicraft Div., Vibro Tool Dept., 180 N. Wabash Ave., Chicago 1, Ill.
 General Dry Batteries Inc., 1300 Athens Ave., Cleveland, Ohio
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 See Advertisements on Pages 296, 297
 National Carbon Co., Inc., 30 E. 42nd St., New York, N. Y.
 See Advertisement on Page 207
 Radio Corp. of America, RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Western Cable Battery Co., Inc., 395 Sibley St., St. Paul, Minn.

625

CHOKES

Radionic Controls, Inc., 3758 Belmont Ave., Chicago 18, Ill.

626

CONNECTORS

Alden Products Co., 117 No. Main St., Brockton 64, Mass.

627

MICROPHONES

Astatic Corp., Conneaut, Ohio
 See Advertisement on Page 66
 Maico Co., Inc., 25 North 3rd St., Minneapolis, Minn.
 Shure Bros., 225 W. Huron St., Chicago, Ill.
 See Advertisement on Page 208
 Tibbetts Industries, Camden, Maine

628

RECEIVERS

American Earphone Co., 10 E. 43rd St., New York 17, N. Y.
 Maico Co., Inc., 25 N. 3rd St., Minneapolis, Minn.
 Telex Products Co., Telex Park, Minneapolis 1, Minn.
 See Advertisement on Page 266

629

TRANSFORMERS

Maico Co., Inc., 25 North 34th St., Minneapolis, Minn.
 Radionic Controls, Inc., 3758 Belmont Ave., Chicago 18, Ill.
 Telex Prods. Co., Telex Park, Minneapolis 1, Minn.
 United Transformer Corp., 150 Varick St., New York 13, N. Y.

630

TUBES

Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
 National Union Radio Corp., 15 Washington St., Newark 2, N. J.
 See Advertisement on Page 61
 Radio Corp. of America, Tube Div., Harrison, N. J.
 See Advertisement on Back Cover
 Raytheon Mfg. Co., Receiving Tube Div., Newton 58, Mass.
 See Advertisement on Page 135
 Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
 Standard Arceturus Corp., 99 Sussex Ave., Newark, N. J.
 Tung-Sol Lamp Works, Inc., 95 Eighth Ave., Newark 4, N. J.
 See Advertisement on Page 120
 Victoreen Instrument Co., 5806 Hough Ave., Cleveland 3, Ohio

631

HOLDERS, Crystal

American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
 See Advertisement on Page 21
 Breon Labs., 607 Rose St., Williamsport, Pa.
 Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
 Crowley & Co., Inc., Henry L., 1 Central Avenue, West Orange, N. J.
 Crystal Research Labs, Inc., 29 Allyn St., Hartford, Conn.
 "Eidson's," 1309 N. Second St., Temple, Texas
 Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
 See Advertisement on Page 201
 Hermetic Seal Products Co., 414 Morris Ave., Newark 3, N. J.
 See Advertisement on Page 233
 Howard Mfg. Co., 15 Fourth St., Council Bluffs, Iowa
 Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn, N. Y.
 Petersen Radio Co., 2800 W. Broadway, Council Bluffs, Iowa
 See Advertisement on Page 206
 R. E. C. Mfg. Corp., 1250 Highland St., Holliston, Mass.
 Somerset Labs., 306 Valleybrook Ave., Lyndhurst, N. J.
 Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118

632

Hoods, Viewing

Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.

633

Horns

SPEAKER PROJECTOR HORNS

Altec Lansing Corp., 1161 Vine St., Hollywood 38, Calif.
 Atlas Sound Corp., 1443 39th St., Brooklyn, N. Y.
 See Advertisement on Page 244
 Castlewood Mfg. Co., 12th & Burnett Sts., Louisville, Ky.
 Hawley Products Co., St. Charles, Ill.
 Jensen Radio Mfg. Co., 6601 S. Laramie Ave., Chicago, Ill.
 See Advertisement on Page 31
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
 Oxford-Tartak Corp., 3911 S. Michigan Ave., Chicago 15, Ill.
 Racon Electric Co., Inc., 52 E. 19th St., New York 3, N. Y.
 See Advertisement on Page 289
 Radio Corp. of America, RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 SOS Cinema Supply Co., 449 West 42nd Street, New York 18, N. Y.
 University Loudspeakers Inc., 225 Varick St., New York, N. Y.
 See Advertisement on Page 39
 Western Electric Co., Inc., 120 Broadway, New York, N. Y.
 See Advertisements on Pages 182-183

634

Housings

ANTENNA HOUSINGS

Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
 See Advertisement on Page 289

635

AUTOMOBILE RADIO HOUSINGS

Hawley Products Co., St. Charles, Ill.
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.

636

INSTRUMENT HOUSINGS

Cole Steel Equip., 349 Broadway, New York 13, N. Y.
 Consolidated Molded Products Corp., 309 Cherry St., Scranton 2, Pa.
 See Advertisement on Page 131
 Insuline Corp. of Amer., 2602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
 Sanders Bros. Mfg. Co., 409 W. Main Street, Ottawa, Illinois
 Stamford Metal Specialty Co., 428 Broadway, New York 13, N. Y.
 See Advertisement on Page 241
 Standard Molding Corp., Dayton, Ohio
 Watertown Mfg. Co., Watertown, Conn.

637

PUBLIC ADDRESS SYSTEM HOUSINGS

Castlewood Mfg. Co., 12th & Burnett Sts., Louisville, Ky.
 Hawley Products Co., St. Charles, Ill.
 Karp Metal Products Co., Inc., 129 Thirtieth St., Brooklyn, N. Y.
 See Advertisement on Page 65
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.

638

SPEAKER HOUSINGS

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
 Hawley Products Co., St. Charles, Ill.
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
 Lorentzen, H. K., Inc., 391 Broadway, New York 12, N. Y.
 National Co., 61 Sherman Street, Malden 48, Mass.
 See Advertisement on Page 292
 Radio Labs. Inc., 2701 Calif. Ave., Seattle 6, Wash.
 Standard Molding Corp., Dayton, Ohio

639

Indicators

REMOTE POSITION ANTENNA INDICATORS

Transicoil Corp., 114 Worth St., New York 13, N. Y.

640

TELEMETER INDICATORS

Polarad Electronics Co., 135 Liberty St., New York 6, N. Y.
 See Advertisement on Page 229

641

Inspection Equipment

LIGHT INSPECTION EQUIPMENT

Larrimore Sales Co., 311 Locust Street, St. Louis 2, Mo.

642

Instrument Parts

PRECISION PARTS

Instrument Parts Corp., Ossining, N. Y.
 See Advertisement on Page 288

643

Insulation Parts

BEAD INSULATION

American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
 See Advertisement on Page 21
 American Phenolic Corp., 1830 S. 54th St., Cicero, Ill.
 See Advertisements on Pages 110, 111
 Centralab Div. of Globe-Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc.
 See Advertisement on Page 146
 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.
 See Advertisement on Page 189
 Insuline Corp. of America, 3602 35th Ave., Long Island City 10, N. Y.
 See Advertisement on Page 192
 Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
 Kilburn Glass Co., Inc., J. R., 22 S. Worcester St., Charley, Mass.
 Lenoxite Div., Lenox Inc., 65 Prince St., Trenton 5, N. J.
 Martindale Electric Co., 1371 Hird Ave., Cleveland, Ohio
 National Ceramic Co., 400 Southard St., Trenton, N. J.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover

ELECTRONIC and ALLIED PRODUCTS

Saxonburg Potteries, Saxonburg, Pa.
 Sperti, Inc., Norwood Sta., Cincinnati 12, Ohio
 Star Porcelain Co., 61 Muirhead Ave., Trenton, N. J.
 Steward Mfg. Co., D. M. E., 36th St., Chattanooga, Tenn.
 Struthers-Dunn Inc., 1321 Arch St., Phila., Pa.
 Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118
 Waterbury Companies, Inc., 835 S. Main St., Waterbury 90, Conn.

644

CAPACITOR BOXES

Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118

645

CAPACITOR FILMS

Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
 Ford Radio & Mica Corp., 438-63rd St., Brooklyn, New York
 See Advertisement on Page 126
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212

646

CERAMIC PARTS

American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
 See Advertisement on Page 21
 Centralab Div., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wis.
 See Advertisement on Page 146
 Crowley & Co. Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
 Precision Fabricators Inc., 120 N. Fitzhugh St., Rochester, N. Y.
 Saxonburg Potteries, Saxonburg, Pa.
 Steward Mfg. Co., D. M., Chattanooga 1, Tenn.
 Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

647

CUT INSULATION PARTS

Acme Folding Box Co. Inc., 141 E. 25th St., New York, N. Y.
 Auburn Mfg. Co., 110 Stack St., Middletown, Conn.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
 Plax Corp., 133 Walnut St., Hartford 5, Conn.
 Printloid Inc., 95 Mercer St., New York, N. Y.
 See Advertisement on Page 230
 Saxonburg Potteries, Saxonburg, Pa.

648

EXTRUDED INSULATION PARTS

American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
 See Advertisement on Page 21
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
 Carter Products Co., 6921 Carnegie Ave., Cleveland, Ohio
 Hopp Press Inc., 460 W. 34th St., New York, N. Y.
 See Advertisement on Page 180
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago, Ill.
 Plastex Corp., 402 Mt. Vernon Ave., Columbus 3, Ohio
 Steward Mfg. Co., D. M. E., 36th St., Chattanooga, Tenn.

Suprenant Electrical Insulation Co., 84 Purchase St., Boston 10, Mass.
 See Advertisement on Page 228
 Technical Plastics Co., 618 Clyde Street, Pittsburgh 13, Pa.

649

FABRICATED INSULATION PARTS

Accurate Mfg. Co., Inc., 6122 N. 21 St., Phila. 38, Pa.
 American Communications Corp., 306 Broadway, New York, N. Y.
 American Felt Co., Glenville, Conn.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111,
 Auburn Button Wks. Inc., 48 Canoga St., Auburn, N. Y.
 Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
 See Advertisement on Page 44
 Buggie Co., H. H., Toledo, Ohio
 Cleveland Plastics, Inc., 1611 E. 21st St., Cleveland 14, Ohio
 Diemolding Corp., Rasbach St., Canalstota, N. Y.
 Edwards Inc., T. J., 121 Beach St., Boston 5, Mass.
 Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
 See Advertisement on Page 201
 Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
 See Advertisement on Page 194
 Franklin Mfg. Co., A. W., 175 Varick St., New York, N. Y.
 See Advertisement on Page 209
 General Electric Co., Plastics Div., 1 Plastics Ave., Pittsfield, Mass.
 See Advertisements on Pages 204, 212
 Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.
 Insulating Fabricators, Inc., 12 E. 12th St., New York 3, N. Y.
 Insulating Fabricators of New England, Inc., 22 Elkins St., S. Boston, Mass.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 International Products Corp., Baltimore 18, Md.
 Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
 Klise Mfg. Co., 50 Cottage Grove St., S. W. Grand Rapids, Mich.
 Lamicold Fabricators, 3600 W. Potomac Ave., Chicago, Ill.
 Metaplast Co., 205 W. 19th St., New York 11, N. Y.
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
 Micarta Fabricators, Inc., 4324 Ravenswood Ave., Chicago 40, Ill.
 Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
 Munsell & Co., Eugene, 200 Varick St., New York, N. Y.
 Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill.
 National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 See Advertisement on Page 33
 Plastic Accessories Inc., 460 Broome St., New York 13, N. Y.
 Precision Fabricators Inc., 120 N. Fitzhugh St., Rochester, N. Y.
 Printloid Inc., 95 Mercer St., New York, N. Y.
 See Advertisement on Page 230
 Santax Corp., 351 No. Crawford, Chicago 24, Ill.
 Spaulding Fibre Co. Inc., 310 Wheeler St., Tonawanda, N. Y.
 Special Electric Labs., 7657 S. Central Ave., Los Angeles 1, Calif.
 Synthane Corp., Oaks, Pa.
 Technical Plastics Co., 618 Clyde St., Pittsburgh 13, Pa.
 Teckna Co., 223-01 Northern Blvd., Bayside, L. I., N. Y.
 Tyler Rubber Co., Andover, Mass.

650

INSULATING FOIL

Celanese Plastics Corp., 180 Madison Ave., New York 16, N. Y.

**When Ordering or Inquiring
 please mention the
 ELECTRONICS BUYERS' GUIDE**

651

INSULATING CORD

Mitchell Rand Insulation Co. Inc., 51 Murray Street, New York 7, New York
 See Advertisement on Page 58
 Owens-Corning Fiberglas Corp., 1860 Nicholas Bldg., Toledo 1, Ohio
 Varflex Corp., N. Jay St., Rome, New York
 See Advertisement on Page 179

652

INSULATING SLEEVES

Anchor Webbing Co., 1005 Main, Pawtucket, R. I.
 B & C Insulation Prod. Inc., 261 Fifth Ave., New York 16, N. Y.
 Bentley, Harris Mfg. Co., Conshohocken, Pa.
 Hope Webbing Co., Providence, R. I.
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
 Mitchell Rand Insulation Co. Inc., 51 Murray Street, New York 7, New York
 See Advertisement on Page 58
 National Varnished Prod. Corp., 211 Woodland Ave., Woodbridge, N. J.
 See Advertisement on Page 287
 Owens-Corning Fiberglas Corp., 1860 Nicholas Bldg., Toledo 1, Ohio
 Varflex Corp., N. Jay St., Rome, New York
 See Advertisement on Page 179

653

LAMINATED PARTS

Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
 See Advertisement on Page 44
 Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
 Farley & Loetscher Mfg. Co., Dubuque, Iowa
 Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati, Ohio
 Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Delaware
 See Advertisement on Page 194
 Hopp Press Inc., 460 W. 34th St., New York, N. Y.
 See Advertisement on Page 180
 Insulating Fabricators of New England, Inc., 22 Elkins Street, S. Boston, Mass.
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
 National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 See Advertisement on Page 33
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

654

MOLDED INSULATION PARTS

American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
 Boonton Molding Co., Boonton, N. J.
 Celanese Plastics Corp., 180 Madison Ave., New York 16, N. Y.
 Chicago Die Mold Corp., 4001 Wrightwood Ave., Chicago 39, Ill.
 Chicago Molded Prods. Corp., 1020 N. Kolmar Ave., Chicago 51, Ill.
 Cincinnati Molding Co., 2037 Florence Ave., Cincinnati 6, Ohio
 Cleveland Plastics, Inc., 1611 E. 21st St., Cleveland 14, Ohio
 Colt's Patent Fire Arms Mfg. Co., Plastics Div., Hartford, Conn.
 Consolidated Molded Prods. Corp., 309 Cherry St., Scranton 2, Pa.
 See Advertisement on Page 131
 Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wis.
 Dayton Insulating Molding Co., Dayton, Ohio
 Dimco Plastics, 207 E. 6th St., Dayton, Ohio
 duPont de Nemours Co., Inc., E. I., Plastics Dept., 626 Schuyler Ave., Arlington, N. J.

Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
 See Advertisement on Page 201

Farley & Loetscher Mfg. Co., Dubuque, Iowa

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302

Felsenthal & Sons, G., 4122 W. Grand Ave., Chicago 51, Ill.

Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
 See Advertisement on Page 194

General Electric Co., Plastics Div., 1 Plastics Ave., Pittsfield, Mass.
 See Advertisements on Pages 204, 212

General Industries Co., Taylor & Olive Sts., Elyria, Ohio

Hopp Press Inc., 460 W. 34th St., New York, N. Y.
 See Advertisement on Page 180

Howard Mfg. Co., 15 Fourth St., Council Bluffs, Iowa

Howard Plastics, Inc., 2600 Grand Ave., Kansas City 8, Mo.

Industrial Molded Prods. Co., 2035 Charleston St., Chicago, Ill.

Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.

Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.

LeRose & Associates, W. T., 635 Second Ave., Troy, N. Y.

Malco Co. Inc., 25 N. 3rd St., Minneapolis, Minn.

Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.

Monsanto Chemical Co., Plastics Div., Springfield 2, Mass.

Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill.

Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
 See Advertisement on Page 282

Oris Mfg. Co., Inc., Thomaston, Conn.

Plastic Manufacturers Inc., Stamford, Conn.

R. E. C. Mfg. Corp., 1250 Highland St., Holliston, Mass.

Recto Molded Products, Appleton St. & B. & O. R. R., Cincinnati, Ohio

Richardson Co., The, Melrose Park, Ill.
 See Advertisement on Page 271

Rogan Bros., 2001 S. Michigan Ave., Chicago, Ill.

Rohm & Haas, 222 W. Washington Sq., Philadelphia, Pa.

Shaw Insulator Co., 160 Colt St., Irvington 11, N. J.
 See Advertisements on Pages 22, 23

Standard Molding Corp., Dayton, Ohio

Synthane Corp., Oaks, Pa.

Taylor Fibre Co., Norristown, Pa.

Taylor Mfg. Co., 3078 W. Meinecke Ave., Milwaukee 10, Wis.

Tech-Art Plastics Co., 41-01 36th Ave., Long Island City, N. Y.

Tyer Rubber Co., Andover, Mass.

Victory Mfg. Co., 1722 W. Arcade Pl., Chicago 2, Ill.

Watertown Mfg. Co., Watertown, Conn.

Werner Co. Inc., R. D., 295-5th Ave., New York 16, N. Y.

Western Felt Wks., 4029 Ogden Ave., Chicago, Ill.

White Dental Mfg. Co., S. S., Industrial Div., 10 E. 49th St., New York, N. Y.
 See Advertisement on Page 269

Worcester Moulded Plastics Co., 8 Grafton St., Worcester 8, Mass.

655

PLASTIC INSULATION PARTS

Accurate Mfg. Co., Inc., 6122 N. 21st St., Phila. 38, Pa.

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.

Baer Co., N. S., 9 Montgomery St., Hillside, N. J.

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.

Boonton Molding Co., Boonton, N. J.

Buggie Co., H. H., Toledo, Ohio

Chicago Die Mold Corp., 4001 Wrightwood Ave., Chicago 39, Ill.

Cincinnati Molding Co., 2037 Florence Ave., Cincinnati 6, Ohio

Cleveland Plastics, Inc., 1611 E. 21st St., Cleveland 14, Ohio

Colt's Patent Fire Arms Mfg. Co., Plastics Div., Hartford, Conn.

Consolidated Molded Prods. Corp., 309 Cherry St., Scranton 2, Pa.
 See Advertisement on Page 131

Creative Plastics Corp., 963 Kent Ave., Brooklyn 5, N. Y.

Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wisc.

Diemoulding Corp., Rasbach St., Canalstota, N. Y.

Dimco Plastics, 207 E. 6th St., Dayton, Ohio

duPont de Nemours Co., Inc., E. I., Organic Chemical Dept., Wilmington 98, Del.

Durez Plastics & Chemicals Inc., 1922 Walck Rd., No. Tonawanda, N. Y.

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302

Felsenthal & Sons, G., 4122 W. Grand Ave., Chicago 51, Ill.

Franklin Mfg. Co., A. W., 175 Varlek St., New York, N. Y.
 See Advertisement on Page 209

Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
 See Advertisement on Page 194

General Electric Co., Plastics Div., 1 Plastics Ave., Pittsfield, Mass.

General Industries Co., Taylor & Olive Sts., Elyria, Ohio

Hopp Press Inc., 460 W. 34th St., New York, N. Y.

Howard Plastics, Inc., 2600 Grand Ave., Kansas City 8, Mo.

Industrial Molded Products Co., 2035 Charleston St., Chicago, Ill.

Insulating Fabricators, Inc., 12 E. 12th St., New York 3, N. Y.

Insulating Fabricators of New England, Inc., 22 Elkins St., S. Boston, Mass.

Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.

Insulation Mfrs. Corp., 565 W. Washington Blvd., Chicago 6, Ill.
 See Advertisement on Page 213

International Products Corp., Baltimore 18, Md.

Jorgensen Mfg. Co., 1547 W. Farms Rd., New York 60, N. Y.

Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.

Lamicold Fabricators, 3600 W. Potomac Ave., Chicago, Ill.

Malco Co. Inc., 25 N. 3rd St., Minneapolis, Minn.

Metaplast Co., 205 W. 19th St., New York 11, N. Y.

Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.

Monsanto Chemical Co., Plastics Div., Springfield 2, Mass.

National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 See Advertisement on Page 33

Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.

Oris Mfg. Co., Inc., Thomaston, Conn.

Plastic Accessories Inc., 460 Broome St., New York 13, N. Y.

Plastic Insulator Co., Inc., 369 Lexington Ave., New York 17, N. Y.
 See Advertisement on Page 290

Plastic Manufacturers Inc., Stamford, Conn.

Precision Fabricators Inc., 120 N. Fitzhugh St., Rochester, N. Y.

Printloid Inc., 95 Mercer St., New York, N. Y.
 See Advertisement on Page 231

R. E. C. Mfg. Corp., 1250 Highland St., Holliston, Mass.

Recto Molded Products, Appleton St. & B. & O. R. R., Cincinnati, Ohio

Richardson Co., The, Melrose Park, Ill.

Rogan Bros., 2001 S. Michigan Ave., Chicago, Ill.

Rogers Corp., Manchester, Conn.

Rohm & Haas, 222 W. Washington Sq., Philadelphia, Pa.

Shaw Insulator Co., 160 Colt St., Irvington 11, N. J.
 See Advertisements on Pages 22, 23

Sillocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.

Standard Products Co., 505 Blvd. Bldg., Detroit 2, Mich.

Synthane Corp., Oaks, Pa.

Taylor Fibre Co., Norristown, Pa.

Taylor Mfg. Co., 3078 W. Meinecke Ave., Milwaukee 10, Wis.

Tech-Art Plastics Co., 41-01 36th Ave., Long Island City, N. Y.

Teckna Co., 223-01 Northern Blvd., Bayside, L. I., N. Y.

Technical Plastics Co., 618 Clyde St., Pittsburgh 13, Pa.

Ucinite Co., The, Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.

Watertown Mfg. Co., Watertown, Conn.

Werner Co. Inc., R. D., 295-5th Ave., New York 16, N. Y.

Western Felt Wks., 4029 Ogden Ave., Chicago, Ill.

Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

White Dental Mfg. Co., S. S., Industrial Div., 10 E. 49th St., New York, N. Y.

Worcester Moulded Plastics Co., 8 Grafton St., Worcester 8, Mass.

656

RODS

American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.

Blum & Co., Julius, 532 W. 22nd St., New York, N. Y.

Carter Products Co., 6921 Carnegie Ave., Cleveland, Ohio

Celanese Plastics Corp., 180 Madison Ave., N. Y. 16, N. Y.

Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.

duPont de Nemours Co., Inc., E. I., Plastics Dept., 626 Schuyler Ave., Arlington, N. J.

Electrical Insulation Co., 12 Vestry St., New York, N. Y.

Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati, Ohio

General Electric Co., Plastics Ave., Pittsfield, Mass.
 See Advertisements on Pages 204, 212

Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.

Industrial Synthetics Corp., 60 Woolsey St., Irvington, N. J.
 See Advertisement on Page 123

Insulating Fabricators of New England, Inc., 22 Elkins St., S. Boston, Mass.

Insulline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192

Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill.

National Vulcanized Fibre Co., Maryland Ave., Wilmington, Delaware
 See Advertisement on Page 33

Penn Fibre & Specialty Co., 2030 E. Moreland St., Phila. 44, Pa.

Plax Corp., 133 Walnut St., Hartford 5, Conn.

Rohm & Haas, 222 W. Washington Sq., Philadelphia, Pa.

Spaulding Fibre Co. Inc., 310 Wheeler St., Tonawanda, N. Y.

Synthane Corp., Oaks, Penna.

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.

657

SCREW MACHINE PARTS

Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
 See Advertisement on Page 44

Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.

Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.

Taylor Fibre Co., Norristown, Pa.

658

SHEETS

American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.

Blum & Co., Julius, 532 W. 22nd St., New York, N. Y.

Celanese Plastics Corp., 180 Madison Ave., N. Y. 16, N. Y.

Electrical Insulation Co., 12 Vestry St., New York, N. Y.

Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati, Ohio

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 See Advertisement on Page 290

General Elec. Co., Plastics Div., 1 Plastics Ave., Pittsfield Ave., Pittsfield, Mass.
 See Advertisements on Pages 204, 212

Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.

Industrial Synthetics Corp., 60 Woolsey St., Irvington, N. J.
 See Advertisement on Page 123

National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 See Advertisement on Page 33

ELECTRONIC and ALLIED PRODUCTS

Penn Fibre & Specialty Co., 2030 E. Moreland St., Phila. 44, Pa.
 Plax Corp., 133 Walnut St., Hartford 5, Conn.
Suprenant Electrical Insulation Co., 84 Purchase St., Boston 10, Mass.
 See Advertisement on Page 228
 Synthane Corp., Oaks, Penna.
 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.

659

CERAMIC STAMPINGS & PUNCHINGS

American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
 See Advertisement on Page 21
 Centralab Div., Globe Union Inc., 900 E. Keefee Ave., Milwaukee 1, Wisc.
 See Advertisement on Page 146
 Ford Radio & Mica Corp., 538-63rd St., Brooklyn, N. Y.
 See Advertisement on Page 126
 Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
 Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill.

660

FIBRE STAMPINGS & PUNCHINGS

Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
 See Advertisement on Page 44
 Continental Diamond Fibre Co., 16 Chapel Street, Newark, Del.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 Penn Fibre & Specialty Co., 2030 E. Moreland St., Phila. 44, Pa.
 Precision Fabricators Inc., 120 N. Fitzhugh St., Rochester, N. Y.
 Rogers Corp., Manchester, Conn.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.

661

PAPER STAMPINGS & PUNCHINGS

Aldine Paper Co., Inc., 535 Fifth Ave., New York 17, N. Y.
 Buggie Co., H. H., Toledo, Ohio
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
 Rogers Corporation, Manchester, Conn.
 Silcocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.
 Uchnite Co., Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.

662

TAPES, INSULATING

Acme Wire Co., New Haven 14, Conn.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Brand & Co., Wm., 276 Fourth Ave., New York 10, N. Y.
 See Advertisements on Page 50-51
 Carolina Narrow Fabric Co., 1636 N. Chestnut St., Winston-Salem, N. C.
 Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.
 Dobeckmum Co., The, Indus. Prods. Div., Cleveland 1, Ohio
 duPont de Nemours & Co., Inc., E. I., Organic Chemical Dept., Wilmington 98, Delaware
 Electro Technical Products Inc., Nutley 10, N. J.
 Hope Webbing Co., Providence, R. I.
 Industrial Synthetics Corp., 60 Woolsey St., Irvington, N. J.
 See Advertisement on Page 123
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.

Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J.
 Johns-Manville Sales Corp., 22 E. 40th St., New York, N. Y.
 Linton & Bro. Inc., Horace, 3081 Ruth St., Phila. 34, Pa.
 Mica Insulator Co., 797 Broadway, 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 Advertisement on Page 58

N. J. Wood Finishing Co. Inc., Electrical Insulation Dept., Woodbridge, N. J.
 Okonite Co., Canal St., Passaic, N. J.
 Owens-Corning Fiberglass Corp., 1860 Nicholas Bldg., Toledo 1, Ohio
 Plax Corp., 133 Walnut St., Hartford 5, Conn.
 Ruberoid Co., 500 Fifth Ave., New York, N. Y.
 Suprenant Electrical Insulation Co., 84 Purchase St., Boston 10, Mass.
 See Advertisement on Page 228
 Wright & Sons Co., Wm. E., West Warren, Mass.

663

CERAMIC TUBING

Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
 Steward Mfg. Co., D. M., Chattanooga 1, Tenn.
 Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118

664

FABRIC TUBES and TUBING

Acme Wire Co., New Haven 14, Conn.
 Anchor Webbing Co., 1005 Main St. Pawtucket, R. I.
 Bentley-Harris Mfg. Co., Conshohocken, Pa.
 Brand & Co., William, 276 Fourth Ave., New York 10, N. Y.
 See Advertisements on Pages 50, 51
 Franklin Fibre-Lamitex Corp., 12th & French Sts., Wilmington, Delaware
 See Advertisement on Page 194
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 See Advertisement on Page 290
 Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J.
 National Varnished Products Corp., 211 Randolph Ave., Woodbridge, N. J.
 See Advertisement on Page 287
 National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 See Advertisement on Page 33
 Priscilla & Braid Co., 1309 Broad St., Central Falls, R. I.
 Varflex Corp., N. Jay St., Rome, N. Y.
 See Advertisement on Page 179

665

FIBERGLAS INSULATION TUBING

Acme Wire Co., New Haven, 14, Conn.
 B & C Insulation Prod. Inc., 261 Fifth Ave., N. Y. 16, N. Y.
 Bentley-Harris Mfg. Co., Conshohocken, Pa.
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
 Mitchell Rand Insulation Co. Inc., 51 Murray St., New York 7, N. Y.
 See Advertisement on Page 58
 National Varnished Prod. Corp., 211 Randolph Ave., Woodbridge, N. J.
 See Advertisement on Page 287
 Owens-Corning Fiberglass Corp., 1860 Nicholas Bldg., Toledo 1, Ohio
 Varflex Corp., N. Jay St., Rome, N. Y.
 See Advertisement on Page 179

666

FIBRE INSULATION TUBES

Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.
 National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 Synthane Corp., Oaks, Pa.

667

GLASS TUBES and TUBING

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
 Brand & Co., William, 276 Fourth Ave., New York 10, N. Y.
 See Advertisements on Pages 50, 51
 Corning Glass Works, Corning, N. Y.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.

668

MICA TUBES

Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.

669

PAPER TUBES and TUBING

Acme Wire Co., New Haven 14, Conn.
 Franklin Fibre-Lamitex Corp., 12th & French Sts., Wilmington, Del.
 See Advertisement on Page 194
 Bentley-Harris Mfg. Co., Conshohocken, Pa.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
 National Varnished Prod. Corp., 211 Randolph Ave., Woodbridge, N. J.
 See Advertisement on Page 287
 National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 See Advertisement on Page 33
 Paramount Paper Tube Co., 801 Glasgow Ave., Fort Wayne, Ind.
 Precision Paper Tube Co., 2033 W. Charleston St., Chicago 47, Ill.

670

PLASTIC INSULATION TUBES

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 B & C Insulation Prod. Inc., 261 Fifth Ave., N. Y. 16, N. Y.
 Blum & Co., Julius, 532 W. 22nd St., New York, N. Y.
 Brand & Co., Wm., 276 Fourth Ave., New York 10, N. Y.
 See Advertisements on Pages 50-51
 Carter Products Co., 6921 Carnegie Ave., Cleveland, Ohio
 Carter Radio Div., Precision Parts Co., 218 Institute Pl., Chicago 10, Ill.
 Celanese Plastics Corp., 180 Madison Ave., N. Y. 16, N. Y.
 Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.
 duPont de Nemours Co., Inc., E. I., Plastics Dept., 626 Schuyler Ave., Arlington, N. J.
 Electrical Insulation Co., 12 Vestry St., New York, N. Y.
 Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati, Ohio
 General Electric Co., Plastics Div., 1 Plastics Ave., Pittsfield, Mass.
 See Advertisements on Pages 204, 212
 Gemloid Corp., 79-10 Albion Ave., Elmhurst, N. Y.
 Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.
 Industrial Synthetics Corp., 60 Woolsey St., Irvington, N. J.
 See Advertisement on Page 123
 Insulating Fabricators of New England, Inc., 22 Elkins St., S. Boston, Mass.
 Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
 Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington, N. J.
 Mayfair Molded Prods. Corp., 4440 N. Elston Ave., Chicago 30, Ill.
 Mitchell Rand Insulation Co. Inc., 51 Murray St., New York 7, N. Y.
 See Advertisement on Page 58
 Nat'l Varnished Prod. Corp., 211 Randolph Ave., Woodbridge, N. J.
 See Advertisement on Page 287
 Penn Fibre & Specialty Co., 2030 E. Moreland St., Phila. 44, Pa.

Plax Corp., 133 Walnut St., Hartford 5, Conn.
 Precision Paper Tube Co., 2033 W. Charles-ton St., Chicago 47, Ill.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
Suprenant Electrical Insulation Co., 84 Purchase St., Boston 10, Mass.
 See Advertisement on Page 228
 Synthane Corp., Oaks, Penna.
 Taylor Fibre Co., Norristown, Pa.
 United Radio Mfg. Co., 191 Greenwich St., New York, N. Y.
Variflex Corp., N. Jay St., Rome, N. Y.
 See Advertisement on Page 179
 Victory Mfg. Co., 1722 W. Arcade Pl., Chi-cago 2, Ill.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

671

SYNTHETIC RESIN TUBING

N. J. Wood Finishing Co. Inc., Electrical Insulation Dept., Woodbridge, N. J.

672

VARNISHED OR LACQUERED INSULATION TUBES

Acme Wire Co., New Haven 14, Conn.
 Alpha Wire Corp., 50 Howard St., New York, N. Y.
 B & C Insulation Prod. Inc., 261 Fifth Ave., N. Y. 16, N. Y.
Brand & Co., Wm., 276 Fourth Ave., New York 10, N. Y.
 See Advertisements on Pages 50, 51
 Hope Webbing Co., Providence, R. I.
Insuline Corp. of Amer., 3602-35th Ave., Long Island City, N. Y.
 See Advertisement on Page 192
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
 Mica Insulator Co., 797 Broadway, Sche-nectady 1, N. Y.
National Varnished Prod. Corp., 211 Ran-dolph Ave., Woodbridge, N. J.
 See Advertisement on Page 287
 Saxonburg Potteries, Saxonburg, Pa.

673

Insulators

ANTENNA INSULATORS & SPRINGS ASSEMBLIES

Aeronautical Radio Mfg. Co., 155 First Street, Mineola, L. I., N. Y.
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
Premax Prods. Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls 2, N. Y.
 See Advertisement on Page 68

674

CAN LINER INSULATORS

Acme Folding Box Co. Inc., 141 E. 25th St., New York, N. Y.
 Moore Co., H. J., 108 Park Row, New York 7, N. Y.
 Rogers Corporation, Manchester, Conn.

675

CERAMIC INSULATORS

American Lava Corp., Kruesi Bldg., Chat-tanooga 5, Tenn.
 See Advertisement on Page 21
 Birnbach Radio Co. Inc., 145 Hudson St., New York, N. Y.
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Fleron & Son Inc., M. M., 113 N. Broad St., Trenton, N. J.
General Ceramics & Steatite Corp., Keasbey, N. J.
 See Advertisement on Page 189
 General Electronics Inc., 1819 Broadway, New York 23, N. Y.

Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
 Locke Insulator Corp., P. O. Box 57, Balti-more 3, Md.
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118
 Union Electrical Porcelain Wks., Van St., Trenton 5, N. J.
 Universal Clay Products Co., 1505 E. 1st St., Sandusky, Ohio

676

FEEDER SPREADER INSULATORS

General Ceramics & Steatite Corp., Keasbey, N. J.
 See Advertisement on Page 189
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
 Johnson Co., E. F., Waseca, Minn.
 Locke Insulator Corp., P. O. Box 57, Bal-timore 3, Md.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118

677

FUSED QUARTZ INSULATORS

Amersil Co., Inc., 60 Wall Tower, New York 5, N. Y.
General Electric Co., Nela Park, Cleveland, Ohio
 See Advertisements on Pages 204, 212
Hanovia Chemical & Mfg. Co., 233 N. J. RR Ave., Newark, N. J.
 See Advertisement on Page 218

678

HIGH DIELECTRIC PAPER INSULATORS

Moore Co., Howard J., 108 Park Row, New York 7, N. Y.

679

MAST GUY INSULATORS

Lapp Insulator Co., 31 Gilbert St., LeRoy, N. Y.
 See Advertisements on Pages 54, 55
 Locke Insulator Corp., P. O. Box 57, Bal-timore 3, Md.

680

PASSTHROUGH & BUSHING INSULATORS

Aircraft Radio Corp., Boonton, N. J.
 See Advertisements on Pages 150, 151
 Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
Centralab Div., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc.
 See Advertisement on Page 146
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Corning Glass Works, Corning, N. Y.
Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
 See Advertisement on Page 201
General Ceramics & Steatite Corp., Keasbey, N. J.
 See Advertisement on Page 189
Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
 Johnson Co., E. F., Waseca, Minn.
Lapp Insulator Co., 31 Gilbert St., Le Roy, N. Y.
 See Advertisements on Pages 54-55
 Locke Insulator Corp., P. O. Box 57, Bal-timore 3, Md.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220

Mykroy Inc., 1917 N. Springfield Ave., Chi-cago 47, Ill.
National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291

681

STANDOFF & CONE INSULATORS

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
Centralab Div., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc.
 See Advertisement on Page 146
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
 See Advertisement on Page 201
General Ceramics & Steatite Corp., Keasbey, N. J.
 See Advertisement on Page 189
General Electronics Inc., 1819 Broadway, New York 23, N. Y.
Insuline Corp. of America, 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
 Johnson Co., E. F., Waseca, Minn.
Lapp Insulator Co., 31 Gilbert St., Le Roy, N. Y.
 See Advertisements on Pages 54-55
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
Mykroy Inc., 1917 N. Springfield Ave., Chi-cago 47, Ill.
National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118
 Workshop Associates, 55 Needham St., New-ton Highlands 61, Mass.

682

STRAIN INSULATORS

Aeronautical Radio Mfg. Co., 155 First St., Mineola, L. I., N. Y.
 Alpha Wire Corp., 50 Howard St., New York, N. Y.
Centralab Div., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc.
 See Advertisement on Page 146
 Corning Glass Works, Corning, N. Y.
Cornish Wire Co., 15 Park Row, New York, N. Y.
 See Advertisement on Page 148
Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
 See Advertisement on Page 201
 Fleron & Son Inc., M. M., 113 N. Broad St., Trenton, N. J.
General Ceramics & Steatite Corp., Keasbey, N. J.
 See Advertisement on Page 189
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
 Johnson Co., E. F., Waseca, Minn.
Lapp Insulator Co., 31 Gilbert St., Le Roy, N. Y.
 See Advertisements on Pages 54-55
 Locke Insulator Corp., P. O. Box 57, Bal-timore 3, Md.
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118

683

THERMOCOUPLE INSULATORS

American Lava Corp., Kruesi Bldg., Chat-tanooga 5, Tenn.
 See Advertisement on Page 21
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118

684

TRANSMITTING ANTENNA INSULATORS

Corning Glass Works, Corning, N. Y.
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283

ELECTRONIC and ALLIED PRODUCTS

Johnson Co., E. F., Waseca, Minn.
Locke Insulator Corp., P. O. Box 57, Baltimore 3, Md.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
See Advertisement on Page 220

685

TEST CLIP INSULATORS

Mueller Elec. Co., 1583 E. 31st Street, Cleveland 14, Ohio

686

TOWER INSULATORS

Lapp Insulator Co., 31 Gilbert St., LeRoy, N. Y.
See Advertisements on Pages 54, 55
Locke Insulator Corp., P. O. Box 57, Baltimore 3, Md.

687

Inverters

American Television & Radio Co., 300 E. Fourth St., St. Paul 1, Minn.
See Advertisement on Page 272
Eicor, Inc., 1501 W. Congress St., Chicago 7, Ill.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Electronic Laboratories, Inc., Indianapolis, Ind.
Leland Electric Co., 1501 Webster St., Dayton, Ohio
Radio Mfg. Engineers Inc., 304 First Ave., Peoria, Ill.
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
See Advertisements on Pages 155-160

688

Jumpers, Bonding

Aeronautical Radio Mfg. Co., 155 First St., Mineola, L. I., N. Y.

689

Keyers and Couplers

Press Wireless Mfg. Corp., 1475 Broadway, New York City 18, N. Y.
See Advertisements on Pages 69-80

690

Keys and Coding Equipment

Alden Products Co., 117 N. Main St., Brockton 64, Mass.
Boehme Inc., H. O., 915 Broadway, New York, N. Y.
Fischer-Smith, Inc., 162 State St., West Englewood, N. J.
Insuline Corp. of Amer., 3602-35th Ave., Long Island City, N. Y.
See Advertisement on Page 192
Logan Co., Les., 530 Gough St., San Francisco 2, Calif.
McElroy Manufacturing Corp., 82 Brookline Ave., Boston, Mass.
Mecanitron Corp., 711 Boylston St., Boston 16, Mass.
Schuttig & Co., 9th & Kearney Sts. N. E., Washington 17, D. C.
Selectograph Mfg. Co., 502 W. Colo Ave., Colorado Springs, Colo.
Telegraph Apparatus Co., 325 W. Huron St., Chicago, Ill.
Telephonics Corp., 350 West 31st St., New York 1, N. Y.
Vibroplex Co., Inc., 833 Broadway, New York, N. Y.
Wilson Mfg. Co., Inc., 600 N. Andrews Ave., Ft. Lauderdale, Fla.
Winslow Co., 9 Liberty St., Newark 5, N. J.

691

Knobs

Aircraft Radio Corp., Boonton, N. J.
Dayton Insulating Molding Co., Dayton, Ohio
Daven Co., 191 Central Ave., Newark 4, N. J.
See Advertisement on Inside Back Cover
Eby, Inc., H. H., 18 W. Chelton Ave., Phila. 13, Pa.
Gemloid Corp., 79-10 Albion Ave., Elmhurst, N. Y.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
See Advertisement on Page 298
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
See Advertisement on Page 220
Victory Mfg. Co., 1722 W. Arcade Pl., Chicago 2, Ill.

692

MOLDED KNOBS

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
Carter Radio Div., Precision Parts Co., 213 Institute Pl., Chicago 10, Ill.
Chicago Die Mold Corp., 4001 Wright Ave., Chicago 39, Ill.
Consolidated Molded Prods. Corp., 309 Cherry St., Scranton 2, Pa.
See Advertisement on Page 131
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
See Advertisement on Page 197
Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.
Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.
Erie Resistor Corp., 644 W. 12th St., Erie, Pa.
See Advertisement on Page 147
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.
Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
Insuline Corp. of America, 3602-35th Ave., Long Island City, N. Y.
See Advertisement on Page 192
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
Kurz-Kasch Co., 1415 S. Broadway, Dayton 1, Ohio
Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill.
Midwest Molding & Mfg. Co., 319 N. Whipple St., Chicago 12, Ill.
National Co., 61 Sherman St., Malden 48, Mass.
New England Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.
Point Mfg. Co., 5775 N. Ridge Ave., Chicago 26, Ill.
Rhodes Mfg. Co., 1753 N. Honore St., Chicago, Ill.
Richardson Co., The, Melrose Park, Ill.
See Advertisement on Page 271
Standard Molding Corp., Dayton, Ohio
Technical Plastics Co., 618 Clyde St., Pittsburgh 13, Pa.
Technical Radio Co., 275 Ninth St., San Francisco 3, Calif.
Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

693

WOODEN KNOBS

Syracuse Ornamental Co., 581 S. Clinton St., Syracuse, New York

694

Laminations

TRANSFORMER LAMINATIONS

Allegheny Ludlum Steel Corp., Brackenridge, Penna.

Publix Metal Prod. Inc., 100-6th Ave., New York 13, N. Y.
Webster-Chicago Corp., 5622 Bloomingdale Ave., Chicago 39, Ill.

695

Lights

DIAL LIGHTS and PANEL LIGHTS

Automatic Electric Co., 1033 W. Van Buren St., Chicago 7, Ill.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio
Dial Light Co. of America, 900 Broadway, New York 3, N. Y.
See Advertisement on Page 255
Drake Mfg. Co., 1713 Hubbard St., Chicago, Ill.
Electronic Labs. Inc., Indianapolis, Indiana
General Electric Co., Nela Park, Cleveland, Ohio
See Advertisements on Pages 204, 212
Johnson Co., Waseca, Minn.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Kirkland Co., H. R., 8-10 King St., Morristown, N. J.
See Advertisement on Page 284
Littelfuse Inc., 4755 Ravenswood Ave., Chicago, Ill.
Mallory & Co. Inc., P. R. 3029 E. Washington St., Indianapolis 6, Ind.
See Advertisements on Pages 296, 297
Micarta Fabricators Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
National Union Radio Corp., 15 Washington St., Newark 2, N. J.
See Advertisement on Page 61
Searle Aero Industries, Inc., Orange, Calif.
Signal Indicator Corp., 894 Broadway, New York 3, N. Y.
Tung-Sol Lamp Works, Inc., 95 Eighth Ave., Newark, N. J.
See Advertisement on Page 129

696

PHOTOELECTRIC LIGHT SOURCES

Aerolux Light Corp., 653-11th Ave., New York 19, N. Y.
Fisher-Pierce Co., 80 Ceylon Street, Boston, Mass.
See Advertisement on Page 259
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Ripley Co., Torrington, Conn.
See Advertisement on Page 30
Worner Electronic Devices, 609 W. Lake St., Chicago 6, Ill.

697

PILOT LIGHTS

Aerolux Light Corp., 653-11th Ave., New York 19, N. Y.
Automatic Electric Co., 1033 W. Van Buren St., Chicago 7, Ill.
Dial Light Co. of America, Inc., 900 Broadway, New York 3, N. Y.
See Advertisement on Page 255
Drake Mfg. Co., 1713 Hubbard St., Chicago, Ill.
See Advertisement on Page 246
General Electric Co., Nela Park, Cleveland, Ohio
See Advertisements on Pages 204, 212
Gothard Mfg. Co., 1309 North 9th St., Springfield, Ill.
Johnson Co., E. F., Waseca, Minn.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Kirkland Co., H. R., 8-10 King St., Morristown, N. J.
See Advertisement on Page 284
Premier Crystal Labs. Inc., 63 Park Row, New York, N. Y.
Signal Indicator Corp., 894 Broadway, New York 3, N. Y.

698

SIGNAL LIGHTS

Avia Prods. Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
Dial Light Co. of America, 900 Broadway, New York 3, N. Y.
See Advertisement on Page 255

General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Kirkland Co., H. R., 8-10 King St., Morris-
 town, N. J.
 See Advertisement on Page 284
 Signal Indicator Corp., 894 Broadway, New
 York 3, N. Y.

699

STROBOSCOPIC LIGHT SOURCES

Aerolux Light Corps., 653-11th Ave., New
 York 19, N. Y.
 General Radio Co., 275 Mass. Ave., Cam-
 bridge 39, Mass.

700

Links, Antenna

Telephonics Corp., 350 W. 31st St., New
 York, N. Y.

701

Locks

DIAL LOCKS

Millen Mfg. Co., James, 150 Exchange St.,
 Malden, Mass.
 See Advertisement on Page 220
 National Co., 61 Sherman St., Malden 48,
 Mass.
 Radio Craftsmen, 1341 S. Michigan Ave.,
 Chicago 5, Ill.

702

SHAFT LOCKS

Millen Mfg. Co., James, 150 Exchange St.,
 Malden, Mass.
 See Advertisement on Page 220
 National Co., 61 Sherman St., Malden 48,
 Mass.

703

Loudspeakers

Aireon Mfg. Corp., Fairfax & Funston Rds.,
 Kansas City 15, Kansas.
 See Advertisement on Page 130
 Altec Lansing Corp., 1161 N. Vine St., Holly-
 wood 38, Calif.
 Atlas Sound Corp., 1443 39th St., Brooklyn,
 N. Y.
 See Advertisement on Page 244
 Best Mfg. Co., 1200 Grove St., Irvington,
 N. J.
 Cinaudagraph Speakers, Inc., Subsidiary of
 Aireon Mfg. Corp., 1401 Fairfax Traffic-
 way, Kansas City, Kansas
 Clark Radio Equipment Corp., 4313 Lincoln
 Ave., Chicago 18, Ill.
 Consolidated Radio Products Co., 350 W.
 Erie St., Chicago 10, Ill.
 Crescent Industries, Inc., 4140 Belmont Ave.,
 Chicago 41, Ill.
 Dilks, Inc., Norwalk, Conn.
 DX Radio Products Co. Inc., 12000 N. Clare-
 mont Ave., Chicago 22, Ill.
 Emerson Radio & Phonograph Corp., 111
 8th Ave., New York, N. Y.
 Farnsworth Television & Radio Corp., 3700
 Pontiac St., Ft. Wayne, Ind.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 General Instrument Corp., 828 Newark Ave.,
 Elizabeth 3, N. J.
 See Advertisement on Page 57
 Hallcrafters Co., 2611 S. Indiana Ave.,
 Chicago, Ill.
 Horton Machine Prods. Co., Horton & Rock-
 away Aves, Valley Stream, L. I., N. Y.
 Industrial Tool & Die Wks., Inc., 2824 Uni-
 versity Ave. S. E., Minneapolis, Minn.
 Jensen Radio Mfg. Co., 6601 S. Laramie
 Ave., Chicago, Ill.
 See Advertisement on Page 36
 Magnavox Co., The, Fort Wayne 4, Indiana
 Molded Insulation Co., Aircraft Control
 Div., 335 E. Price St., Phila., Pa.
 National Co., 61 Sherman St., Malden 48,
 Mass.
 See Advertisement on Page 291

Operadio Mfg. Co., 135th & Indiana Sts.,
 St. Charles, Ill.
 Oxford-Tartak Corp., 3911 S. Michigan Ave.,
 Chicago 15, Ill.
 Perfection Electric Co., 829 S. State St.,
 Chicago, Ill.
 Permoflux Corp., 4900 W. Grand Avenue,
 Chicago, Ill.
 Quam Nichols Co., 526 E. 33rd Pl., Chicago
 16, Ill.
 Racon Electric Co., 52 E. 19th St., New York
 3, N. Y.
 See Advertisement on Page 289
 Radell Corp., 6323 Guilford Ave., Indian-
 apolis, Ind.
 Radio Corp. of Amer., RCA Victor Div.,
 Camden, N. J.
 See Advertisement on Back Cover
 Radio Development & Research Co., 26
 Cornellson Ave., Jersey City, N. J.
 Radio Speakers Inc., 221 E. Cullerton St.,
 Chicago, Ill.
 Rola Co. Inc., 2530 Superior Ave., Clevel-
 and, Ohio
 Rowe Industries, 3120 Monroe St., Toledo 6,
 Ohio
 See Advertisement on Page 254
 Searle Aero Industries, Inc., Orange, Calif.
 SOS Cinema Supply Co., 449 W. 42nd St.,
 New York 18, N. Y.
 Stephens Mfg. Co., 10416 National Blvd.,
 Los Angeles 34, Calif.
 Techo-Scientific Co., 901 Nepperhan Ave.,
 Yonkers 3, N. Y.
 University Loudspeakers, Inc., 225 Varick
 St., New York, N. Y.
 See Advertisement on Page 39
 Utah Radio Prods. Co., 820 Orleans St.,
 Chicago, Ill.
 Vibraloc Mfg. Co., 3597 Mission St., San
 Francisco, Calif.
 Western Elec. Co. Inc., 120 Broadway, New
 York 5, N. Y.
 See Advertisements on Pages 182-183

704

MARINE SPEAKER SYSTEMS

Guided Radio Corp., 161-6th Ave., New
 York 13, N. Y.
 Remler Co. Ltd., 2101 Bryant St., San
 Francisco 10, Calif.

705

TWEETERS & WOOFERS

Racon Electric Co., 52 E. 19th St., New York
 3, N. Y.
 See Advertisement on Page 289

706

LOUDSPEAKER DRIVER UNITS

Atlas Sound Corp., 1443 39th St., Brooklyn,
 N. Y.
 See Advertisement on Page 244
 University Loudspeakers Inc., 225 Varick
 Street, New York, New York
 See Advertisement on Page 39

707

Lugs & Terminals

Aircraft-Marine Products, Inc., 1523 N.
 Fourth St., Harrisburg, Pa.
 Audio Products Co., 2101 W. Olive Ave.,
 Burbank, Calif.
 See Advertisement on Page 270
 Belden Mfg. Co., 4647 W. Van Buren St.,
 Chicago 44, Ill.
 Burke Electric Co., 12th & Cranberry Sts.,
 Erie, Pa.
 See Advertisement on Page 228
 Cambridge Thermionle Corp., 445 Concord
 Ave., Cambridge, Mass.
 See Advertisement on Page 67
 Corning Glass Wks., Corning, N. Y.
 Dante Electric Mfg. Co., Bantam, Conn.
 Diebel Die & Mfg. Co., 3658 N. Lincoln
 Ave., Chicago 13, Ill.
 Ericsson Screw Machine Prods. Co., 25
 Lafayette St., Brooklyn 1, N. Y.
 Federal Electric Products Co., Inc., 50
 Paris St., Newark, N. J.
 Grammes & Sons, L. F., 389 Union St.,
 Allentown 2, Pa.

Greene Mfg. Corp., G. G., Warren, Pa.
 Gregory Mfg. Co., 67 Franklin St., New
 Haven 11, Conn.
 Heyman Mfg. Co., Kenilworth, N. J.
 See Advertisement on Page 214
 High Tension Co., Inc., 36 N. Main St.,
 Phillipsburg, N. J.
 Ilasco Copper & Tube Product Inc., Marie-
 mont Ave., Mariemont 27, Ohio
 Insuline Corp. of Amer., 36-02 35th Ave.,
 Long Island City, N. Y.
 See Advertisement on Page 192
 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. Y.
 Kulka Electric Mfg. Co., Inc., 30 South St.,
 Mt. Vernon, N. Y.
 Manufacturers Screw Products, 270 W.
 Hubbard St., Chicago, Ill.
 Penn-Union Elec. Corp., 315 State St.,
 Erie, Pa.
 Rajah Co., Locust Ave., Bloomfield, N. J.
 Rusgreen Mfg. Co., 14262 Birwood Ave.,
 Detroit, Mich.
 Sherman Mfg. Co., H. B., Battle Creek,
 Mich.
 Stimpson Co., Inc., Edwin B., 74 Franklin
 Ave., Brooklyn 5, N. Y.
 Thomas & Betts Co. Inc., 36 Butler St.,
 Elizabeth 1, N. J.
 Thompson-Bremer & Co., 1640 W. Hubbard
 St., Chicago, Ill.
 Zierick Mfg. Corp., 385 Gerard Ave., New
 York, N. Y.

708

Magnets

ELECTRO MAGNETS

Signal Engineering & Mfg. Co., 154 W. 14th
 St., New York, N. Y.

709

PERMANENT MAGNETS

Advance Transformer Co., 14 N. May St.,
 Chicago, Ill.
 Allegheny Ludlum Steel Corp., Bracken-
 ridge, Penna.
 American Electro Metal Corp., 320 Yonkers
 Ave., Yonkers, N. Y.
 Arnold Engrg. Co., 147 E. Ontario St.,
 Chicago, Ill.
 See Advertisement on Page 128
 Cinaudagraph Corp., 2 Selleck St., Stam-
 ford, Conn.
 See Advertisement on Page 254
 Crowley & Co. Inc., Henry L., 1 Central
 Ave., W. Orange, N. J.
 Crucible Steel Co. of America, 405 Lex-
 ington Ave., New York 17, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Magnetic Corp., 2126 E. Fort St.,
 Detroit 7, Mich.
 Indiana Steel Products Co., 6 N. Michigan
 Ave., Chicago, Ill.
 See Advertisement on Page 104
 Kellogg Switchboard & Supply Co., 6650 S.
 Cicero Ave., Chicago 38, Ill.
 Simonds Saw & Steel Co., Lockport, N. Y.
 Taylor-Wharton Iron & Steel Co., High-
 bridge, N. J.
 Try-United Plastics Corp., 390 Nye Ave.,
 Irvington, N. J.

710

Metal Parts

BUSHINGS

Bound Brook Oil-less Bearing Co., Bound
 Brook, N. J.
 Keystone Carbon Co., Inc., 1935 State St.,
 St. Marys, Pa.

711

LAMINATED METAL PARTS

General Plate Div. Metals & Controls Corp.,
 34 Forest St., Attleboro, Mass.
 Magnetic Products Corp., Norwalk, Conn.
 Publix Metal Prod. Inc., 100-6th Ave.,
 New York 13, N. Y.

ELECTRONIC and ALLIED PRODUCTS

712

LEAD PARTS

Alpha Metals Inc., 369 Hudson Ave., Brooklyn, N. Y.
See Advertisement on Page 274

713

METAL TRIMMINGS

Bailey Co., Inc., 21 Water St., Amesbury, Mass.
Bart Labs., Inc., 227 Main St., Belleville 9, N. J.
Rice's Sons Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
Werner Co. Inc., R. D., 295 Fifth Ave., New York 16, N. Y.

714

POWDERED METAL PARTS

American Electro Metal Corp., 320 Yonkers Ave., Yonkers, N. Y.
Amplex Div., Chrysler Corp., Detroit 31, Mich.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Bound Brook Oil-less Bearing Co., Bound Brook, N. J.
Crowley & Co. Inc., Henry L., 1 Central Ave., West Orange, N. J.
Keystone Carbon Co., Inc., 1935 State St., St. Marys, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis, Ind.
See Advertisements on Pages 296, 297
Micro Ferrocarb Prods. Div., Maguire Industries Inc., Greenwich, Conn.
Powder Metallurgy Corp., 30-48 Greenpoint Ave., Long Island City, N. Y.
U. S. Graphite Co., 1621 Holland Ave., Saginaw, Mich.

715

SCREW MACHINE PARTS

Ace Mfg. Corp., 1255 E. Erie Ave., Philadelphia, Pa.
Automatic Metal Prods. Co., 315 Berry St., Brooklyn 1, N. Y.
Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
Buchmann Spark-Wheel Corp., 5-20 47th Avenue, Long Island City 1, N. Y.
Corbin Screw Div., Amer. Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.
DX Radio Products Co. Inc., 1200 N. Claremont Ave., Chicago 22, Ill.
Eastern Specialty Co., 3617 N. 8th St., Phila. 40, Pa.
Eby, Inc., H. H., 18 W. Chelton Ave., Phila. 13, Pa.
Electronic Supply Co., 207 Main St., Worcester, Mass.
Engineering Co., 27 Wright St., Newark, N. J.
See Advertisements on Pages 266, 268
Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.
Hartford Machine Screw Co., 476 Capitol Ave., Hartford, Conn.
Instrument Parts Corp., Ossining, N. Y.
See Advertisement on Page 288
Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
Magnetic Products Corp., Norwalk, Conn.
Mid-West Screw Prods. Co., 3662 Park Ave., St. Louis 10, Mo.
Milford Rivet & Machine Co., Milford, Conn.
Publix Metal Prod. Inc., 100 6th Ave., New York, 13, N. Y.
St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.
Special Machine Tool Engrg. Works, 132 Lafayette St., New York 13, N. Y.
Standard Pressed Steel Co., Jenkinstown, Pa.
See Advertisement on Page 100
Teleoptic Co., 1241 Mound Ave., Racine, Wisc.
Titan Metal Mfg. Co., Bellefonte, Pa.
Tudor Products Co., 70 Franklin St., East Orange, N. J.

Waltham Screw Co., 77 Rumford Ave., Waltham, Mass.
Wynn Mfg. Div., Hudson Supply Co., 401 N. 27th St., Richmond, Va.

716

METAL STAMPINGS, Small

Accurate Mfg. Co., Inc., 6122 N. 21st St., Phila., Pa.
Ace Manufacturing Corp., 1255 East Erie Ave., 38, Phila., Pa.
Acklin Stamping Co., 1923 Nebraska Ave., Toledo 7, Ohio
Adel Precision Prods. Corp., 10777 Van Owen St., Burbank, Calif.
Air-King Prods Co., Inc., 1523 63rd St., Brooklyn, N. Y.
Andrews & Perillo, 39-30 Crescent St., Long Island City, N. Y.
Art Wire & Stamping Co., 227 High St., Newark 2, N. J.
Auburn Mfg. Co., 110 Stack St., Middletown, Conn.
Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.
Chicago Expansion Bolt Co., 2240 W. Ogden Ave., Chicago 12, Ill.
Congress Tool & Die Co., Congress Die Casting Div., 3750 E. Outer Dr., Detroit, Mich.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
Cuyahoga Spring Co., 10272 Berea Rd., Cleveland, Ohio
Dalmo, Victor, San Carlos, Calif.
Dayco Radio Corp., 915 Valley St., Dayton 4, Ohio
Dayton Rogers Mfg. Co., 2835 12th Ave., South, Minneapolis 7, Minn.
Diebel Die & Mfg. Co., 3658 N. Lincoln Ave., Chicago 13, Ill.
Dual Remote Control Co., 31776 Cowan Rd., Wayne, Mich.
Eastern Specialty Co., 3617 19 N. Eighth St., Phila. 40, Pa.
Eby, Inc., H. H., 18 W. Chelton Ave., Phila. 13, Pa.
Edin Electronics Co., 207 Main St., Worcester, Mass.
Engineering Co., 27 Wright St., Newark, N. J.
See Advertisements on Pages 266, 268
Franklin Mfg. Corp., A. W., 175 Varick St., New York, N. Y.
See Advertisement on Page 209
Gardner Mfg. Co., 2711 Union St., Oakland 7, Calif.
Garrett Co., Inc., George K., 1421 Chestnut St., Phila. 2, Pa.
General Cement Mfg. Co., 319 Taylor Ave., Rockford, Ill.
See Advertisement on Page 290
Goat Metal Stampings, Inc., 314 Dean St., Brooklyn, N. Y.
See Advertisement on Page 303
Grammes & Sons, L. F., 389 Union St., Allentown 2, Pa.
Greene Mfg. Corp., G. G., Warren, Pa.
Gregory Mfg. Co., 67 Franklin St., New Haven 11, Conn.
Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.
Heyman Mfg. Co., Kenilworth, N. J.
See Advertisement on Page 214
Howard Mfg. Co., 15 Fourth St., Council Bluffs, Iowa
Hubbard Spring Co., M. D., 573 Central Ave., Pontiac, Mich.
Hunter Pressed Steel Co., Lansdale, Pa.
King Labs., Inc., 205 Oneida St., Syracuse 4, N. Y.
See Advertisement on Page 280
Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
Kilton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J.
La Magna Mfg. Co., Inc., East Rutherford, N. J.
Lansing Stamping Co., 1159 S. Pa. Ave., Lansing, Mich.
Lorentzen, H. K., Inc., 391 W. Broadway, New York 12, N. Y.
Magnetic Products Corp., Norwalk, Conn.
Market Forge Co., Everett, Mass.
Melrath Supply & Gasket Co., Tioga St. & Aramingo Ave., Phila, Pa.
Milwaukee Stamping Co., 824 S. 72nd St., Milwaukee, Wisc.
Patton-MacGuey Co., 17 Virginia Ave., Providence 5, R. I.
Precision Fabricators Inc., 120 N. Fitzhugh St., Rochester, N. Y.
Publix Metal Prod., Inc., 100 6th Ave., New York 13, N. Y.
Quadriga Mfg. Co., 213 W. Grand Ave., Chicago 11, Ill.

Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry, Pa.
Rhodes Mfg. Co., 1753 N. Honore St., Chicago, Ill.
Shakeproof Inc., Div. of Ill. Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
Special Electric Labs., 7657 S. Central Ave., Los Angeles 1, Calif.
Special Machine Tool Engrg. Works, 132 Lafayette St., New York 13, N. Y.
Stamford Metal Specialty Co., 428 Broadway, New York 13, N. Y.
See Advertisement on Page 246
Standard Engineering Labs., 40 S. Oak Knoll Ave., Pasadena 1, Calif.
Standard Products Co., 505 Boulevard Bldg., Detroit 2, Mich.
Stimpson Co., Inc., Edwin, 74 Franklin Ave., Brooklyn 5, N. Y.
Thomas & Skinner Steel Prod. Co., 1120 E. 23rd St., Indianapolis, Ind.
See Advertisement on Page 278
Traveler Karenola Radio & Telev. Corp., 571 W. Jackson Blvd., Chicago 6, Ill.
Tricon Manufacturing Co., 8318 S. Racine Ave., Chicago, Ill.
Tubing Seal-Cap, Inc., P. O. Box 6450, Metropolitan Station, Los Angeles 55, Calif.
Tudor Products Co., 70 Franklin St., East Orange, N. J.
Ucinite Co., 459 Watertown St., Newtonville, Mass.
Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.
Worcester Pressed Steel Co., 100 Barber Ave., Worcester, Mass.
Wrought Washer Mfg. Co., 2100 S. Bay St., Milwaukee 7, Wisc.
Zierick Mfg. Corp., 385 Gerard Ave., New York, N. Y.

717

Microphones

AIRCRAFT TYPE MICROPHONES

Miles Reproducer Co. Inc., 612 Broadway, New York 3, N. Y.
See Advertisement on Page 294
Permoflux Corp., 4900 W. Grand Ave., Chicago, Ill.
Telephonics Corp., 350 W. 31st St., New York, N. Y.

718

CARBON MICROPHONES

Aviometer Corp., 370 W. 35th St., New York 1, N. Y.
See Advertisement on Page 226
Bendix Radio Corp., Baltimore 4, Md.
Electro Voice Inc., 1239 S. Bend Ave., South Bend, Ind.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Shure Bros., 225 W. Huron St., Chicago, Ill.
See Advertisement on Page 208
Universal Microphone Co., Inglewood, Calif.
University Loudspeakers Inc., 225 Varick St., New York, New York
See Advertisement on Page 39

719

CONDENSER MICROPHONES

American Microphone Co., 1915 S. Western Ave., Los Angeles, Calif.
Aviometer Corp., 350 W. 35th St., New York 1, N. Y.
See Advertisement on Page 226
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.

**When Ordering or Inquiring
please mention the
ELECTRONICS BUYERS' GUIDE**

720

CONTACT MICROPHONES

Amperite Co., 561 Broadway, New York, N. Y.
 See Advertisement on Page 122
 Avlometer Corp., 370 W. 35th St., New York 1, N. Y.
 See Advertisement on Page 226
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Mark Simpson Mfg. Co., Inc., 188 W. 4th St., New York 14, N. Y.

721

CRYSTAL MICROPHONES

American Microphone Co., 1915 S. Western Ave., Los Angeles, Calif.
 Astatic Corp., Conneaut, Ohio
 See Advertisement on Page 66
 Brush Development Co., 3405 Perkins Ave., Cleveland 14, Ohio
 See Advertisement on Page 137
 du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
 Electro Voice Inc., 1239 S. Bend Ave., South Bend, Ind.
 See Advertisement on Page 181
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Shure Bros., 225 W. Huron St., Chicago, Ill.
 See Advertisement on Page 208
 Tibbets Industries, Camden, Maine
 Turner Co., 909 17th St., Cedar Rapids, Iowa

722

DYNAMIC MICROPHONES

Amperite Co., 561 Broadway, New York, N. Y.
 See Advertisement on Page 122
 Astatic Corp., Conneaut, Ohio
 See Advertisement on Page 66
 Avlometer Corp., 370 W. 35th St., New York 1, N. Y.
 See Advertisement on Page 226
 Bendix Radio Corp., Baltimore 4, Md.
 California Telephone & Elect. Co., 6075 W. Pico Blvd., Los Angeles 35, Calif.
 Electro Voice Inc., 1239 S. Bend Ave., South Bend, Ind.
 See Advertisement on Page 181
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Lektra Labs., 30 E. 10th Street, New York, N. Y.
 Permoflux Corp., 4900 W. Grand Ave., Chicago, Ill.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif.
 Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
 Shure Bros., 225 W. Huron St., Chicago, Ill.
 See Advertisement on Page 208
 Turner Co., 909 17th St., Cedar Rapids, Iowa
 Universal Microphone Co., Inglewood, Calif.
 University Loudspeakers, Inc., 225 Varick Street, New York, New York
 See Advertisement on Page 39
 Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183

723

VELOCITY MICROPHONES

Amperite Co., 561 Broadway, New York, N. Y.
 See Advertisement on Page 122
 Electro Voice Inc., 1239 S. Bend Ave., South Bend, Ind.
 See Advertisement on Page 181
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.

724

Microwave Transmission Lines and Accessories

American Brass Co., Waterbury 88, Conn.
 Bone Engrg. Corp., 701 W. Bdway., Glendale 4, Cal.
 Dalmo, Victor, San Carlos, California
 DeMornay-Budd Inc., 475 Grand Conc., New York, N. Y.
 See Advertisement on Page 203
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Geophysical Instrument Co., Key Blvd. & Nash St., Arlington, Va.
 Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
 Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
 See Advertisement on Page 283
 Kings Electronics Co., 3772 Classon Ave., Brooklyn 5, N. Y.
 See Advertisement on Page 262
 Mendelsohn Speedgum Co., Inc., 457 Bloomfield Ave., Bloomfield, N. J.
 Selector Mfg. Co., 21-10 49th Ave., Long Island City, N. Y.
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
 Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125
 Technographics, Inc., 1457 West Diversity Blvd., Chicago 14, Ill.
 Televiso Products Inc., 6533 N. Olmstead Ave., Chicago, Ill.
 Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

725

Mirrors

TELEVISION MIRRORS

American Lens Co., Inc., 45 Lispenard St., New York 13, 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.
 Herron Optical Co., 705 W. Jefferson Blvd., Los Angeles 7, Calif.
 Instrument Optic Co., 1872 Genesee St., Buffalo 11, N. Y.
 Moge & Sons, Inc., Wm., 76 Interhaven Ave., Plainfield, N. J.
 Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles, Calif.
 Perkin Elmer Corp., Glenbrook, Conn.
 Zenith Optical Co., 123 W. 64th St., New York 23, N. Y.

726

Motors

FRACTIONAL H. P. MOTORS

Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio
 See Advertisement on Page 101
 Barber Colman Co., River & Loomis Sts., Rockford, Ill.
 Bodine Elec. Co., Ohio St. & Oakley Blvd., Chicago, Ill.
 Brown Brokemeyer Co., 1000 S. Smithville Rd., Dayton 1, Ohio
 Burke Elect. Co., 12th & Cranberry Sts., Erie, Pa.
 See Advertisement on Page 228
 Continental Electric Co., Inc., 332 Ferry St., Newark, N. J.
 Crocker-Wheeler Elect. Mfg. Co., Div. of Joshua Hendy Iron Wks., Ampere, N. J.
 Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester, N. Y.
 Diehl Mfg. Co., 1129 Ffinderne Ave., Somerville, N. J.
 Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y.
 See Advertisement on Page 185

Eicor, Inc., 1501 W. Congress St., Chicago 7, Ill.
 Electric Indicator Co., 21 Parker Ave., Stamford, Conn.
 See Advertisement on Page 253
 Electric Motor Corp., Racine, Wisc.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Industries Co., Taylor & Olive Sts., Elyria, Ohio
 Gibbs & Co., Thomas B., Div. of George W. Borg Corp., 814 Michigan St., Delavan, Wisc.
 Howell Electric Motors Co., Howell, Mich.
 Jack & Heintz Precision Industries, Inc., Cleveland 1, Ohio
 Kato Engrg. Co., 530 N. Front St., Mankato, Minn.
 Kollsman Instrument Div. of Square D Co., 80-08 45th Ave., Elmhurst, N. Y.
 Leland Elec. Co., 1501 Webster St., Dayton, Ohio
 Magnetic Products Corp., The, Norwalk, Conn.
 Ohio Elect. Mfg. Co., 5908 Maurice Ave., Cleveland 1, Ohio
 See Advertisement on Page 258
 Oster Mfg. Co., John, Racine, Wisconsin
 Point Mfg. Co., 5775 N. Ridge Ave., Chicago 26, Ill.
 Price Elec. Corp., E. Church & 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Publix Metal Prods. Inc., 100 6th Ave., New York 13, N. Y.
 Redmond Co., Inc., Monroe St., Owosso, Mich.
 Robbins & Myers, 1345 Lagonda Ave., Springfield, Ohio
 Russell Electric Co., 340 W. Huron St., Chicago 10, Ill.
 Small Motors Inc., 1322 Elston Ave., Chicago 22, Ill.
 Smith Mfg. Co., F. A., P. O. Box 509, Rochester 2, N. Y.
 Star Elect. Motor Co., 200 Bloomfield Ave., Bloomfield, N. J.
 Superior Electric Co., 1901 Indiana Ave., Chicago 16, Ill.
 See Advertisements on Pages 5-16
 U. S. Electrical Motors, Inc., 200 E. Saluson Ave., Los Angeles 64, Calif.
 Universal Electric Co., 300 E. Main St., Owosso, Mich.
 Victor Elec. Prods. Inc., 2950 Robertson Ave., Cincinnati 9, Ohio
 Wagner Elect. Corp., 6400 Plymouth Ave., St. Louis, Mo.
 Webster-Chicago Corp., 5622 Bloomingdale Ave., Chicago 39, Ill.
 Wincharger Corp., 7th & Division Sts., Sioux City, Iowa
 See Advertisement on Page 142

727

PHONOGRAPH MOTORS

Airtronics Development Corp., 131-133 Third St., Dayton 2, Ohio
 Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio
 See Advertisement on Page 101
 Favorite Mfg. Co., 105 E. 12th St., New York 3, N. Y.
 Garrard Sales Corp., 401 Broadway, New York 13, N. Y.
 General Industries Co., Taylor & Olive Sts., Elyria, Ohio
 Magnetic Products Corp., Norwalk, Conn.
 Micro-Sonic Corp., 44 West 18th St., New York, N. Y.
 Rek-O-Kut Co., 143 Grand St., New York 13, N. Y.
 See Advertisement on Page 265
 Russell Electric Co., 340 W. Huron St., Chicago 10, Ill.
 Spirling Prods. Co., 64 Grand St., New York 13, N. Y.
 Webster Chicago Corp., Electronics Div., 3825 Armitage Ave., Chicago 47, Ill.
 Wincharger Corp., 7th & Division Sts., Sioux City, Iowa
 See Advertisement on Page 142

728

REMOTE CONTROL MOTORS

Eicor, Inc., 1501 W. Congress St., Chicago 7, Ill.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Motors Corp., Detroit, Mich.
 Transicoil Corp., 114 Worth St., New York 13, N. Y.

ELECTRONIC and ALLIED PRODUCTS

729

SERVO MOTORS

Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
Holtzer-Cabot, Div. of First Industrial Corp., 125 Amory St., Boston, Mass.

730

SYNCHRONOUS MOTORS

Anglo Corp., 4234 Lincoln Ave., Chicago 18, Ill.
Columbia Elect. Mfg. Co., 4519 Hamilton Ave. N. E., Cleveland 14, Ohio
Continental Electric Co., Inc., 332 Ferry St., Newark, N. J.
Cramer Co., R. W., Centerbrook, Conn.
Diehl Mfg. Co., Funderne Plant, Somerville, N. J.
Eastern Air Devices Inc., 385 Dean St., Brooklyn 17, N. Y.
See Advertisement on Page 185
Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
Electric Engineering & Mfg. Co., Los Angeles, Calif.
Electric Indicator Co., 21 Parker Ave., Stamford, Conn.
See Advertisement on Page 253
Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio
Electric Specialty Co., 211 South St., Stamford, Conn.
Electrical Engineering & Mfg. Corp., 4606 W. Jefferson Blvd., Los Angeles 16, Calif.
Electrolux Corp., Old Greenwich, Conn.
Electromatic Typewriters, Inc., Rochester, N. Y.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Gibbs & Co., Thomas B., Div. of George W. Borg Corp., 814 Michigan St., Delavan, Wisc.
Haydon Mfg. Co. Inc., Forestville, Conn.
Hobart Mfg. Co., Troy, Ohio
Kollsman Instrument Div. of Square D Co., 80-08 45th Ave., Elmhurst, N. Y.
Leich Elec. Co., 585 W. Washington Blvd., Chicago 6, Ill.
Oster Mfg. Co., John, Racine, Wisc.
Philharmonic Radio Corp., 528 E. 72nd St., New York 21, N. Y.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

731

TIMING MOTORS

Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio
See Advertisement on Page 101
Delco Appliance Div., General Motors Corp., 391 Lyall Ave., Rochester, N. Y.
General Tire & Rubber Co., Mechanical Goods Div., Wabash, Ind.
Russell Electric Co., 340 W. Huron St., Chicago 10, Ill.

732

Mountings

METER BACK MOUNTINGS

Littelfuse Inc., 4755 Ravenswood Ave., Chicago, Ill.

733

VIBRATION and SHOCK MOUNTINGS

American Felt Co., Glenville, Conn.
Barry Co., L. N., 119 Sidney St., Cambridge, Mass.
General Tire & Rubber Co., Mechanical Goods Div., Wabash, Ind.
Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.
Hamilton Kent Mfg. Co. Inc., Div. U. S. Stoneware, Kent, Ohio
Harris Products Co., 5105 Cowan Ave., Cleveland, Ohio
Korfund Co., Inc., 48-15 32nd Place, Long Island City, N. Y.
Lavole Labs., Morganville, N. J.

Lord Mfg. Co., 1635 W. 12th St., Erie, Pa.
Lorentzen, H. K., Inc., 391 W. Broadway, New York 12, N. Y.
MB Manufacturing Co. Inc., 1060 State St., New Haven 11, Conn.
See Advertisements on Pages 140, 141, 193
Robinson Aviation Inc., 730 Fifth Ave., New York 19, N. Y.
Ucinite Co., Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
Vendo Co., 1907 Grand Ave., Kansas City 8, Mo.

734

Mounts

ANTENNA MOUNTS

Lavole Labs., Morganville, N. J.
Shur-Antenna-Mount, Inc., Seaclyffe, Long Island, N. Y.

735

THERMISTOR MOUNTS

Cover Dual Signal Systems, Inc., 5215-25 Ravenswood Ave., Chicago 40, Ill.

736

Needles

CUTTING NEEDLES

Acton Co., H. W., 370 7th Ave., New York, N. Y.
See Advertisement on Page 68
Audio Devices Inc., 444 Madison Ave., New York 22, N. Y.
See Advertisement on Page 143
Eldeen Co., 504 N. Water St., Milwaukee, Wisc.
Gatti, Inc., Aurele M., 1909 Liberty St., Trenton, N. J.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
See Advertisement on Page 290
Miles Reproducer Co. Inc., 612 Broadway, New York 3, N. Y.
See Advertisement on Page 294
Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago 15, Ill.
Phonograph Needle Mfg. Co., 42 Dudley St., Providence 5, R. I.
Presto Recording Corp., 242 West 55th Street, New York 19, N. Y.
See Advertisements on Pages 48-49
Recotone Corp., 212 Fifth Ave., New York, N. Y.
Wilcox Gay Corp., Charlotte, Mich.

737

PLAYBACK NEEDLES

Acton Co., H. W., 370 7th Ave., New York, N. Y.
See Advertisement on Page 68
Aero Needle Co., 619 N. Michigan Ave., Chicago 11, Ill.
Audio Devices Inc., 444 Madison Ave., New York 22, N. Y.
See Advertisement on Page 143
Duotone Co., 799 Broadway, New York, N. Y.
Eldeen Co., 504 N. Water St., Milwaukee, Wisc.
Electrovox Co. Inc., 31 Fulton Street, Newark 2, N. J.
Favorite Mfg. Co., 105 E. 12th St., New York 3, N. Y.
Gatti, Inc., Aurele M., 1909 Liberty St., Trenton, N. J.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
See Advertisement on Page 290
Gould-Moody Co., 395 Broadway, New York, N. Y.
See Advertisement on Page 122
Jensen Industr. Inc., 737 N. Michigan Ave., Chicago 11, Ill.
Miles Reproducer Co. Inc., 612 Broadway, New York 3, N. Y.
See Advertisement on Page 294
Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago 15, Ill.
Pfanstiel Chemical Co., 104 Lake View Ave., Waukegan, Ill.

Phonograph Needle Mfg. Co., 42 Dudley St., Providence 5, R. I.
Presto Recording Corp., 242 West 55th Street, New York 19, N. Y.
See Advertisements on Pages 48-49
Radio Corp of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Recotone Corp., 212 Fifth Ave., New York, N. Y.
Recordisc Corp., 395 Broadway, New York, N. Y.

738

Networks

DIRECTIONAL ANTENNA PHASING NETWORKS

Andrew Co., 363 E. 75th St., Chicago 19, Ill.

739

MATCHING NETWORKS

Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
Altec Lansing Corp., 1161 N. Vine St., Hollywood 38, Calif.
Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
See Advertisement on Page 285
Carter Radio Div., Precision Parts Co., 213 Institute Pl., Chicago 10, Ill.
Daven Co., 191 Central Ave., Newark 4, N. J.
See Advertisement on Inside Back Cover
Stephens Mfg. Co., 10416 National Blvd., Los Angeles 34, Calif.
Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

740

Nuts

Allmetal Screw Prods. Co., 33 Greene St., New York 13, N. Y.
Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
Continental Screw Co., New Bedford, Mass.
Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
Corbin Screw Div., American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.
Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
Harper Co., H. M., 2620 Fletcher St., Chicago 18, Ill.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
Manufacturers Screw Prods., 270 W. Hubbard St., Chicago, Ill.
Palnut Co. Inc., 77 Cordier St., Irvington 11, N. J.
See Advertisement on Page 53
Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
Penn-Union Elec. Corp., 315 State St., Erie, Pa.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Progressive Mfg. Co., 52 Norwood St., Torrington, Conn.
Pure Carbon Co., St. Marys, Pa.
Reed & Prince Mfg. Co., Duncan Ave., Worcester, Mass.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio
Russell, Burdsall & Ward Bolt & 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.
Standard Locknut & Lockwashed Inc., 33-35 W. St. Clair St., Indianapolis, Ind.
Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill.
United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago, Ill.
Westfield Metal Prods. Co. Inc., Westfield, Mass.

741

SELF-LOCKING NUTS

Anco Products Corp., Paterson, N. J.
Boots Aircraft Nut Corp., New Canaan, Conn.

Carter Radio Div., Precision Parts Co., 213 Institute Pl., Chicago 10, Ill.
 Columbia Nut & Bolt Co., 945 Main St., Bridgeport, Conn.
 Elastic Stop Nut Corp. of America, 2330 Vauxhall Road, Union, New Jersey
 Laminated Shim Co., Inc., 56 Union St., Glenbrook, Conn.
 Nat'l Screw & Mfg. Co., The, Cleveland 4, Ohio
 Penn Engineering & Mfg. Corp., Box 311, Doylestown, Pa.
 Prestole Div., Detroit Harvester Co., 4500 Detroit Ave., Toledo 12, Ohio
 Standard Pressed Steel Co., Jenkintown, Pa.
 See Advertisement on Page 100
 Stover Lock Nut & Machinery Corp., 101 Park Avenue, New York 17, N. Y.
 Thompson-Bremer & Co., 1640 W. Hubbard St., Chicago, Ill.
 Tinnerman Products Inc., 2106 Fulton Rd., Cleveland 13, Ohio

742

SELF-SEALING NUTS

Radio Frequency Labs., Inc., 708 Main St., Boonton, N. J.
 See Advertisement on Page 114

743

Oscillators

AUDIO-FREQUENCY OSCILLATORS

Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
 Amplifier Co. of America, 396 Broadway, New York, N. Y.
 Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
 Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
 Central Scientific Co., 1700 Irving Park Blvd., Chicago 13, Ill.
 Collins Radio Co., 855-35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
 Espey Mfg. Co., Inc., 33 West 46th St., New York, N. Y.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
 Herbach & Rademan Co., Mfg. Div., 517 Ludlow St., Philadelphia 6, Pa.
 Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
 See Advertisement on Page 112
 Hickok Electrical Instrument Co., 10514 DuPont Ave., Cleveland, Ohio
 Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
 See Advertisement on Page 256
 Jackson Electrical Instrument Co., 16-18 S. Patterson Blvd., Dayton 1, Ohio
 MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
 Maico Co., Inc., 25 North 3rd St., Minneapolis 1, Minn.
 Mendelsohn Speedgun Co., Inc., 457 Bloomfield Ave., Bloomfield, N. J.
 Radio Corp of America, RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Rowe Radio Research Laboratory Co., 2422 N. Pulaski Rd., Chicago 39, Ill.
 Simpson Mfg. Co., Inc., Mark, 188 W. Fourth St., New York, N. Y.
 Western Electric Co. Inc., 120 Broadway, New York 5, N. Y.
 See Advertisement on Page 182, 183

744

CAVITY OSCILLATORS

Aircraft Radio Corp., Boonton, N. J.
 See Advertisements on Pages 150, 151
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212

745

CRYSTAL OSCILLATORS

Federal Engineering Co., 37 Murray St., New York 7, N. Y.
 General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

746

MICROWAVE POWER OSCILLATORS

Polarad Electronics Co., 135 Liberty St., New York 6, N. Y.
 See Advertisement on Page 229

747

MULTIVIBRATORS

Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
 General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

748

RADIO-FREQUENCY OSCILLATORS

Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
 Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
 Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.
 Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.
 General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
 Hickok Electrical Instrument Co., 10514 DuPont Ave., Cleveland, Ohio
 Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
 See Advertisements on Pages 69-80
 Radio Corp. of America, RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
 Western Elec. Co., Inc., 120 Broadway, New York 20, N. Y.
 See Advertisements on Pages 182, 183

749

ULTRASONIC OSCILLATORS

Boonton Radio Corp., Boonton, N. J.
 See Advertisement on Page 42
 Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
 See Advertisement on Page 112
 Televiso Products Inc., 6533 N. Olmstead Ave., Chicago, Ill.

750

OVENS, CRYSTAL CONTROL

Bliley Electric Co., Union Station Bldg., Erie, Pa.
 See Advertisement on Page 112
 Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, Calif.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.
 Precision Scientific Co., 1750 N. Springfield Ave., Chicago 47, Ill.

When Ordering or Inquiring
 please mention the
ELECTRONICS BUYERS' GUIDE

Somerset Labs., 306 Valleybrook Ave., Lyndhurst, N. J.
 States Co., 19 New Park Ave., Hartford 6, Conn.
 Valpey Crystals, Highland St., Holliston, Mass.

751

Panels

Acme Fire Alarm Co., Inc., 106 Seventh Ave., New York 11, N. Y.
 Air Associates, Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
 Audio Development Co., 2833 13th Ave., S., Minneapolis 7, Minn.
 Caswell Runyon Co., Huntington, Ind.
 Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
 Columbia Metal Box Co., 260 E. 143rd Street, New York, N. Y.
 Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 See Advertisement on Page 197
 Eastern Specialty Co., 3617 N. 8th St., Phila. 40, Pa.
 Edin Electronics Co., 207 Main Street, Worcester, Mass.
 Etched Products Corp., 39-01 Queens Blvd., Long Island City, N. Y.
 Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N. Y.
 See Advertisement on Page 32
 Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
 Hadley Co., Robert M., 711 E. 61st St., Los Angeles, Calif.
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
 Johnson Co., E. F., Waseca, Minn.
 Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
 McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 New England Etching & Plating Co., 25 Spring Street, Holyoke, Mass.
 Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
 See Advertisement on Page 282
 Par-Metal Prods. Corp., 32-62 49th St., L. I. City 3, N. Y.
 See Advertisement on Page 256
 Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 3, Calif.
 Rhodes Mfg. Co., 1753 N. Honore St., Chicago, Ill.
 Richardson Co., The, Melrose Park, Ill.
 See Advertisement on Page 271
 Stamford Metal Specialty Co., 428 Broadway, New York 13, N. Y.
 See Advertisement on Page 246

752

INSTRUMENT PANELS

Bud Radio Inc., 2118 E. 55th Street, Cleveland 3, Ohio
 Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.
 Premier Metal Etching Co., 21-08 44th Ave., Long Island City, N. Y.
 See Advertisement on Page 260

753

RELAY RACK PANELS

Bud Radio Inc., 2118 E. 55th Street, Cleveland 3, Ohio
 Par-Metal Prods. Corp., 32-62 49th St., L. I. City 3, N. Y.
 See Advertisement on Page 256

754

Papers, Recording

FACSIMILE RECORDING PAPERS

Alden Prods. Co., 117 N. Main St., Brockton 64, Mass.

ELECTRONIC and ALLIED PRODUCTS

Radio Inventions, Inc., Faximile, Inc., 155
Perry St., New York 14, N. Y.

755

Pickups

INDUSTRIAL PICKUPS

Commercial Research Labs. Inc., 20 Bartlett
Ave., Detroit 3, Mich.
See Advertisement on Page 126
du Mont Labs., Inc., Allen B., 2 Main Ave.,
Passaic, N. J.
Electronic Control Corp., 1573 E. Forest St.,
Detroit, Mich.
MB Mfg. Co., 1060 State St., New Haven,
Conn.
See Advertisements on Pages 140, 141, 193
Rowe Radio Research Labs., 2422 N. Pu-
laski Rd., Chicago 39, Ill.
Trimount Instrument Co., 37 W. Van Buren,
Chicago 5, Ill.

756

MAGNETIC PICKUPS

Caltron Co., 11916 W. Pico Blvd., Div. of
F. Rieber, Inc., Los Angeles 34, Calif.
Lane-Wells Co., 5610 S. Soto St., Los
Angeles 11, Calif.
Shure Bros., 225 W. Huron St., Chicago, Ill.
See Advertisement on Page 208
Turner Co., 909 17th St., Cedar Rapids, Iowa
Webster Elec. Co., 1900 Clark St., Racine,
Wisc.

757

PHOTOELECTRIC PICKUPS

Electronic Products Co., 19 No. First St.,
Geneva, Ill.

758

TRANSCRIPTION AND PHONOGRAPH PICKUPS

Astatic Corp., Conneaut, Ohio
See Advertisement on Page 66
Audak Co., 500 Fifth Ave., New York, N. Y.
See Advertisement on Page 27
Brush Development Co., 3405 Perkins Ave.,
Cleveland 14, Ohio
See Advertisement on Page 137
Caltron Co., 11916 W. Pico Blvd., Div. of F.
Rieber, Inc., Los Angeles 34, Calif.
Electronic Products Co., 19 No. First St.,
Geneva, Ill.
Fairchild Camera & Instrument Corp., 475-
10th Ave., New York 18, N. Y.
Favorite Mfg. Co., 105 E. 12th St., New
York 3, N. Y.
Garrard Sales Corp., 401 Broadway, New
York 13, N. Y.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Pfanstiehl Chemical Co., 104 Lakeview Ave.,
Waukegan, Ill.
Pickering and Co., Audio Labs., Ocean-
side, N. Y.
Presto Recording Corp., 242 W. 55th St.,
New York 19, N. Y.
See Advertisements on Pages 48, 49
Robinson Recording Labs., 35 S. 9th St.,
Phila., Pa.
See Advertisement on Page 292
Shure Brothers, 225 W. Huron St., Chicago,
Ill.
See Advertisement on Page 208
Tibbetts Labs., Camden, Maine
Webster Elec. Co., 1900 Clark St., Racine,
Wisc.

759

Pivots, Instrument Jewel

Gatti, Inc., A. M., 1909 Liberty St., Trenton,
N. J.
Linde Air Products Co., 30 E. 42nd St., New
York 17, N. Y.
See Advertisements on Pages 56, 277
Ney Co., J. M., Hartford, Conn.
Permo Inc., 6415 Ravenswood Ave., Chicago,
Ill.
Steel Co., Herman D., Lafayette Bldg.,
Phila. 6, Pa.
Swiss Jewel Co., Lafayette Bldg., Phila. 6,
Pa.

760

Plugs

TERMINAL PLUGS

Aircraft-Marine Prods., Inc., 1523 N. Fourth
St., Harrisburg, Pa.
American Phenolic Corp., 1830 S. 54th Ave.,
Chicago 50, Ill.
See Advertisements on Pages 110, 111
Bead Chain Mfg. Co., 110 Mt. Grove St.,
Bridgeport 5, Conn.
Carter Radio Div., Precision Parts Co., 213
Institute Pl., Chicago 10, Ill.
Eagle Electric Mfg. Co., Inc., 23-10 Bridge
Plaza S., Long Island City, N. Y.
Eby, Inc., Hugh H., 18 W. Chelton Ave.,
Phila. 13, Pa.
Franklin Mfg. Corp., A. W., 175 Varick St.,
New York, N. Y.
See Advertisement on Page 309
Hermansen Co., Riverside Dr., Elkhart, Ind.
See Advertisements on Pages 44, 152
Maico Co. Inc., 25 North 3rd St., Minne-
apolis, Minn.
Millen Mfg. Co., James, 150 Exchange St.,
Malden, Mass.
See Advertisement on Page 220
Parker-Kalon Corp., 200 Varick St., New
York 14, N. Y.
Pyle-National Co., 1334 N. Kostner Ave.,
Chicago 51, Ill.
Russell & Stoll Co., 125 Barclay St., New
York 7, N. Y.
Star Expansion Prods. Co., 147-149 Cedar
St., New York 6, N. Y.
See Advertisement on Page 192

761

Plugs & Jacks

A B C Products, Inc., 2131-35 Stoner Ave.,
W Los Angeles 25, Calif.
Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150-151
Alden Prods. Co., 117 N. Main St., Brockton
64, Mass.
Amalgamated Radio & Television Corp., 476
Broadway, New York 13, N. Y.
American Phenolic Corp., 1830 S. 54th Ave.,
Chicago 50, Ill.
See Advertisements on Pages 110, 111
Audio Development Co., 2833 13th Ave. S.,
Minneapolis 7, Minn.
Bead Chain Mfg. Co., 110 Mt. Grove St.,
Bridgeport 5, Conn.
Birnbach Radio Co., Inc., 145 Hudson St.,
New York, N. Y.
Bud Radio Inc., 2113 E. 55th St., Cleveland
3, Ohio
Buggie Co., H. H., Toledo, Ohio
Cannon Elec. Development Co., 3209 Hum-
boldt St., Los Angeles 31, Calif.
See Advertisement on Page 60
Carter Radio Div., Precision Parts Co., 213
Institute Place, Chicago 10, Illinois
Cinch Mfg. Corp., 2335 W. Van Buren St.,
Chicago 12, Ill.
Eby, Inc., H. H., 18 W. Chelton Ave., Phila.
13, Pa.
Federal Telephone & Radio Corp., 591 Broad
St., Newark, N. J.
See Advertisements on Pages 299-302
General Radio Co., 275 Mass. Ave., Cam-
bridge 39, Mass.
Hubbell Inc., Harvey, Bridgeport 2, Conn.
Insuline Corp. of America, 3602-35th Ave.,
L. I. City, N. Y.
See Advertisement on Page 192
J. F. D. Mfg. Co., 4111 Ft. Hamilton
Pkway., Brooklyn, N. Y.
Johnson Co., E. F., Waseca, Minn.
Jones, Howard B., 2460 W. George St.,
Chicago 18, Ill.
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., 372 Classon Ave.,
Brooklyn 5, N. Y.
See Advertisement on Page 262
Mallory & Co., Inc., P. R., 3029 E. Wash-
ington St., Indianapolis 6, Ind.
See Advertisements on Pages 296, 297
Morse Co., Frank W., 301 Congress Street,
Boston 10, Mass.
National Co., 61 Sherman St., Malden 48,
Mass.
See Advertisement on Page 291
Presto Electric Co., Union City, N. J.
Telegraph Apparatus Co., 325 W. Huron
St., Chicago, Ill.
Telephonics Corp., 350 W. 31st St., New
York, N. Y.
Utah Radio Prods. Co., 820 Orleans St.,
Chicago, Ill.

762

Pointers

DIAL POINTERS

Aermotive Equipment Corp., 1632-3 Central
St., Kansas City 10, Mo.
Davies Molding Co., Harry, 1428 N. Wells
St., Chicago 10, Ill.
Eric Resistor Corp., 644 W. 12th St., Erie,
Pa.
See Advertisement on Page 147
Gemloid Corp., 79-10 Albion Ave., Elmhurst,
N. Y.
Grammes & Sons, Inc., L. F., 389 Union St.,
Allentown 2, Pa.
Insuline Corp. of America, 3602-35th Ave.,
L. I. City, N. Y.
See Advertisement on Page 192
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway.,
Brooklyn, N. Y.
La Magna Mfg. Co., Inc., East Rutherford,
N. J.
Mayfair Molded Products Corp., 4440 N.
Elston Ave., Chicago 30, Ill.
New England Radiocrafters, 1156 Common-
wealth Ave., Boston 34, Mass.
Sillocks-Miller Co., 10 Parker Ave., W.,
So. Orange, N. J.
Standard Molding Corp., Dayton, Ohio
Ucinite Co., Div. United-Carr Fastener
Corp., 459 Watertown St., Newtonville,
Mass.

763

Points, Contact

Automatic Metal Prods. Co., 315 Berry St.,
Brooklyn 1, N. Y.
Brainin Co., C. S., 233 Spring St., New York
13, N. Y.
See Advertisement on Page 270
Callite Tungsten Corp., 544 39th St., Union
City, N. J.
See Advertisement on Page 35
Cleveland Tungsten, Inc., 10200 Meech Ave.,
Cleveland, Ohio
Fansteel Metallurgical Corp., 2200 Sheridan
Rd., No. Chicago, Ill.
See Advertisement on Page 121
General Plate Div. Metals & Controls Corp.,
34 Forest St., Attleboro, Mass.
Gibson Elec. Co., 8350 Frankstown Avenue,
Pittsburgh 21, Pa.
Graphite Metalizing Corp., 1055 Nepperhan
Ave., Yonkers 3, N. Y.
See Advertisement on Page 114
Mallory & Co., Inc., P. R., 3029 E. Wash-
ington St., Indianapolis 6, Ind.
See Advertisements on Pages 296, 297
Metroloy Co., 57 E. Alpine St., Newark,
N. J.
Speer Carbon Co., Lincoln Ave., St. Marys,
Pa.
Tricon Mfg. Co., 8318 S. Racine Ave., Chi-
cago, Ill.
Wilson Co., H. A., 105 Chestnut St., Newark
5, N. J.

764

Posts, Binding

Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150-151
Brown Engineering Co., 4635 S. E. Haw-
thorne Blvd., Portland 15, Oregon
Burke Electric Co., 12th & Cranberry Sts.,
Erie, Pa.
See Advertisement on Page 228
Chase Brass & Copper Co., Inc., 236 Grand
St., Waterbury 91, Conn.
Corning Glass Works, Corning, N. Y.
Eastern Specialty Co., 3617 N. 8th St.,
Phila. 40, Pa.
Eby, Inc., H. H., 18 W. Chelton Ave., Phila.
13, Pa.
Grammes & Sons Inc., L. F., 389 Union St.,
Allentown 2, Pa.
Hewlett-Packard Co., 295 Page Mill Rd.,
Palo Alto, Calif.
See Advertisement on Page 113
Kellogg Switchboard & Supply Co., 6650 S.
Cicero Ave., Chicago 38, Ill.
Millen Mfg. Co., James, 150 Exchange St.,
Malden, Mass.
See Advertisement on Page 220
Mykroy Inc., 1917 N. Springfield Ave., Chi-
cago 47, Ill.
Shalleross Mfg. Co., 10 Jackson Ave., Col-
lingdale, Pa.
See Advertisement on Page 38
Taylor Fibre Co., Norristown, Pa.

765

Power Supplies

Air Associates Inc., 3827 W. Century Blvd., Los Angeles 45, Calif.
 American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 American Television & Radio Co., 300 E. Fourth St., St. Paul, Minn.
 See Advertisement on Page 272
 Benwood Linze Co., 1815 Locust St., St. Louis, Mo.
 Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
 Communication Measurements Lab., 120 Greenwich St., New York, N. Y.
 DeMornay-Budd Inc., 475 Grand Concl., New York, N. Y.
 See Advertisement on Page 203
 Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
 Electro Products Labs., 549 W. Randolph St., Chicago, Ill.
 See Advertisement on Page 278
 Electronic Labs. Inc., Indianapolis, Indiana
 Farnsworth Television & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Ferris Instr. Co., 110-112 Cornelia St., Boonton, N. J.
 Gem Radio & Telev. Co., 72 Cortland St., New York 6, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Gross Communications Prods., 1865-71 Prospect Ave., Cleveland 15, Ohio
 See Advertisement on Page 214
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 Richardson Allen Corp., 15 W. 20th Street, New York 11, N. Y.
 Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
 See Advertisement on Page 38
 Telegrip Radio Co., 1901 S. Washtenaw, Chicago, Ill.
 Takk Corporation, Newark, Ohio
 United States Television Mfg. Corp., 106-7th Ave., New York, N. Y.
 Waterman Products Co., Inc., 2445-63 Emerald St., Phila. 25, Pa.
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17, 18, 19, 20, 190, 191

766

ELECTRONICALLY REGULATED POWER SUPPLIES

Amplifier Co. of America, 396 Broadway, New York, N. Y.
 Freed Transformer Co., 72 Spring St., New York 12, N. Y.
 International Transformer Co., 396 Broadway, New York, New York
 Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill.
 Polarad Electronics Co., 135 Liberty St., New York 6, N. Y.
 See Advertisement on Page 229
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

767

POWER PACKS

Airpax Products Co., P. O. Box 6741, Baltimore 4, Maryland
 American Television & Radio Co., 300 E. Fourth St., St. Paul 1, Minn.
 See Advertisement on Page 272
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
 Electronic Labs. Inc., Indianapolis, Indiana
 Electronic Products Co., 19 No. First St., Geneva, Ill.

General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Transformer Corp., 1250 W. Van Buren St., Chicago 7, Ill.
 Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.
 Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 See Advertisements on Pages 296, 297
 National Union Radio Corp., 15 Washington St., Newark 2, N. J.
 See Advertisement on Page 61
 Radiart Corp., 3571 W. 62nd St., Cleveland, Ohio
 Standard Transformer Corp., 1500 N. Halsted St., Chicago, Ill.
 Vibrapower Co., James, 1551 Thomas St., Chicago 22, Ill.
 Western Cable Battery Co. Inc., 395 Sibley St., St. Paul, Minn.

768

VOLTAGE REGULATED POWER SUPPLIES

American Communications Corp., 306 Broadway, New York, N. Y.
 American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
 See Advertisement on Page 231
 Atomic Instruments Co., 160 Charles St., Boston, Mass.
 See Advertisement on Page 202
 Browning Laboratories, Inc., 750 Main St., Winchester, Mass.
 Electronic Measurements Co., Red Bank, N. J.
 See Advertisement on Page 276
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.
 Hercules Electric & Mfg. Co. Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
 International Transformer Co., 396 Broadway, New York, N. Y.
 MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.
 Pan American Electric Co., Inc., 132 Front St., New York, N. Y.
 Radar Engineers, 4004 Arcade Bldg., Seattle 1, Wash.
 Radio-Television Institute, Inc., 480 Lexington Ave., New York 17, N. Y.
 Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y.
 Superior Electric Co., 83 Laurel St., Bristol, Conn.
 Thermionic Engineering Corp., 32 W. 12th St., Bayonne, N. J.

769

Pulleys, Dial

Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
 La Magna Mfg. Co., Inc., East Rutherford, N. J.

770

Push Buttons

Chicago Die Mold Corp., 4001 Wrightwood Ave., Chicago 39, Ill.
 Mayfair Molded Products Corp., 4440 N. Elston Ave., Chicago 30, Ill.
 Murdock Mfg. Co., Wm. J., Chelsea, Mass.

771

Racks, Relay

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
 Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N. Y.
 See Advertisement on Page 52
 Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
 Insuline Corp. of America, 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
 Johnson Co., E. F., Waseca, Minn.
 Karp Metal Prods. Co., Inc., 129 Thirtieth St., Brooklyn, N. Y.
 See Advertisement on Page 65

Lindsay & Thomas, Inc., 60 E. 42nd St., New York 17, N. Y.
 National Co., Malden 48, Mass.
 See Advertisement on Page 29

772

Rectifiers

CRYSTAL RECTIFIERS

Standard Arcturus Corp., 99 Sussex Ave., Newark N. J.

773

DRY DISC RECTIFIERS

Acme Fire Alarm Co., Inc., 106 Seventh Ave., New York 11, N. Y.
 Benwood Linze Co., 1815 Locust St., St. Louis 3, Mo.
 Bradley Labs., Inc., 82 Meadow St., St. Louis 3, Mo.
 See Advertisement on Page 222
 Conant Electrical Labs., 6500 O St., Lincoln, Nebr.
 See Advertisement on Page 224
 Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
 Electron Equipment Corp., 917 Meridian Ave., South Pasadena, Calif.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
 See Advertisement on Page 121
 Federal Telephone and Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Bridgeport, Conn.
 See Advertisements on Pages 204, 212
 Green Electric Co., Inc., W., 130 Cedar St., New York 6, N. Y.
 See Advertisement on Page 102
 Hercules Electric & Mfg. Co. Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
 Linick Chemical Co., 29 E. Madison St., Chicago 2, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 See Advertisements on Pages 296, 297
 McColphin-Christie Corp., Ltd., 4922 S. Figueroa St., Los Angeles 37, Calif.
 Mellaphone Corp., Rochester 2, N. Y.
 Nothelfer Winding Labs., 111 Albemarle Ave., Trenton, N. J.
 Radio Receptor Co., Inc., 251 W. 19th St., New York, N. Y.
 See Advertisement on Page 26
 Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y.
 Selenium Corp. of America, 1719 W. Pico Blvd., Los Angeles 15, Calif.
 See Advertisement on Page 132
 Sorgel Electric Co., 838 W. National Ave., Milwaukee 4, Wis.
 Westinghouse Electric Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191
 Xervac Instrument Co., 101 Vine St., Hartford 5, Conn.

774

TUBE RECTIFYING UNITS

American Battery Co., 17 S. Jefferson St., Chicago, Ill.
 Davis & Murphy, 5252 Broadway, Chicago 40, Ill.
 Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
 Electron Equipment Corp., 917 Meridian Ave., South Pasadena, Calif.
 Electrons, Inc., 127 Sussex Ave., Newark, N. J.
 See Advertisement on Page 138
 Federal Telephone and Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Green Electric Co., Inc., W., 130 Cedar St., New York 6, N. Y.
 See Advertisement on Page 102
 Hercules Electric & Mfg. Co. Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
 Langevin Co. Inc., 37 W. 65th St., New York, N. Y.
 See Advertisements on Pages 175, 176, 177, 178

ELECTRONIC and ALLIED PRODUCTS

Machlett Labs., Springdale, Conn.
See Advertisement on Page 263
McColpin-Christie Corp., Ltd., 4922 S. Figueroa St., Los Angeles 37, Calif.
Nothelfer Winding Labs., 111 Albemarle Ave., Trenton, N. J.
Press Wireless Mfg. Corp., 1475 Broadway, New York 18, N. Y.
See Advertisements on Pages 69-80
Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y.
Robinson Recording Labs., 35 S. 9th St., Phila., Pa.
See Advertisement on Page 202
Sorgel Electric Co., 838 W. National Ave., Milwaukee 4, Wis.

775

Regulators

CURRENT REGULATORS

Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.
See Advertisement on Page 247

776

FREQUENCY REGULATORS

Burlington Instrument Co., 214 N. 4th St., Burlington, Iowa

777

VOLTAGE REGULATORS and STABILIZERS

Burlington Instrument Corp., 214 North 4th St., Burlington, Iowa
Commercial Research Labs. Inc., 20 Bartlett Ave., Detroit 3, Mich.
See Advertisement on Page 126
General Aviation Equipment Co., Inc., 630 5th Ave., New York 20, N. Y.
General Electric Co., Bridgeport 2, Conn.
See Advertisements on Pages 204, 212
Oeram Corp., Auburn Rd., Seneca Falls, N. Y.
R. B. M. Div., Essex Wire Corp., Logansport, Ind.
Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
Sola Electric Co., 2525 Clybourn Ave., Chicago 14, Ill.
Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.
See Advertisement on Page 247
SOS Cinema Supply Co., 449 West 42nd St., New York 18, N. Y.
Submarine Signal Co., 160 State, Boston, Mass.
Superior Electric Co., 83 Laurel St., Bristol, Conn.
United Transformer Corp., 150 Varick St., New York 13, N. Y.
See Advertisement on Inside Front Cover
Ward Leonard Electric Co., 31 South St., Mount Vernon, N. Y.
See Advertisements on Pages 198, 199

778

Relays

AIRCRAFT TYPE RELAYS

Aircraft Radio Corp., Boonton, N. J.
See Advertisements on Pages 150, 151
Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
See Advertisements on Pages 28, 29
Automatic Electric Co., 1033 W. Van Buren St., Chicago 7, Ill.
Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
Electric Auto-Lite Co., The, Toledo 1, Ohio
Federal Instrument Corp., 3609 Vernon Blvd., L. I. City 1, N. Y.
Leach Relay Co., Inc., 5915 Avalon Blvd., Los Angeles 3, Calif.
See Advertisement on Page 136
Phillips Control Corp., 612 N. Michigan Ave., Chicago 11, Ill.
Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
See Advertisement on Page 270

Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
See Advertisements on Pages 198, 199

779

CAPACITY OPERATED RELAYS

Banks Mfg. Co., 1105 W. Lawrence Ave., Chicago 40, Ill.
Browning Labs., Inc., 750 Main St., Winchester, Mass.
Cook Electric Co., 2700 Southport Ave., Chicago, Ill.

780

COAXIAL RELAYS

Allied Control Co., Inc., 2 East End Ave., New York 10, N. Y.
See Advertisements on Pages 28, 29
Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
See Advertisement on Page 26
Signal Engineering & Mfg. Co., 154 W. 14th St., New York, N. Y.

781

D'ARSONVAL RELAYS

General Electronics, Inc., 101 Hazel St., Paterson, N. J.

782

DIFFERENTIAL RELAYS

Allied Control Co., Inc., 2 East End Ave., New York 10, N. Y.
See Advertisements on Pages 28, 29
Automatic Switch Co., 41 E. 11th St., New York 3, N. Y.
Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
Edison Inc., Thomas H., Instrument Div., Orange, N. J.
Electric Auto-Lite Co., The, Toledo 1, Ohio
Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
See Advertisement on Page 26
Sigma Instruments, Inc., 70 Ceylon St., Boston 21, Mass.
See Advertisement on Page 217

783

ELECTRONIC CURRENT RELAYS

Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
See Advertisements on Pages 28, 29
Automatic Switch Co., 41 E. 11th St., New York 3, N. Y.
Automatic Temperature Control Co., 18 W. Chelton Avenue, Phila. 44, Pa.
Central Scientific Co., 1700 Irving Park Blvd., Chicago 13, Ill.
Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
See Advertisement on Page 259
Fischer Scientific Co., 711 Forbes St., Pittsburgh 16, Pa.
Parker Engineering Prods. Co., 16 W. 22nd St., New York 10, N. Y.
Phillips Control Corp., 612 N. Michigan Ave., Chicago 11, Ill.
Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
See Advertisement on Page 26

784

FREQUENCY SELECTIVE RELAYS

Control Corp., 718 Central Ave., Minneapolis 14, Minn.
Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
See Advertisement on Page 290

Stevens Arnold Co., 22 Elkins St., So. Boston, Mass.
Wallace & Tiernan Products, Inc., Belleville, N. J.

785

GENERAL PURPOSE RELAYS

Advance Electric & Relay Co., 1260 W. Second St., Los Angeles, Calif.
Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
See Advertisements on Pages 28, 29
Arrow-Hart & Hegeman Elec. Co., 103 Hawthorn St., Hartford 6, Conn.
Assembly Prods., Inc., Chagrin Falls, Ohio
See Advertisement on Page 294
Automatic Elec. Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
Automatic Switch Co., 41 E. 11th St., New York 3, N. Y.
Betts & Betts Corp., 551 W. 52nd St., New York, N. Y.
Carter Radio Div., Precision Parts Co., 218 Institute Pl., Chicago 10, Ill.
Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
Davis & Co., Dean W., Kentland, Ind.
Electric Auto-Lite Co., The, Toledo 1, Ohio
Electric Products Supply Co., 1140 Venice Blvd., Los Angeles 15, Calif.
Federal Instrument Corp., 3609 Vernon Blvd., L. I. City 1, N. Y.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.
Guardian Elec. Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.
Kurman Elec. Co., 35-18 37th St., Long Island City 1, N. Y.
North Electric Mfg. Co., 501 S. Market St., Galion, Ohio
Oeram Corp., Auburn Rd., Seneca Falls, N. Y.
Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
See Advertisement on Page 270
Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
See Advertisement on Page 26
Radex Corp. of Amer., 1322 Elston Ave., Chicago, Ill.
R. B. M. Div., Essex Wire Corp., Logansport, Ind.
Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif.
Signal Engineering & Mfg. Co., 154 W. 14th St., New York, N. Y.
Standard Elec. Products Co., 400 Linden Ave., Dayton 3, Ohio
Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
See Advertisements on Pages 198, 199
Western Elec. Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

786

IMPULSE RELAYS

Advance Elec. & Relay Co., 1260 W. Second Street, Los Angeles, Calif.
Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
Guardian Elec. Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.
Leach Relay Co., Inc., 5915 Avalon Blvd., Los Angeles 3, Calif.
See Advertisement on Page 136
Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
See Advertisement on Page 26

787

INDUSTRIAL CONTROL RELAYS

Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
See Advertisements on Pages 28, 29
Arrow-Hart & Hegeman Elec. Co., 103 Hawthorn St., Hartford 6, Conn.
Automatic Electric Co., 1033 W. Van Buren St., Chicago 7, Ill.

Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Electric Auto-Lite Co., The, Toledo 1, Ohio
 Sigma Instruments, Inc., 70 Ceylon St., Boston 21, Mass.
 See Advertisement on Page 217
 Signal Engineering & Mfg. Co., 154 W. 14th St., New York, N. Y.
 Tork Clock Co., 1 Grove St., Mt. Vernon, N. Y.

788

INSTRUMENT RELAYS

Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
 See Advertisement on Page 275

789

KEYING and BREAK-IN RELAYS

Advance Elec. & Relay Co., 1260 W. Second St., Los Angeles, Calif.
 Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
 Guardian Elec. Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.
 Leach Relay Co., Inc., 5915 Avalon Blvd., Los Angeles 3, Calif.
 See Advertisement on Page 136
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Sigma Instruments, Inc., 70 Ceylon Street, Boston 21, Mass.
 See Advertisement on Page 217
 Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
 See Advertisements on Pages 198-199
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17, 18, 19, 20, 190, 191

790

LATCHING RELAYS

Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Arrow-Hart & Hegeman Elec. Co., 103 Hawthorn St., Hartford 6, Conn.
 Control Corp., 718 Central Ave., Minneapolis 14, Minn.
 Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
 Electric Auto-Lite Co., The, Toledo 1, Ohio
 Guardian Elec. Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.
 Leach Relay Co., Inc., 5915 Avalon Blvd., Los Angeles 3, Calif.
 See Advertisement on Page 136
 Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
 See Advertisement on Page 270
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Standard Elec. Products Co., 400 Linden Avenue, Dayton 2, Ohio
 Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.

791

MERCURY RELAYS

Adams & Westlake, Michigan St., Elkhart, Ind.
 See Advertisements on Pages 186, 187
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Durakool, Inc., 1010 N. Main St., Elkhart, Ind.
 H-B Electric Co., 6109 N. 21st St., Phila. 38, Pa.
 Hermasol Co., Riverside Dr., Elkhart, Ind.
 See Advertisements on Pages 44, 152, 266
 North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio
 Signal Engineering & Mfg. Co., 154 W. 14th St., New York, N. Y.

792

MULTIPOLE RELAYS

Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Electric Auto-Lite Co., The, Toledo 1, Ohio
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26

793

OVERLOAD and UNDERLOAD RELAYS

Advance Elec. & Relay Co., 1260 W. Second St., Los Angeles, Calif.
 Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.
 Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
 Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wisc.
 Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
 See Advertisement on Page 259
 Guardian Elec. Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.
 Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, Ohio
 Leach Relay Co., 5915 Avalon Blvd., Los Angeles, Calif.
 See Advertisement on Page 136
 Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
 See Advertisement on Page 270
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Sigma Instruments, Inc., 70 Ceylon Street, Boston 21, Mass.
 See Advertisement on Page 217
 Signal Engineering & Mfg. Co., 154 W. 14th St., New York, N. Y.
 Standard Elec. Products Co., 400 Linden Ave., Dayton 3, Ohio
 Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
 See Advertisements on Pages 198-199
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

794

PHOTOELECTRIC RELAYS

Airpax Products Co., P. O. Box 6741, Baltimore 4, Md.
 Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
 Eby, Inc., Hugh H., 18 W. Chelton Ave., Phila. 13, Pa.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electronic Products Co., 19 No. First St., Geneva, Ill.
 Ess Instrument Co., 963 Washington St., Bergenfield, N. J.
 Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
 See Advertisement on Page 259
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
 See Advertisement on Page 270
 Worner Electronic Devices, 609 West Lake St., Chicago 6, Ill.

795

PLATE CIRCUIT RELAYS

Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
 Federal Instrument Corp., 3609 Vernon Blvd., L. I. City 1, N. Y.
 Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
 See Advertisement on Page 270

Sigma Instruments, Inc., 70 Ceylon St., Boston 21, Mass.
 See Advertisement on Page 217
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

796

POLARIZED RELAYS

Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, Ohio
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Sigma Instruments, Inc., 70 Ceylon St., Boston 21, Mass.
 See Advertisement on Page 217
 Stevens Arnold Co., 22 Elkins St., So. Boston, Mass.

797

POWER RELAYS

Adams & Westlake Co., Michigan St., Elkhart, Ind.
 See Advertisements on Pages 186, 187
 Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Arrow-Hart & Hegeman Elec. Co., 103 Hawthorn St., Hartford 6, Conn.
 Automatic Switch Co., 41 East 11th St., New York 3, N. Y.
 Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.
 Cook Electric Co., 2700 Southport Ave., Chicago, Ill.
 Grayhill Corp., 1 N. Pulaski Rd., Chicago, Ill.
 Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
 Leach Relay Co., 5915 Avalon Blvd., Los Angeles 3, Calif.
 See Advertisement on Page 136
 Minneapolis-Honeywell Reg. Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
 See Advertisement on Page 290
 Phillips Control Corp., 612 N. Michigan Ave., Chicago 11, Ill.
 Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
 See Advertisement on Page 270
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Sigma Instruments, Inc., 70 Ceylon St., Boston 21, Mass.
 See Advertisement on Page 217
 Signal Engineering & Mfg. Co., 154 W. 14th St., New York, N. Y.
 Standard Elec. Products Co., 400 Linden Ave., Dayton 3, Ohio
 Tork Clock Co., 1 Grove St., Mt. Vernon, N. Y.
 Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
 See Advertisements on Pages 198-199

798

ROTARY RELAYS

Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26

799

SENSITIVE CONTROL RELAYS

Adams & Westlake Co., Michigan St., Elkhart, Ind.
 See Advertisements on Pages 186, 187
 Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29

ELECTRONIC and ALLIED PRODUCTS

Automatic Elec. Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
 Automatic Switch Co., 41 E. 11th St., New York 3, N. Y.
 Automatic Temperature Control Co., 18 W. Chelton Ave., Phila. 44, Pa.
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Cook Electric Co., 2700 Southport Ave., Chicago, Ill.
 Edison Inc., Thomas H., Instrument Div. Orange, N. J.
 Electric Auto-Lite Co., Toledo 1, Ohio
 H-B Electric Co., 6109 North 21st St., Phila. 38, Pa.
 Kurman Electric Co., 35-18 37th St., Long Island City 1, N. Y.
 Leach Relay Co., 5915 Avalon Blvd., Los Angeles 3, Calif.
 See Advertisement on Page 136
 Magnetic Devices, Inc., Frederick, Md.
 Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
 See Advertisement on Page 270
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Sigma Instruments, Inc., 70 Ceylon St., Boston 21, Mass.
 See Advertisement on Page 217
 Standard Electrical Products Co., 400 Linden Ave., Dayton 3, Ohio
 Stevens Arnold Co., 22 Elkins St., So. Boston, Mass.
 Struthers-Dunn, Inc., 1321 Arch St., Phila. 7, Pa.
 Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
 See Advertisements on Pages 198-199
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191
 Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
 See Advertisement on Page 249

800

SEQUENCE RELAYS

Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Struthers-Dunn, Inc., 1321 Arch St., Philadelphia 7, Pa.

801

SHOCK-RESISTING RELAYS

Allied Control Co. Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Kurman Elec. Co., 35-18 37th St., Long Island City 1, N. Y.
 Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
 See Advertisement on Page 270

802

SNAP ACTION RELAYS

Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
 Electric Auto-Lite Co., The, Toledo 1, Ohio
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26

803

STEPPING RELAYS

Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Cook Electric Co., 2700 Southport Ave., Chicago, Ill.
 Guardian Electric Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.

When Ordering or Inquiring
 please mention the
ELECTRONICS BUYERS' GUIDE

North Electric Mfg. Co., 501 S. Market St., Galion, Ohio
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26

804

TELEPHONE RELAYS

Allied Control Co. Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Automatic Electric Co., 1033 W. Van Buren St., Chicago 7, Ill.
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Control Corp., 718 Central Ave., Minneapolis 14, Minn.
 Cook Electric Co., 2700 Southport Ave., Chicago, Ill.
 Cover Dual Signal Systems, Inc., Div. of Electra Voice Corp., 5215-25 Ravenswood Ave., Chicago 40, Ill.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Leach Relay Co., 5915 Avalon Blvd., Los Angeles 3, Calif.
 See Advertisement on Page 136
 Phillips Control Corp., 612 N. Michigan Ave., Chicago 11, Ill.
 Potter & Brumfield Mfg. Co., Inc., 617 N. Gibson St., Princeton, Ind.
 See Advertisement on Page 270
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Signal Engrg. & Mfg. Co., 154 W. 14th St., New York, N. Y.
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

805

TEMPERATURE COMPENSATED RELAYS

Electric Auto-Lite Co., Inc., Toledo 1, Ohio
 Kurman Elec. Co., 35-18 37th St., Long Island City 1, N. Y.
 Sigma Instruments, Inc., 70 Ceylon St., Boston, Mass.

806

TIME DELAY RELAYS

Adams & Westlake Co., Michigan St., Elkhart, Ind.
 See Advertisements on Pages 186, 187
 Advance Electric and Relay Co., 1260 W. Second St., Los Angeles, Calif.
 Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 American Gas Accumulator Co., 1029 Newark Ave., Elizabeth, N. J.
 See Advertisement on Page 282
 Amperite Co., 561 Broadway, New York, N. Y.
 See Advertisement on Page 122
 Automatic Temperature Control Co., 18 W. Chelton Ave., Phila. 44, Pa.
 Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Clark Controller Co., 1146 E. 152nd St., Cleveland, Ohio
 Cook Electric Co., 2700 Southport Ave., Chicago, Ill.
 Cramer Co., R. W., Centerbrook, Conn.
 Edison, Inc., Thomas A., Instrument Div., 51 Lakeside Ave., West Orange, N. J.
 Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
 See Advertisement on Page 259
 Fredericks Co., Geo. E., Bethayres, Pa.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Guardian Electric Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.
 Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, Ohio
 Haydon Manufacturing Co., Inc., Forestville, Conn.
 Industrial Timer Corp., 117 Edison Pl., Newark 5, New Jersey
 Kurman Electric Co., 35-18 37th St., Long Island City 1, N. Y.

Leach Relay Co., 5915 Avalon Blvd., Los Angeles 3, Calif.
 See Advertisement on Page 136
 Meletron Corp., 950 N. Highland Ave., Los Angeles 38, Calif.
 Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
 See Advertisement on Page 290
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio
 Paragon Electric Co., 37 W. Van Buren St., Chicago 5, Ill.
 Phillips Control Corp., 612 N. Michigan Ave., Chicago 11, Ill.
 Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
 See Advertisement on Page 270
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Sigma Instruments, Inc., 70 Ceylon St., Boston 21, Mass.
 See Advertisement on Page 217
 Signal Engrg. & Mfg. Co., 154 W. 14th St., New York, N. Y.
 Spencer Thermostat Co., 34 Forest St., Attleboro, Mass.
 Standard Electrical Products Co., 400 Linden Ave., Dayton 3, Ohio
 Ulanet Co., George, 88 E. Kinney St., Newark 5, N. J.
 Ward Leonard Electric Co., 31 South St., Mount Vernon, N. Y.
 Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
 See Advertisement on Page 249

807

TRANSFER RELAYS

Advance Electric & Relay Co., 1260 W. Second St., Los Angeles, Calif.
 Allied Control Co., Inc., East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Automatic Switch Co., 41 E. 11th St., New York 3, N. Y.
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
 Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.
 Guardian Elec. Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.
 Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
 Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
 See Advertisement on Page 26
 Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
 See Advertisements on Pages 198, 199
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

808

VACUUM CONTACT RELAYS

American Instrument Co., 8030 Georgia Ave., Silver Springs, Md.
 Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
 See Advertisement on Page 290

809

VIBRATING REED TYPE RELAYS

Biddle Co., Jas. G., 1213 Arch St., Phila., Pa.

810

Resistors

FIXED RESISTORS

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Atlas Resistor Co., 423 Broome St., New York, N. Y.
 Audio Products Co., 2101 W. Olive Ave., Burbank, Calif.
 See Advertisement on Page 270
 Avia Prods. Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
 Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.

Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
 Carborundum Co., Globe Div., Niagara Falls, N. Y.
Centralab Div., Globe Union, Inc., 900 Keefe Ave., Milwaukee 1, Wisc.
 See Advertisement on Page 146
 Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Clarostat Mfg. Co., Inc., 285-7 6th St., Brooklyn, N. Y.
 See Advertisements on Pages 116, 117
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Continental Carbon Inc., 13900 Lorain Ave., Cleveland, Ohio
 Corning Glass Works, Corning, N. Y.
Electrical Reactance Corp., Franklinville, N. Y.
 See Advertisement on Page 210
Erie Resistor Corp., 644 W. 12th St., Erie, Pa.
 See Advertisement on Page 147
General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
 Globar Div., Carborundum Co., Buffalo Ave., Niagara Falls, N. Y.
Hardwick, Hindle Inc., 40 Harmon St., Newark, N. J.
 See Advertisement on Page 286
Instrument Resistors Co., Little Falls, N. J.
 See Advertisement on Page 127
 International Resistance Co., 401 N. Broad St., Phila. 8, Pa.
Mallory & Co., Inc., P. R., 3029 Washington St., Indianapolis, Ind.
 See Advertisements on Pages 296, 297
Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
 See Advertisement on Page 290
 Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland, Ohio
Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago, Ill.
 See Advertisement on Page 215
 Precision Machine Works Inc., 14 South Ninth St., Minneapolis, Minn.
Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.
 See Advertisement on Page 295
 Schaefer Bros. Co., 1059 W. 11th St., Chicago, Ill.
Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
 See Advertisement on Page 38
 Sperry Resistor Corp., St. Marys, Pa.
Sprague Electric Co., North Adams, Mass.
 See Advertisement on Page 64
 Stackpole Carbon Co., Tannery St., St. Marys, Pa.
Ward Leonard Electric Co., 31 South St., Mt. Vernon, N. Y.
 See Advertisements on Pages 198, 199
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisement on Pages 182, 183
Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191
White Dental Manufacturing Co., S. S. (Industrial Div.), 10 E. 40th St., New York, N. Y.
 See Advertisement on Page 269
 Wirt Co., 5221 Greene St., Philadelphia, Pa.

811

HERMETICALLY SEALED RESISTORS

Daven Co., 191 Central Ave., Newark 4, N. J.
 See Advertisement on Inside Back Cover

812

HIGH MEGOHM RESISTORS

Victoreen Instrument Co., 5806 Hough Ave., Cleveland 3, Ohio

813

PRECISION WIRE WOUND RESISTORS

Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Clarostat Mfg. Co. Inc., 285-7 6th St., Brooklyn, N. Y.
 See Advertisements on Pages 116-117

Cover Dual Signal Systems, Inc., Div. of Electra Voice Corp., 5215-25 Ravenswood Ave., Chicago 40, Ill.
Daven Co., 191 Central Ave., Newark 4, N. J.
 See Advertisement on Inside Back Cover
 Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
 Elco Resistors Co., 114 W. 18th St., New York, N. Y.
 Fairchild Camera & Instrument Corp., 475-10th Ave., New York 18, N. Y.
 Federal Instrument Corp., 3609 Vernon Blvd., L. I. City 1, N. Y.
 General Electronics, Inc., 101 Hazel St., Paterson, N. J.
 General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
 Gibbs & Co., Thomas B., Div. of George W. Borg Corp., 814 Michigan St., Delavan, Wisc.
 Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.
Instrument Resistors Co., 25 Amity St., Little Falls, N. J.
 See Advertisement on Page 127
 International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
Madison Electrical Prods. Corp., Madison, N. J.
 See Advertisement on Page 232
 Nilsson Electrical Lab., Inc., 103 Lafayette St., New York 13, N. Y.
Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.
 See Advertisement on Page 215
 Reimers Electric Appliance Co., 506 56th St., West New York, N. J.
 Resistance Prods. Co., 140 S. Second St., Harrisburg, Pa.
 Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., South Pasadena, Calif.
Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
 See Advertisement on Page 38
 Technology Instrument Corp., 1058 Main St., Waltham, Mass.

814

PRECISION WIRE WOUND POTENTIOMETER RESISTORS

Gamewell Co., 1238 Chestnut St., Newton Upper Falls 64, Mass.
 National Technical Lab., 820 Mission Street, South Pasadena, Calif.
Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.
 See Advertisement on Page 295
 Tech Labs, 7 Lincoln St., Jersey City, N. J.
 See Advertisement on Page 246

815

RESISTANCE SPECIALTIES

Ballantine Labs. Inc., Boonton, N. J.
 See Advertisement on Page 124
Clarostat Mfg. Co. Inc., 285-7 6th St., Brooklyn, N. Y.
 See Advertisements on Pages 116, 117
Conant Electrical Labs., 6500 O St., Lincoln, Nebraska
 See Advertisement on Page 224
 Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio
 Friez Instrument Div., Bendix Aviation Corp., Taylor Ave., near Loch Raven Blvd., Baltimore 4, Md.
 General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
 Giannini & Co. Inc., 161 E. California St., Pasadena, Calif.
 Globar Div., Carborundum Co., Buffalo Ave., Niagara Falls, N. Y.
Helipot Corp., 1011 Mission St., So. Pasadena, Calif.
 See Advertisement on Page 279
Rubicon Co., 3751 Ridge Ave., Phila., Pa.
 See Advertisement on Page 295
Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183

816

SLIDE WIRE INSTRUMENT RHEOSTATS

Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.

POTENTIOMETERS and RHEOSTATS

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Amalgamated Electronic Associated, 60 E. 42nd St., New York 17, N. Y.
 Atlas Resistor Co., 423 Broome St., New York, N. Y.
Audio Products Co., 2101 W. Olive Ave., Burbank, Calif.
 See Advertisement on Page 270
Biddle Co., James G., 1213 Arch St., Phila., Pa.
Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.
 Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
 Carter Radio Div., Precision Parts Co., 213 Institute Place, Chicago 10, Ill.
Centralab Div. of Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.
 See Advertisement on Page 146
 Chicago Telephone Supply Co., 1142 W. Beardsley Ave., Elkhart, Ind.
 Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.
Clarostat Mfg. Co. Inc., 285-7 6th St., Brooklyn, N. Y.
 See Advertisements on Pages 116, 117
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Dalmo, Victor, San Carlos, Calif.
Daven Co., 191 Central Ave., Newark 4, N. J.
 See Advertisement on Inside Back Cover
DeJur-Ameco Corp., Northern Blvd. at 45th St., L. I. City 1, N. Y.
 See Advertisements on Pages 46, 47
 Eastern Specialty Co., 3619 N. Elgth St., Phila. 40, Pa.
 Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
 Eppley Lab. Inc., Newport, R. I.
 Fairchild Camera & Instrument Corp., 475 Tenth Ave., New York 18, N. Y.
General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.
 Giannini & Co., Inc., G. M., 161 E. California St., Pasadena, Calif.
 Gibbs & Co., Thomas B., Div. of George W. Borg Corp., 814 Michigan St., Delavan, Wisc.
Hardwick, Hindle, Inc., 40 Hermon St., Newark, N. J.
 See Advertisement on Page 286
Helipot Corp., 1011 Mission St., South Pasadena, Calif.
 See Advertisement on Page 279
 International Resistance Co., 401 N. Broad St., Phila. 8, Pa.
 Leeds & Northrup Co., 4970 Stenton Ave., Phila. 44, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 See Advertisements on Pages 296, 297
 Milwaukee Resistor Co., 748 W. Virginia St., Milwaukee 4, Wisc.
Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
 See Advertisement on Page 290
 Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
 National Electric Controller Co., 5307 Ravenswood Ave., Chicago, Ill.
National Union Radio Corp., 15 Washington St., Newark 2, N. J.
 See Advertisement on Page 61
Ohmite Manufacturing Co., 4835 W. Flournoy St., Chicago 44, Ill.
 See Advertisement on Page 215
 Precision Machine Works, Inc., 14 South Ninth St., Minneapolis, Minn.
Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.
 See Advertisement on Page 294
Rubicon Co., 3751 Ridge Ave., Phila., Pa.
 See Advertisement on Page 295
 Schaefer Bros. Co., 1059 W. 11th St., Chicago, Ill.
Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
 See Advertisement on Page 38
Sprague Elec. Co., 189 Beaver St., North Adams, Mass.
 See Advertisement on Page 64
 Stackpole Carbon Co., St. Marys, Pa.
Tech Labs., 7 Lincoln St., Jersey City, N. J.
 See Advertisement on Page 246
 Technology Instrument Corp., 1058 Main St., Waltham, Mass.
Trefz Mfg. Co., 38-11 Main St., Flushing, N. Y.

ELECTRONIC and ALLIED PRODUCTS

Utah Radio Products Co., 820 Orleans St., Chicago, Ill.
Ward Leonard Electric Co., 31 South St., Mount Vernon, N. Y.
See Advertisements on Pages 198, 199
Westinghouse Electric Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191
Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill.
Wirt Co., 5221 Greene St., Philadelphia, Pa.

818

WIRE WOUND RESISTORS

Amalgamated Electronics Ass'd, 60 E. 42nd St., N. Y. 17, N. Y.
American Coil & Engineering Co., 1271 N. Hermitage Ave., Chicago 22, Ill.
Atlas Resistor Co., 423 Broome St., New York, N. Y.
Carter Radio Div., Precision Parts Co., 213 Institute Place, Chicago 10, Ill.
Centralab Div. of Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wis.
See Advertisement on Page 146
Clarostat Mfg. Co. Inc., 285-7 6th St., Brooklyn, N. Y.
See Advertisements on Pages 116-117
Consolidated Wire & Associated Corpn., 1635 S. Clinton St., Chicago 16, Ill.
Continental Carbon, Inc., 13900 Lorain Ave., Cleveland, Ohio
Electrical Reactance Corp., Franklinville, N. Y.
See Advertisement on Page 210
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Groves Corp., 41 N. Sprigg St., Cape Girardeau, Mo.
Instrument Resistors Co., 25 Amity St., Little Falls, N. J.
See Advertisement on Page 127
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
Lectrohm, Inc., 5125 W. 25th St., Cicero 50, Ill.
Madison Electrical Products Corp., Madison, N. J.
Mallory & Co., Inc., P. O. 3029 E. Washington St., Indianapolis 6, Ind.
See Advertisements on Pages 296, 297
Marion Electrical Instrument Co., Manchester, N. H.
Milwaukee Resistor Co., 748 W. Virginia St., Milwaukee 4, Wis.
Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
See Advertisement on Page 290
Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
Ohio Carbon Co., 12508 Berea Rd., Cleveland, Ohio
Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.
See Advertisement on Page 215
Precision Machine Works, Inc., 14 South Ninth St., Minneapolis, Minn.
Presto Electric Co., Union City, N. J.
Reimers Electric Appliance Co., Inc., 596-56th St., West New York, N. J.
Richardson-Allen Corp., 15 W. 20th St., New York 11, N. Y.
Rubicon Co., 3751 Bidge Ave., Philadelphia, Pa.
See Advertisement on Page 295
States Co., 19 New Park Ave., Hartford 6, Conn.
Sprague Electric Co., North Adams, Mass.
See Advertisement on Page 61
Trefz Mfg. Co., 38-11 Main St., Flushing, N. Y.
Wirt Co., 5221 Greene St., Philadelphia, Pa.

819

Rings

CARBON PACKING RINGS

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia, Pa.

820

COLLECTOR RINGS

Makepeace Co., D. E., Attleboro, Mass.
See Advertisement on Page 216

821

OIL SEALING RINGS

Auburn Mfg. Co., 110 Stack St., Middletown, Conn.
Graphite Metallizing Corp., 1055 Nepperhan Ave., Yonkers 3, N. Y.
Sealol Corp., 45 Willard St., Providence, R. I.

822

RETAINING RINGS

Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.
Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.

823

Rivets

American Rivet Co., 1301 W. Congress St., Chicago 7, Ill.
Atlas Tack Corp., Pleasant St., Fairhaven, Mass.
Chicago Rivet & Machine Co., 9600 W. Jackson Blvd., (Bellwood) Chicago, Ill.
Clendenin Bros., 108 South St., Baltimore, Md.
Continental Screw Co., New Bedford, Mass.
Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
Harper Co., H. M., 2630 Fletcher St., Chicago 18, Ill.
Hassall Inc., John, Clay & Oakland Sts., Brooklyn, N. Y.
See Advertisement on Page 272
Milford Rivet & Machine Co., Milford, Conn. (Eastern Div.), Elyria, Ohio (Central Div.)
Nat'l Screw & Mfg. Co., The, Cleveland 4, Ohio
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Plume & Atwood Mfg. Co., 470 Bank St., Waterbury, Conn.
Publix Metal Prod., Inc., 100-6th Ave., New York 13, N. Y.
Reed & Prince Mfg. Co., Duncan Ave., Worcester, Mass.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio
Russell, Burdsall & Ward Bolt & Nut Co., Midland Ave., Port Chester, N. Y.
Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill.
Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
Tubular Rivet & Stud Co., Wollaston 70, Mass.
U. S. Screw Co., Keene, N. H.
Waldes Kohinoor Inc., Long Island City 1, N. Y.

824

Scales

OSCILLOSCOPE SCALES

Du Mont Labs., Inc., 2 Main Ave., Passaic, N. J.

825

Scanners

REFLECTED & TRANSMITTED LIGHT SCANNERS

Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.
See Advertisement on Page 259
Radio Inventions, Inc., Faxmille, Inc., 155 Perry St., New York 14, N. Y.

826

Scramblers, Speech

Amplifier Co. of America, 396 Broadway, New York, N. Y.

827

Screws

Aircraft Screw Products Co., Inc., 47-23 35th St., Long Island City 1, N. Y.
Alden Products Co., 117 N. Main St., Brockton 64, Mass (Self-Tapping)
Allen Mfg. Co., Hartford, Conn.
Allmetal Screw Prods. Co., 33 Greene St., New York 13, N. Y.
American Screw Co., Providence, R. I. (Self-Tapping)
Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
Bristol Co., Waterbury 91, Conn. (Self-Tapping)
Chandler Prods. Co., 1475 Chardon Rd., Cleveland, Ohio
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.
Continental Screw Co., New Bedford, Mass. (Self-Tapping)
Cook Elec. Co., 2700 Southport Ave., Chicago, Ill.
Corbin Screw Div., Amer. Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn. (Self-Tapping)
Cords Ltd., Inc., 26 Camp St., Newark 5, N. J. (Self-Tapping)
Ericsson Screw Machine Prods. Co., 25 Lafayette St., Brooklyn 1, N. Y.
Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill. (Self-Tapping)
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. (Self-Tapping)
See Advertisement on Page 290
Hartford Machine Screw Co., 476 Capitol Ave., Hartford 2, Conn. (Self-Tapping)
Hassall, Inc., John, Clay & Oakland Sts., Brooklyn, N. Y.
See Advertisement on Page 272
Heyman Mfg. Co., Michigan Ave., Kenilworth, N. J. (Self-Tapping)
See Advertisement on Page 214
International Merit Prods. Corp., 254 W. 54th St., New York 19, N. Y.
Lanson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
Manufacturers Screw Products, 270 W. Hubbard St., Chicago, Ill. (Self-Tapping)
Milford Rivet & Machine Co., Milford, Conn. (Self-Tapping)
Nat'l Screw & Mfg. Co., The, Cleveland 4, Ohio (Self-Tapping)
New England Screw Co., Keene, New Hampshire
Palnut Co. Inc., 77 Cordier St., Irvington 11, N. J.
Parker-Kalon Corp., 200 Varick St., New York 14, N. Y. (Self-Tapping)
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill. (Self-Tapping)
Progressive Mfg. Co., 52 Norwood St., Torrington, Conn.
Publix Metal Prod., Inc., 100-6th Ave., New York 13, N. Y.
Pure Carbon Co., St. Marys, Pa.
Reed & Prince Mfg. Co., Duncan Ave., Worcester, Mass.
Russell, Burdsall & Ward Bolt & 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. (Self-Tapping, Set Screws)
Scovill Mfg. Co., Waterville Screw Prods. Div., Waterville, Conn. (Self-Tapping, Set Screws)
Shakenproof Inc., Div. of Ill. Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
Southington Hardware Mfg. Co., Southington, Conn.
Standard Pressed Steel Co., Jenkintown, Pa.
See Advertisement on Page 100
Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill. (Self-Tapping)
Thomas & Betts Co., 30-36 Butler St., Elizabeth 1, N. J. (Self-Tapping)
United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago, Ill. (Self-Tapping)
United States Screw Co., Keene, N. Y.
Waltham Screw Co., 77 Rumford Ave., Waltham, Mass.

828

Seals

CARBON SEALS

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia, Pa.

829

HERMETIC SEALS

Buggie Co., H. H., Toledo, Ohio
 Cincinnati Electric Products Co., Carthage at Hannaford, Cincinnati 12, Ohio
 Corning Glass Works, Corning, N. Y.
 Electronic Controls Inc., 44 Summer Ave., Newark, N. J.
 Hermaseal Co., Riverside Dr., Elkhart, Ind. See Advertisements on Pages 44, 152, 266
 Locke Insulator Corp., P. O. Box 57, Baltimore 3, Md.
 Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill.
 National Research Corp., Vacuum Engrg. Div., 100 Brookline Ave., Boston 15, Mass.
 Stupakoff Ceramic & Mfg. Co., Latrobe, Pa. See Advertisement on Page 118
 Van Engineering Co., 534 Samoht Ridge, West Price Hill, Cincinnati, Ohio
 Vitrosecal Corp., 28 East Electric, Covington, Kentucky

830

OIL SEALS

Graton & Knight Co., 356 Franklin Street, Worcester 4, Mass.

831

Selective Calling Apparatus

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.

832

Shafts

Amalgamated Radio & Television Corp., 476 Broadway, New York 13, N. Y.
 Centralab Div., Globe Union Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.
 See Advertisement on Page 146
 Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
 See Advertisement on Page 201
 Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.

833

FLEXIBLE SHAFTS

Aircraft Radio Corp., Boonton, N. J.
 See Advertisements on Pages 150, 151
 Crocker-Wheeler Elect. Mfg. Co., Div. of Joshua Bendy Iron Wks., Amper, N. J.
 Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.
 See Advertisement on Page 113
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway, Brooklyn, N. Y.
 Johnson Co., E. F., Waseca, Minn.
 Stewart Mfg. Corp., F. W., 4311 Ravenswood Ave., Chicago 13, Ill.
 Walker-Turner Co. Inc., 1463 Berckman St., Plainfield, N. J.
 White Dental Mfg. Co., S. S., Industrial Div., 10 E. 40th St., New York, N. Y.
 See Advertisement on Page 269

834

Shapers, Signal

TELEVISION SIGNAL SHAPERS

Telequip Radio Co., 1901 S. Washtenaw, Chicago, Ill.

835

Shielding, Radio Ignition

Hallett Mfg. Co., 603 S. Redondo Blvd., Inglewood, Calif.

836

Shields

CAPACITOR SHIELDS

Fishwick Radio Co., 430 Colorado Bldg., Washington, D. C.
 Paul & Beckman Div., Portable Products Corp., 1801 Cortland St., Phila. 40, Pa.

837

CATHODE RAY TUBE SHIELDS

Allegheny Ludlum Steel Corp., Brackenridge, Pa.
 Metallic Arts Co., 243 Broadway, Cambridge 39, Mass.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220

838

COIL SHIELDS

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Erie Can Co., 816 W. Erie St., Chicago 22, Ill.
 Guthman, Inc., E. L., 15 S. Throop St., Chicago, Ill.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 Paul & Beckman Div., Portable Prods. Corp., 1801 Cortland St., Phila. 40, Pa.

839

TRANSFORMER SHIELDS

Allegheny Ludlum Steel Corp., Brackenridge, Pa.
 Erie Can Co., 816 W. Erie St., Chicago 22, Ill.
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.

840

TUBE SHIELDS

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Dayco Radio Corp., 915 Valley St., Dayton 4, Ohio
 Eby, Inc., H. H., 18 W. Chelton Ave., Phila. 13, Pa.
 Erie Can Co., 816 W. Erie St., Chicago, Ill.
 Goat Metal Stampings, Inc., 314 Dean St., Brooklyn, N. Y.
 See Advertisement on Page 303
 Guthman & Co., Edwin L., 15 S. Throop St., Chicago, Ill.
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
 National Co., Inc., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291

841

Shunts

METER SHUNTS

Ballantine Labs. Inc., Boonton, N. J.
 See Advertisement on Page 124
 Burlington Instrument Corp., 214 North 4th St., Burlington, Iowa
 Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
 Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebr.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 General Electronics, Inc., 101 Hazel St., Paterson, N. J.

Instrument Resistors Co., 25 Amity St., Little Falls, N. J.

See Advertisement on Page 127
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

Nilsson Electrical Lab. Inc., 103 Lafayette St., New York 13, N. Y.

Rubicon Co., 3751 Ridge Ave., Philadelphia, Pa.

See Advertisement on Page 295
 Scientific Service Lab., Subsidiary Electronics Inc., 915 Meridian Ave., South Pasadena, Calif.

Sun Mfg. Co., 6323 Avondale Ave., Chicago 31, Ill.

Weston Electrical Instrument Corp., 618 Freylinhuysen Ave., Newark 5, N. J.
 See Advertisement on Page 249

842

Sleeves

ANTENNA COPPER SPLICING SLEEVES

High Tension Co., Inc., 36 N. Main Street, Phillipsbury, N. J.
 Rusgreen Mfg. Co., 14262 Birwood Ave., Detroit 4, Mich.
 Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.

843

Sockets

BATTERY SOCKETS

Franklin Mfg. Co., A. W., 175 Varick St., New York, N. Y.
 See Advertisement on Page 209
 Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn.

844

CRYSTAL SOCKETS

Franklin Mfg. Co., A. W., 175 Varick St., New York, N. Y.
 See Advertisement on Page 209
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192

845

DIAL & PILOT LIGHT SOCKETS

Alden Products Co., 117 North Main St., Brockton 64, Mass.
 Amalgamated Radio & Television Corp., 476 Broadway, New York 13, N. Y.
 Automatic Metal Prods. Co., 315 Berry St., Brooklyn 1, N. Y.
 Dial Light Co. of America, 900 Broadway, New York 3, N. Y.
 See Advertisement on Page 255
 Drake Mfg. Co., 1713 Hubbard St., Chicago, Ill.
 See Advertisement on Page 246
 Franklin Mfg. Co., A. W., 175 Varick St., New York, N. Y.
 See Advertisement on Page 209
 General Electric Co., Bridgeport, Conn.
 See Advertisements on Pages 204, 212
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Kulka Electric Mfg. Co., Inc., 30 South St., Mt. Vernon, N. Y.
 Morse Co., Frank W., 301 Congress St., Boston 10, Mass.
 Ucinite Co., 459 Watertown St., Newtonville, Mass.

846

MICROWAVE TUBE SOCKETS

Aircraft Radio Corp., Boonton, N. J.
 See Advertisements on Pages 150, 151

847

MINIATURE SOCKETS & CONNECTORS

Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn.

ELECTRONIC and ALLIED PRODUCTS

848

TUBE SOCKETS

Amalgamated Radio & Television Corp., 476 Broadway, New York 13, N. Y.
American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio
Centralab Div., Globe Union Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.
See Advertisement on Page 146
Cinch Mfg. Co., 2335 W. Van Buren St., Chicago, Ill.
Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
Eby, Inc., H. H., 18 W. Chelton Ave., Phil. 13, Pa.
Electronic Mfg. Co., 20 Orange St., Newark 2, N. J.
Electronic Mechanics, Inc., 70 Clifton Blvd., Clifton, N. J.
See Advertisement on Page 201
Franklin Mfg. Corp., W. 175 Varick St., New York, N. Y.
See Advertisement on Page 209
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 201, 212
General Electronics Inc., 1819 Broadway, New York 23, N. Y.
Hammarlund Mfg. Co., Inc., 460 West 34th St., New York 1, N. Y.
Hubbell, Inc., Harvey, Bridgeport 2, Conn.
Insuline Corp. of America, 36-02 35th Ave., Long Island City, N. Y.
See Advertisement on Page 192
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway, Brooklyn, N. Y.
Johnson Co., E. F., Waseca, Minn.
McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
See Advertisement on Page 220
Mykroy, Inc., 1917 N. Springfield Ave., Chicago 47, Ill.
National Co., Inc., 61 Sherman St., Malden 48, Mass.
See Advertisement on Page 291
Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Cal.
Ucinite Co., 459 Watertown St., Newtonville, Mass.

849

Solenoids

Allied Control Co. Inc., 2 East End Ave., New York 21, N. Y.
See Advertisements on Pages 28, 29
Automatic Electric Co., 1033 W. Van Buren St., Chicago 7, Ill.
Automatic Switch Co., 41 E. 11th St., New York 3, N. Y.
Bradley Co., A., 136 W. Greenfield Ave., Milwaukee 2, Wisc.
Cannon Elec. Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
Clippard Instrument Lab., 1440 Chase Ave., Cincinnati 23, Ohio
Davis & Co., Dean W., Kentland, Ind.
Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
Electronic Transformer Co., 207 W. 25th St., New York, N. Y.
Guardian Elec. Mfg. Co., 1400 Washington Blvd., Chicago 7, Ill.
Instrument Resistors Co., 25 Amity St., Little Falls, N. J.
See Advertisement on Page 127
Leach Relay Co., Inc., 5915 Avalon Blvd., Los Angeles 3, Calif.
See Advertisement on Page 136
Magnavox Co., The, Fort Wayne 4, Indiana
Magnetic Devices Corp., 76-14 Woodside Ave., Jackson Heights, N. Y.
Meletron Corp., 950 N. Highland Ave., Los Angeles 38, Calif.
Phillips Control Corp., 612 N. Michigan Ave., Chicago 11, Ill.
Point Mfg. Co., 5775 N. Ridge Ave., Chicago 26, Ill.
Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
See Advertisement on Page 26
Roebing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.

Shallcross Mfg. Co., 10 Jackson Ave., Colingdale, Pa.
See Advertisement on Page 38
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 18, Ill.
Struthers-Dunn, Inc., 1321 Arch St., Phila. 7, Pa.

850

ROTARY SOLENOIDS

Leland George H., 123 Webster St., Dayton 2, Ohio

851

Spectroscopic Source Units

Jarrell-Ash Co., 165 Newbury Street, Boston 16, Mass.

852

Springs

Accurate Spring Mfg. Co., 3311 W. Lake St., Chicago, Ill.
American Spiral Spring & Mfg. Co., 5528 Harrison St., Pittsburgh, Pa.
Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.
Cuyahoga Spring Co., 10272 Berea Rd., Cleveland, Ohio
Garrett Co., Inc., G. K., 1421 Chestnut St., Phila 2, Pa.
Gibson Co., Wm. D., Div. of Associated Spring Corp., 1800 Clybourn Ave., Chicago, Ill.
Hubbard Spring Co., M. D., Central Ave., Pontiac, Mich.
Hunter Pressed Steel Co., Lansdale, Pa.
Jones Spring Co., W. B., 124 E. 7th St., Cincinnati, Ohio
Lee Spring Co., 30 Main St., Brooklyn, N. Y.
Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, Ill.
Muelhausen Spring Corp., 255 Michigan Ave., Logansport, Ind.
Raymond Mfg. Co., Div. of Associated Spring Corp., 226 S. Center St., Corry, Pa.
Reliable Spring & Wire Forms Co., 3167 Fulton Rd., Cleveland 9, Ohio
Schott Co., Walter L., 3306 Santa Monica Blvd., Beverly Hills, Calif.
Thomas & Skinner Steel Prod. Co., 1120 E. 23rd St., Indianapolis, Ind.

852-A

ANTENNA TENSION SPRINGS

Aeronautical Radio Mfg. Co., 155 First St., Mineola, L. I., N. Y.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212

853

INSTRUMENT HAIRSPRINGS

Manross & Son, F. N., Div. of Associated Spring Corp., Bristol, Conn.
Precision Products Co., 26 Bedford St., Waltham, Mass.

854

PRECISION SPRINGS

Accurate Spring Mfg. Co., 3311 W. Lake St., Chicago, Ill.
See Advertisement on Page 139
All Weather Springs, 140 Cedar St., New York 6, N. Y.
Chattillon, John & Sons, 93 Cliff St., New York 7, N. Y.
Palnut Co. Inc., 77 Cordier St., Irvington 11, N. J.
See Advertisement on Page 53
Reliable Spring & Wire Forms Co., 3167 Fulton Rd., Cleveland 9, Ohio
See Advertisement on Page 221
Thomas & Skinner Steel Prod. Co., 1120 E. 23rd St., Indianapolis, Ind.
See Advertisement on Page 278

855

Stands

MICROPHONE STANDS

American Microphone Co., 1915 S. Western Ave., Los Angeles, Cal.
Amperite Co., 561 Broadway, New York, N. Y.
See Advertisement on Page 122
Art Specialty Co., 3245 Lake St., Chicago, Ill.
Astatic Corp., Conneaut, Ohio
See Advertisement on Page 66
Atlas Sound Corp., 1443 39th St., Brooklyn, N. Y.
See Advertisement on Page 244
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio
Electro Voice Corp., South Bend 24, Ind.
See Advertisement on Page 181
McElroy Mfg. Corp., 82 Brookline Ave., Boston 15, Mass.
Meletron Corp., 950 N. Highland Ave., Los Angeles 38, Calif.
Racon Electric Co., Inc., 52 East 19th St., New York 3, N. Y.
See Advertisement on Page 289
Radio Corp. of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Shure Brothers, 225 W. Huron St., Chicago, Ill.
See Advertisement on Page 208
Simpson Mfg. Co., Mark, 188 W. 4th St., New York 14, N. Y.
Special Products Co., 9115 Brookville Rd., Silver Spring, Md.
Turner Co., Cedar Rapids, Iowa
University Loudspeakers Inc., 225 Varick St., New York, N. Y.
See Advertisement on Page 39
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

856

SPEAKER STANDS

Atlas Sound Corp., 1443 39th St., Brooklyn, N. Y.
University Loudspeakers Inc., 225 Varick St., New York, N. Y.

857

Strain Reliefs

Campbell-Reeder, 1027 W. McKinley Street, Milwaukee, Wisc.
Heyman Mfg. Co., Kenilworth, N. J.
See Advertisement on Page 214

858

Suppressors

AUTO RADIO IGNITION SUPPRESSORS

Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio
Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
See Advertisement on Page 192
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway, Brooklyn, N. Y.
Wirt Co., 5221 Greene St., Philadelphia, Pa.

859

FLUORESCENT LIGHT SUPPRESSORS

Atlas Condenser Products Co., 548 Westchester Ave., Bronx, N. Y.

860

IONOTRON STATIC ELIMINATOR SUPPRESSORS

U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

861

NOISE SUPPRESSORS

Aeronautical Radio Mfg. Co., 155 First St., Mineola, L. I., N. Y.
 Atlas Condenser Prods. Co., 548 Westchester Ave., Bronx, N. Y.
 Communication Parts, 1101 N. Paulina St., Chicago 22, Ill.
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio
 Electronic Devices Co., 601 W. 26th St., New York, N. Y.
 Insuline Corp. of Amer., 36-02 35th Ave., Long Island City, N. Y.
 See Advertisement on Page 192
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 See Advertisements on Pages 296, 297
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 Pyramid Elec. Co., 415-421 Tonnele Ave., Jersey City 6, N. J.
 S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
 Solar Mfg. Corp., 285 Madison Ave., New York 17, N. Y.
 Sprague Electric Co., 189 Beaver St., North Adams, Mass.
 See Advertisement on Page 64
 Technical Appliance Corp., 41-06 DeLong Street, Flushing, New York
 Technology Instrument Corp., 1058 Main St., Waltham, Mass.
 Tobe Deutschmann Corp., Filterette Div., Canton, Mass.
 See Advertisements on Pages 91-98
 United Transformer Corp., 150 Varick Street, New York 13, N. Y.
 See Advertisement on Inside Front Cover
 Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183

862

PARASITIC SUPPRESSORS

Clarostat Mfg. Co., Inc., 285-7 6th St., Brooklyn, N. Y.
 See Advertisements on Pages 116-117
 Erie Resistor Corp., 644 W. 12th St., Erie, Pa.
 See Advertisement on Page 147
 Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.
 See Advertisement on Page 215

863

Suspensions

SPEAKER SUSPENSIONS

Hawley Products Co., St. Charles, Ill.
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
 Kay Electric Co., 8 Eaton Place, Newark, N. J.
 See Advertisement on Page 134

864

Switchboards

RADIO SWITCHBOARDS

American Communications Corp., 306 Broadway, New York, N. Y.
 Reliance Instrument Co., 715 N. Kedzie Ave., Chicago, Ill.

865

Switches

AUTOMATIC SWITCHES

Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.

Ocran Corp., Auburn Rd., Seneca Falls, N. Y.
 Signal Engineering & Mfg. Co., 154 W. 14th St., New York, N. Y.

866

COAXIAL CABLE SWITCHES

Bird Electronic Corp., 1800 E. 38th St., Cleveland 14, Ohio
 See Advertisement on Page 227

867

CONTROL SWITCHES

Adams & Westlake Co., Michigan St., Elkhart, Ind.
 See Advertisements on Pages 186-187
 Micro Switch Div., First Industrial Corp., 7 Spring St., Freeport, Ill.

868

DECADE SWITCHES

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

869

ELECTRONIC SWITCHES

Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
 Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Ripley Co., Torrington, Conn.

870

FLOAT TYPE SWITCHES

Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.
 General Electric Co., Schenectady 5, N. Y.

871

KEY SWITCHES

Audio Development Co., 2833-13th Ave. S., Minneapolis 7, Minn.
 Automatic Electric Co., 1033 W. Van Buren St., Chicago 7, Ill.
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Mossman, Donald P., 612 N. Michigan Ave., Chicago 11, Ill.
 Presto Electric Co., Union City, N. J.

872

KNIFE SWITCHES

Arrow-Hart & Hegeman Elec. Co., 103 Hawthorn St., Hartford 6, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland, Ohio
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Phila. 30, Pa.
 Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N. J.
 Trumbull Elec. Mfg. Co., Plainville, Conn.

873

LEVER SWITCHES

Centralab Div. of Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.
 See Advertisement on Page 146
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Control Co., 1200 Soldiers Field Rd., Boston 34, Mass.
 Insuline Corp. of America, 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192

Loge Sound Engineers, J. M., 936 S. Western Ave., Los Angeles 6, Calif.
 Metallic Arts Co., 243 Bdway, Cambridge, Mass.

874

LIMIT SWITCHES

Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.
 Cutler-Hammer, Inc., 315 North 12th St., Milwaukee 1, Wisc.
 Hetherington & Son, Inc., Robert, Sharon Hill, Pa.
 Micro Switch Div. of First Industrial Corp., 7 Spring St., Freeport, Ill.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
 Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
 See Advertisement on Page 290

875

MERCURY SWITCHES

Aerolux Light Corp., 653-11th Ave., New York 19, N. Y.
 Durakool, Inc., 1010 N. Main St., Elkhart, Ind.
 General Electric Co., Bridgeport, Conn.
 See Advertisements on Pages 204, 212
 Hart Mfg. Co., 1110 Bartholomew Ave., Hartford 1, Conn.
 Hermaseal Co., Riverside Dr., Elkhart, Ind.
 See Advertisements on Pages 44, 152, 266
 Littelfuse, Inc., 4755 Ravenswood Ave., Chicago, Ill.
 Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.

876

PRECISION SNAP ACTION SPRING SWITCHES

Aero Electric Co., 1305 Superior Ave., Cleveland, Ohio
 See Advertisement on Page 184
 Grayhill Corp., 1 N. Pulaski Rd., Chicago, Ill.
 Hetherington & Son Inc., Robert, Sharon Hill, Pa.
 Micro Switch Div. of First Industrial Corp., 7 Spring St., Freeport, Ill.

877

PRESSURE OPERATED SWITCHES

Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.
 Cutler-Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wisc.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 See Advertisement on Page 290
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Meletron Corp., 950 N. Highland Ave., Los Angeles 38, Calif.

878

ROTARY and BAND CHANGE SWITCHES

Aircraft Radio Corp., Boonton, N. J.
 See Advertisements on Pages 150-151
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass.
 Audio Products Co., 2101 W. Olive Ave., Burbank, Calif.
 See Advertisement on Page 270
 Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Bradley Co., Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisc.
 Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon
 Bud Radio, Inc., 2118 East 55th St., Cleveland 3, Ohio
 Carter Radio Div., Precision Parts Co., 213 Institute Pl., Chicago 10, Ill.

ELECTRONIC and ALLIED PRODUCTS

Centralab Div., Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wis.

See Advertisement on Page 146

Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.

Communication Products Co., Inc., Route 36, Palmer Ave., Keansburg, N. J.

Cover Dual Signal Systems, Inc., Div. of Electra Voice Corp., 5215-25 Ravenswood Ave., Chicago 40, Ill.

Dielectric Prods. Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.

Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.

General Control Co., 1200 Soldiers Field Rd., Boston 34, Mass.

General Electric Co., Schenectady 5, N. Y.

See Advertisements on Pages 204, 212

General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.

Grayhill Corp., 1 N. Pulaski Rd., Chicago, Ill.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

Herlec Corp., The, 422 N. Fifth St., Milwaukee 3, Wis.

See Advertisement on Page 142

Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.

See Advertisement on Page 192

JBL Instrument Co., 420 E. Providence Rd., Aldan, Pa.

J-B-T Instruments Inc., 441 Chapel St., New Haven 8, Conn.

See Advertisement on Page 293

Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

See Advertisements on Pages 296, 297

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.

Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.

See Advertisement on Page 290

Mossman, Donald P., 612 N. Michigan Ave., Chicago 11, Ill.

Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.

See Advertisement on Page 215

Radiat Service, 720 W. Schubert Ave., Chicago 14, Ill.

Roller-Smith, Bethlehem, Pa.

Shalleross Mfg. Co., 10 Jackson Ave., Colingdale, Pa.

See Advertisement on Page 38

Stackpole Carbon Co., St. Marys, Pa.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila. 44, Pa.

Ucinite Co., 459 Watertown St., Newtonville, Mass.

U. S. Instrument, 19 South Harrison St., East Orange, N. J.

See Advertisement on Page 262

Wirt Co., 5221 Greene St., Philadelphia, Pa.

879

SAFETY SWITCHES

Cannon Elec. Development Co., 3209 Humboldt St., Los Angeles 31, Calif.

See Advertisement on Page 60

Federal Electric Products Co., Inc., 50 Paris St., Newark, N. J.

Micro Switch Div., First Industrial Corp., 7 Spring St., Freeport, Ill.

Wadsworth Elec. Mfg. Co., 20 W. 11th St., Covington, Ky.

880

SLIDE SWITCHES

Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.

See Advertisements on Pages 28-29

Insuline Corp. of America, 3602-35th Ave., L. I. City, N. Y.

See Advertisement on Page 192

Muter Co., 1255 S. Michigan Ave., Chicago, Ill.

Stackpole Carbon Co., St. Marys, Pa.

Wirt Co., 5221 Greene Street, Philadelphia, Pa.

881

SNAP ACTION SWITCHES

Arrow-Hart & Hegeman Elec. Co., 103 Hawthorne St., Hartford 6, Conn.

Carter Radio Div., Precision Parts Co., 213 Institute Place, Chicago 10, Ill.

Micro Switch Div., First Industrial Corp., 7 Spring St., Freeport, Ill.

Muter Co., 1255 S. Michigan Ave., Chicago, Ill.

Mu Switch Corp., Canton 31, Mass.

882

STEP TYPE SWITCHES

Automatic Electric Co., 1033 W. Van Buren St., Chicago 7, Ill.

Carter Radio Div., Precision Parts Co., 213 Institute Pl., Chicago 10, Ill.

Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.

Daven Co., 191 Central Ave., Newark 4, N. J.

See Advertisement on Inside Back Cover

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.

See Advertisements on Pages 299-302

883

TAP SWITCHES

Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass.

Brown Engrg. Co., 4635 S. E. Hawthorne Blvd., Portland 15, Oregon

J B L Instrument Co., 420 E. Providence Rd., Aldan, Pa.

Peerless Labs., 461-467 10th Ave., New York 18, N. Y.

Tech Laboratories, 7 Lincoln St., Jersey City, N. J.

See Advertisement on Page 246

884

THERMAL SWITCHES

Betts & Betts Corp., 551 W. 52nd St., New York, N. Y.

Fenwal Inc., 43 Pleasant St., Ashland, Mass.

General Electric Co., Schenectady 5, N. Y.

See Advertisements on Pages 204, 212

Micro Switch Div., First Industrial Corp., 7 Spring St., Freeport, Ill.

Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.

885

TIME SWITCHES

Cramer Co., R. W., Centerbrook, Conn.

International Register Co., 2620 W. Washington Blvd., Chicago 12, Ill.

J-B-T Instruments Inc., 441 Chapel St., New Haven 8, Conn.

See Advertisement on Page 293

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S. Minneapolis, Minn.

Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.

Paragon Electric Co., 37 W. Van Buren St., Chicago 5, Ill.

Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.

Timing Instr. Co. Inc., 106 Spring St., New York 12, N. Y.

Tork Clock Co., 1 Grove St., Mount Vernon, N. Y.

Wadsworth Electric Mfg. Co., Inc., 20 W. 11th St., Covington, Ky.

Zenith Electric Co., 152 W. Walton St., Chicago, Ill.

886

TOGGLE and PUSHBUTTON SWITCHES

Aero Electric Co., 1316 Superior Ave., Cleveland, Ohio

See Advertisement on Page 184

Alcraft Radio Corp., Boonton, N. J.

See Advertisements on Pages 150-151

Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass.

Bradley Co., A., 136 W. Greenfield Ave., Milwaukee 2, Wis.

Brown Instrument Co., 4428 Wayne Ave., Philadelphia 44, Pa.

Bud Radio, Inc., 2118 E. 55th St. Cleveland 3, Ohio

Carter Radio Div., Precision Parts Co., 213 Institute Place, Chicago 10, Ill.

Cutler-Hammer Inc., 315 North 12th St., Milwaukee 1, Wis.

Dual Remote Control Co., 31776 Cowan Rd., Wayne, Michigan.

Federal Telephone and Radio Corp., 591 Broad St., Newark, N. J.

See Advertisements on Pages 299-302

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

See Advertisement on Page 290

General Electric Co., Bridgeport, Conn.

See Advertisements on Pages 204, 212

Grayhill Corp., 1 N. Pulaski Rd., Chicago, Ill.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.

Hetherington & Son, Inc., Robert, Sharon Hill, Pa.

Insuline Corp. of America, 36-02 35th Ave., Long Island City, N. Y.

See Advertisement on Page 192

J. F. D. Mfg. Co., 4111 Fort Hamilton Parkway, Brooklyn, N. Y.

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 Advertisements on Pages 296, 297

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S. Minneapolis, Minn.

Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.

Morse Co., Frank W., 301 Congress St., Boston 10, Mass.

Mossman, Donald P., 612 N. Michigan Ave., Chicago 11, Ill.

Muter Co., 1255 S. Michigan Ave., Chicago, Ill.

Ucinite Co., 459 Watertown St., Newtonville, Mass.

Utah Radio Products Co., 820 Orleans St., Chicago, Ill.

Ward Leonard Electric Co., 31 South St., Mount Vernon, N. Y.

See Advertisements on Pages 198-199

887

VACUUM SWITCHES

Bitel-McCullough Inc., San Bruno, Calif.

General Electric Co., Schenectady 5, N. Y.

See Advertisements on Pages 204, 212

Sperti, Inc., Norwood Station, Cincinnati 12, Ohio

888

Switch Parts

CONTACTS

Leach Relay Co. Inc., 5915 Avalon Blvd., Los Angeles 8, Calif.

See Advertisement on Page 136

Superior Carbon Products Inc., 9112 George Ave., Cleveland, Ohio

889

CALL LETTER TABS

Bostonian Process Co., 40 W. 13th St., New York 11, N. Y.

Cardy-Lundmark Co., 1801 W. Byron St., Chicago 13, Ill.

Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.

Ever Ready Label Corp., 141-155 E. 25th St., New York 10, N. Y.

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

See Advertisement on Page 290

Hopp Press, Inc., 460 W. 34th St., New York 1, N. Y.

See Advertisement on Page 180

Insuline Corp. of Amer., 3602-35th Ave., Long Island City 10, N. Y.

See Advertisement on Page 192

McInerney Plastics Co., 25 Commerce Ave., S. W., Grand Rapids 2, Mich.

Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.

Photox Silk Screen Supply Co., 30 Irving Pl., New York 3, N. Y.

Plastic Accessories, Inc., 460 Broome St., New York 13, N. Y.

Plastic Fabricators Co., 440 Sansome St., San Francisco 11, Calif.
 Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 3, Calif.
 Premier Crystal Labs., Inc., 63 Park Row, New York 7, N. Y.
 Printloid, Inc., 95 Mercer St., New York 12, N. Y.
 See Advertisement on Page 230
 Wilson Plastics Div., Wilson Magazine Camera Co., 6022 Media St., Phila. 31, Pa.

890

TELEGRAPH TAPE

Foote Pierson & Co., Inc., 75 Hudson St., Newark 4, N. J.
 Paper Manufacturers Co., Philadelphia 18, Pa.

891

Tape, Magnetic

RECORDER TAPE

Indiana Steel Prod. Co., 6 N. Michigan Ave., Chicago, Ill.
 See Advertisement on Page 104

892

Telephones

TELEPHONES, HANDSETS

Aviometer Corp., 370 West 35th St., New York 1, N. Y.
 See Advertisement on Page 226
 Erco Radio Labs, Inc., Fenimore Ave., Hempstead, N. Y.
 See Advertisement on Page 280
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Hose-McCann Products Co., 177 Pacific St., Brooklyn 2, N. Y.
 Western Electric Co. Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182, 183

893

Terminals

Aircraft-Marine Prods., Inc., 1523 No. 4th St., Harrisburg, Pa.
 Carbone Corp., Myrtle Ave., Boonton, N. J.
 Centralab Div., Globe Union Inc., 900 E. Keefe Ave., Milwaukee 1, Wis.
 See Advertisement on Page 146
 Eastern Specialty Co., 3617 N. 3th St., Phila. 40, Pa.
 Frankel Connector Co., 177 Hudson St., New York, N. Y.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 Littelfuse Inc., 4755 Ravenswood Ave., Chicago, Ill.
 Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
 Murdock Mfg. Co., Wm. J., Chelsea, Mass.
 National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 Patton-MacGuyer Co., 17 Virginia Ave., Providence 5, R. I.
 Shakeproof Inc., Div. of Ill. Tool Wks., 2501 N. Keeler Avenue, Chicago 39, Ill.

894

TERMINAL BLOCKS

Aircraft Radio Corp., Boonton, N. J.
 See Advertisements on Pages 150-151
 Burke Elect. Co., 12th & Cranberry Sts., Erie, Pa.
 See Advertisement on Page 228
 Consolidated Molded Products Corp., 309 Cherry St., Scranton 2, Pa.
 See Advertisement on Page 131
 Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.
 Curtis Development & Mfg. Co., 1 N. Crawford Ave., Chicago 21, Ill.

Eby, Inc., H. H., 18 W. Chelton Ave., Phila. 13, Pa.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 IlSCO Copper Tube & Products, Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
 National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 See Advertisement on Page 33
 Rhodes Mfg. Co., 1753 N. Honore St., Chicago, Ill.
 States Co., 19 New Park Ave., Hartford 6, Conn.
 Taylor Fibre Co., Norristown, Pa.
 Thomas & Betts Co. Inc., 36 Butler St., Elizabeth 1, N. J.
 U. S. Instrument, 19 S. Harrison St., East Orange, N. J.
 See Advertisement on Page 282

895

TERMINAL BOARDS

Aircraft-Marine Prods., Inc., 1523 No. 4th St., Harrisburg, Pa.
 Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
 See Advertisement on Page 44
 Cambridge Thermionic Corp., 445 Concord Ave., Cambridge, Mass.
 See Advertisement on Page 67
 Cinch Manufacturing Corp., 2335 W. Van Buren Street, Chicago 12, Ill.
 Electronic Mfg. Co., 20 Orange St., Newark 2, N. J.
 Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
 See Advertisement on Page 201
 Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N. Y.
 See Advertisement on Page 52
 Five Star Radio Co., 416 Broadway, Cambridge, Mass.
 Franklin Mfg. Co., A. W., 175 Varick Street, New York, N. Y.
 See Advertisement on Page 209
 Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.
 Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
 Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Phila., Pa.
 Murdock Mfg. Co., Wm. J., Chelsea, Mass.
 Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill.
 Rhodes Mfg. Co., 1753 N. Honore St., Chicago, Ill.
 The Ucinite Co., Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.

896

HERMETICALLY SEALED TERMINALS

Doolittle Radio Inc., 7421 Loomis Bldg., Chicago 36, Ill.
 See Advertisement on Page 114
 Hernaseal Co., Riverside Dr., Elkhart, Ind.
 See Advertisements on Pages 44, 152, 266
 Hermetic Seal Products Co., 414 Morris Ave., Newark 3, N. J.
 Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118
 Vitrosal Corp., 28 East Electric, Covington, Ky.

897

TERMINAL STRIPS

Aircraft-Marine Prods., Inc., 1523 No. 4th St., Harrisburg, Pa.
 Amalgamated Radio & Television Corp., 476 Broadway, New York 13, N. Y.
 Assembly Prods. Inc., Chagrin Falls, Ohio
 See Advertisement on Page 294
 Brach Mfg. Corp., L. S., 55 Dickerson St., Newark 4, N. J.
 Cinch Mfg. Corp., 2335 W. Van Buren St., Chicago 12, Ill.
 Collins Radio Co., 855-35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Eby, Inc., H. H., 18 Chelton Ave., Phila. 13, Pa.
 Electronic Mfg. Co., 20 Orange St., Newark 2, N. J.

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Franklin Mfg. Co., A. W., 175 Varick Street, New York, N. Y.
 See Advertisement on Page 209
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Greene Mfg. Corp., G. G., Warren, Pa.
 Hermetic Seal Prods. Co., 414 Morris Ave., Newark 3, N. J.
 Insuline Corp. of America, 3602-35th Ave., L. I. City, N. Y.
 See Advertisement on Page 192
 Jones, Howard B., 2460 W. George St., Chicago 18, Ill.
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
 Kulka Electric Mfg. Co. Inc., 30 South St., Mt. Vernon, N. Y.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
 Murdock Mfg. Co., Wm. J., Chelsea, Mass.
 Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill.
 National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
 See Advertisement on Page 282
 Penn-Union Elec. Corp., 315 State St., Erie, Pa.
 Snyder Mfg. Co., 22nd & Ontario Sts., Phila. 40, Pa.
 States Co., 19 New Park Ave., Hartford 6, Conn.

898

Thermocouples

Aerolux Light Corp., 653-11th Ave., New York 19, N. Y.
 General Controls Co., 801 Allen Ave., Glendale, Calif.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Richards, Arklay S., Co., Inc., 78 Winchester St., Newton Highlands 61, Mass.
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125
 Nervac Instrument Co., 101 Vine St., Hartford 5, Conn.

899

Thermopiles

Jarrell-Ash Co., 165 Newbury Street, Boston 16, Mass.

900

TELEVISION TIMERS

Telegrip Radio Co., 1901 S. Washtenaw, Chicago, Ill.

901

Transformers

AUDIO & POWER TRANSFORMERS

Acme Electric & Mfg. Co., 31 Water St., Cuba, N. Y. (Audio & Power)
 Advance Transformer Co., 14 N. May St., Chicago, Ill. (Audio & Power)
 Allied Control Co. Inc., 2 East End Ave., New York 21, N. Y. (Audio & Power)
 See Advertisements on Pages 28-29
 Altec Lansing Corp., 1161 N. Vine St., Hollywood 38, Calif.
 American Television & Radio Co., 300 E. Fourth St., St. Paul 1, Minn. (Power)
 See Advertisement on Page 272
 American Transformer Co., 178 Emmett St., Newark, N. J. (Audio & Power)
 See Advertisement on Page 223
 Anco Products Corp., Paterson, N. J. (Audio & Power)
 Audio Development Co., 2833 13th Ave. S., Minneapolis 7, Minn. (Audio & Power)
 Baxter and Turner Mfg. Co., 148 E. Larned St., Detroit 26, Mich. (Audio & Power)

ELECTRONIC and ALLIED PRODUCTS

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
 Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill. (Audio & Power)
 Commercial Equipment Co., 1416 McGee St., Kansas City, Mo. (Audio)
 Control Corp., 718 Central Ave., Minneapolis 14, Minn. (Power)
 Controls Labs., Inc., 98 Union St., Worcester 8, Mass. (Power)
 Dinton Coil Co. Inc., Caledonia, N. Y. (Audio & Power)
 Dongan Electric Mfg. Co., 2987 Franklin St., Detroit, Mich. (Audio & Power)
 Eisler Engrg. Co., 740 S. 13th St., Newark 3, N. J. (Power)
 Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio (Power)
 Electrical Specialty Co., 2304 Washington St., Boston, Mass. (Audio & Power)
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. (Audio & Power)
 Electricoil Transformer Co., 421 Canal St., New York 13, N. Y. (Audio & Power)
 Electronic Components, 423 N. Western Ave., Los Angeles 4, Calif. (Audio & Power)
 Electronic Controls Inc., 44 Summer Ave., Newark, N. J. (Audio)
 Electronic Engrg. Co. Inc., 3223 W. Armitage Ave., Chicago, Ill. (Audio & Power)
 Electronic Transformer Co., 207 W. 25th St., New York, New York (Audio & Power)
 Engineering Lab. Inc., 602 E. 4th St., Tulsa 3, Okla. (Audio)
 Essex Electronics, 1060 Broad St., Newark 2, N. J. (Audio & Power)
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J. (Audio & Power)
 See Advertisements on Pages 299-302
Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, New York (Audio & Power)
 See Advertisement on Page 52
 Foster Co., A. P., 719 Wyoming Ave., Lockland 15, Ohio (Audio)
 Franklin Transformer Mfg. Co., 65 22nd Ave., N. E., Minneapolis 13, Minn. (Power)
 Freed Transformer Co., 72 Spring St., New York 12, N. Y. (Audio & Power)
 Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8, Calif. (Power)
 General Electric Co., Schenectady 5, N. Y. (Audio & Power)
 See Advertisements on Pages 204, 212
 General Transformer Corp., 1250 W. Van Buren St., Chicago 7, Ill. (Audio & Power)
 Gramer Co., 2734 N. Pulaski Rd., Chicago 39, Ill. (Audio & Power)
 Hadley Co., Robert M., 711 E. 61st St., Los Angeles, Calif. (Audio & Power)
 Halldorson Co., The, 4500 Ravenswood Ave., Chicago 28, Ill. (Audio & Power)
 Hanmarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y. (Audio & Power)
 Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y. (Audio & Power)
 Hollywood Transformer Co., 11034 Blix St., North Hollywood, Calif. (Audio)
 Industrial Transformer Corp., 2540 Belmont Ave., New York 58, N. Y. (Audio & Power)
 See Advertisements on Pages 235, 236, 237, 238
 Intex Co., 303 W. 42nd St., New York 18, N. Y. (Audio)
 See Advertisement on Page 260
 International Transformer Co., 396 Broadway, New York, N. Y. (Audio & Power)
 Islip Radio Mfg. Co., Beech St., Islip, N. Y. (Audio & Power)
 Jefferson Electric Co., Bellwood, Ill. (Audio & Power)
 Jensen Radio Mfg. Co., 6601 S. Laramie Ave., Chicago, Ill. (Audio)
 See Advertisement on Page 36
 Kenyon Transformer Co., 840 Barry St., New York 59, N. Y. (Audio & Power)
 See Advertisement on Page 275
 Kyle Corp., South Milwaukee, Wis.
 Langevin Co. Inc., 37 W. 65th St., New York, N. Y. (Audio & Power)
 See Advertisements on Pages 175, 176, 177, 178
 Magnetic Devices Corp., 76-14 Woodside Ave., Jackson Heights, N. Y. (Audio & Power)
 Magnetic Products Corp., Norwalk, Conn. (Audio & Power)
 Magnetic Windings Co., Div. of Essex Wire Corp., 416 South 16th St., Easton, Pa. (Audio & Power)

Maguire Industries Inc., Electronics Dept., Bridgeport, Conn. (Audio & Power)
 Maico Co. Inc., 25 N. 3rd St., Minneapolis, Minn. (Audio)
 Marcus Transformer Co., 32-34 Montgomery St., Hillside 5, N. J. (Power)
 Miller Co., B. F., Trenton 4, N. J. (Audio & Power)
 Newark Transformer Co., 17 Frelinghuysen Ave., Newark, N. J. (Power)
 New York Transformer Co., 26 Waverly Place, New York 3, N. Y. (Audio & Power)
 Nothelmer Winding Labs., 111 Albemarle Ave., Trenton, N. J. (Power)
 Osborne Transformer Corp., 948 E. Lafayette Ave., Detroit 7, Mich. (Audio & Power)
 Peerless Labs., 461 Tenth Ave., New York 18, N. Y. (Audio & Power)
 Permoflux Corp., 4900 W. Grand Ave., Chicago, Ill. (Audio)
 Pickering & Co., Audio Labs., Oceanside, N. Y. (Power)
 Precision Transformer Co., 733 W. Ohio St., Chicago 10, Ill. (Audio & Power)
 Radio Development & Research Co., 26 Cornellson Ave., Jersey City, N. J. (Audio & Power)
 Radionic Controls, Inc., 3758 Belmont Ave., Chicago 18, Ill. (Audio & Power)
Raytheon Mfg. Co., Electronic Equip. Div., Waltham 54, Mass. (Audio & Power)
 See Advertisement on Page 135
 Red Arrow Electric Corp., 100 Coit St., Irvington, N. J. (Audio & Power)
 Rola Co. Inc., 2530 Superior Ave., Cleveland, Ohio (Audio)
 "S" Corrugated Quenched Gap Co., Scientific Elec. Div., 107 Monroe St., Garfield, N. J. (Power)
 Sorzel Elec. Co., 838 W. National Ave., Milwaukee 4, Wisc. (Power)
 Stamford Electric Prods. Co., Inc., Sunnyside Ave., Stamford, Conn. (Audio & Power)
 Standard Transformer Corp., 1500 N. Halsted St., Chicago, Ill. (Audio & Power)
 Stockwell Transformer Co., 295 N. State St., Concord, New Hampshire (Audio & Power)
 Submarine Signal Co., 160 State St., Boston, Mass. (Audio & Power)
 Super Elec. Prods. Corp., 1057 Summit Ave., Jersey City, N. J. (Audio & Power)
 Swain Nelson Co., 2320 Glenview Rd., Glenview, Ill. (Audio & Power)
 Technology Instrument Corp., 1053 Main St., Waltham, Mass. (Audio & Power)
 Thermador Electric Mfg. Co., 5119 S. Riverside Drive, Los Angeles 22, Calif. (Audio & Power)
 Thordarson Elec. Mfg. Div. Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill. (Audio & Power)
 Transformer Products Inc., 143 W. 51st St., New York, N. Y. (Audio & Power)
United Transformer Corp., 150 Varick St., New York 13, N. Y. (Audio & Power)
 See Advertisement on Inside Front Cover
 Utah Radio Prods. Co., 820 Orleans St., Chicago, Ill. (Audio & Power)
Walker-Jimieson, 311 S. Western Ave., Chicago 12, Ill.
 See Advertisement on Page 59
 Walsh Engineering Co., 34 De Hart Pl., Elizabeth, N. J. (Audio & Power)
 Westinghouse Electric Corp., East Pittsburgh, Pa. (Power)
 See Advertisement on Pages 17-20, 190, 191

902

AUTO-TRANSFORMERS

Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
 Electrical Specialty Co., 2304 Washington St., Boston, Mass.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
General Electric Co., Schenectady, N. Y.
 See Advertisements on Pages 204, 212
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
 Newark Transformer Co., 17 Frelinghuysen Ave., Newark 5, N. J.
 New York Transformer Co., 26 Waverly Pl., New York 3, N. Y.
Raytheon Mfg. Co., Electronic Equip. Div., Waltham 54, Mass.
 See Advertisement on Page 135
 Standard Transformer Corp., 1500 N. Halsted St., Chicago, Ill.
Superior Electric Co., 83 Laurel St., Bristol, Conn.
 See Advertisements on Pages 5-16

903

BLOCKING OSCILLATOR TRANSFORMERS

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
Freed Transformer Co., 72 Spring St., New York 12, N. Y.
Raytheon Mfg. Co., Electronic Equip. Div., Waltham 54, Mass.
 See Advertisement on Page 135

904

CURRENT TRANSFORMERS

Allied Control Co. Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
Burlington Instrument Corp., 214 North 4th St., Burlington, Iowa
Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
Electronic Engineering Co., Inc., 3223 W. Armitage Ave., Chicago, Ill.
Electronic Transformer Co., 207 W. 25th St., New York, N. Y.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
General Electronics, Inc., 101 Hazel St., Paterson, N. J.
Miller Co., B. F., Trenton 4, N. J.
National Transformer Corp., 56 State St., Paterson, N. J.
New York Transformer Co., 26 Waverly Pl., New York 3, N. Y.
Nothelmer Winding Labs., 111 Albemarle Ave., Trenton, N. J.
Scientific Service Lab., Subsidiary Electronics Inc., 915 Meridian Ave., S. Pasadena, Calif.
Stockwell Transformer Co., 295 State St., Concord, New Hampshire
Thordarson Electric Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill.
Transformer Products, Inc., 143 W. 51st St., New York, N. Y.
United Transformer Corp., 150 Varick St., New York 13, N. Y.
 See Advertisement on Inside Front Cover
Walsh Engineering Co., 34 Dehart Pl., Elizabeth, N. J.

905

DISCRIMINATOR TRANSFORMERS

Electronic Engrg. Co. Inc., 3223 W. Armitage Ave., Chicago, Ill.
Madison Electrical Products Corp., 74 Main St., Madison, N. J.
 See Advertisement on Page 232
Special Products Co., 9115 Brookville Rd., Silver Springs, Md.

906

INSTRUMENT TRANSFORMERS

Allied Control Co. Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
Burlington Instrument Corp., 214 N. 4th St., Burlington, Iowa
Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.
Electronic Engineering Co., Inc., 3223 W. Armitage Ave., Chicago, Ill.
Electronic Transformer Co., 207 W. 25th St., New York, N. Y.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
Foster Co., A. P., 719 Wyoming Ave., Lockland 15, Ohio
Miller Co., B. F., Trenton 4, N. J.
Nothelmer Winding Labs., 111 Albemarle Ave., Trenton, N. J.
Scientific Service Lab., Subsidiary Electronics, Inc., 915 Meridian Ave., S. Pasadena, Calif.
Transformer Products Inc., 143 W. 51st St., New York, N. Y.
United Transformer Corp., 150 Varick St., New York 13, N. Y.
 See Advertisement on Inside Front Cover

Walsh Engineering Co., 34 De Hart Place, Elizabeth, N. J.
 Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
 See Advertisement on Page 249

907

MICROPHONE TRANSFORMERS

Aircraft Radio Corp., Boonton, N. J.
 See Advertisements on Pages 150, 151
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
 Electro Voice Inc., 1329 S. Bend Ave., South Bend, Ind.
 See Advertisement on Page 181
 Electronic Engrg. Co., Inc., 3223 W. Armitage Ave., Chicago, Ill.
 New York Transformer Co., 26 Waverly Pl., New York 3, N. Y.
 Permoflux Corp., 4900 W. Grand Ave., Chicago, Ill.
 Shure Bros., 225 W. Huron St., Chicago, Ill.
 See Advertisement on Page 208
 Stamford Electric Prods. Co., Inc., Sunnyside Ave., Stamford, Conn.
 Utah Radio Prods. Co., 820 Orleans St., Chicago, Ill.

908

MICROWAVE TRANSFORMERS

Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

909

MINIATURE TRANSFORMERS

Electronic Engineering Co., Inc., 3223 W. Armitage Ave., Chicago, Ill.
 Malco Co. Inc., 25 North 3rd St., Minneapolis, Minn.
 Permoflux Corp., 4900 W. Grand Ave., Chicago, Ill.
 Radionic Controls, Inc., 3758 Belmont Ave., Chicago 18, Ill.
 Telex Prods. Co., Telex Park, Minneapolis 1, Minn.
 See Advertisement on Page 266
 United Transformer Corp., 150 Varick St., New York 13, N. Y.
 Vacolite Co., 3001-3003 N. Henderson, Dallas, Texas.

910

PLUG-IN TRANSFORMERS

Dongan Electric Mfg. Co., 2987 Franklin St., Detroit 7, Mich.
 Electricoil Transformer Co., 421 Canal St., New York 13, N. Y.
 Electronic Transformer Co., 207 W. 25th St., New York, N. Y.
 Fairchild Camera & Instrument Corp., 475-10th Ave., New York 18, N. Y.
 General Winding Co., 420 W. 45th St., New York 19, N. Y.
 Industrial Transformer Corp., 2540 Belmont Ave., New York 58, N. Y.
 See Advertisements on Pages 235-238
 Kenyon Transformer Co., Inc., 840 Barry St., New York 59, N. Y.
 See Advertisement on Page 273
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 Newcomb Audio Products Co., 2815 S. Hill St., Los Angeles 7, Calif.
 New York Transformer Co., 62 William St., New York, N. Y.
 Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
 Raytheon Mfg. Co., Newton 58, Mass.
 See Advertisement on Page 135
 Rittenhouse Co., A. E., Honeoye Falls, N. Y.
 Sitton Transformer Corp., 763 Tifton St., N. W., Atlanta, Ga.
 Stockwell Transformer Corp., 295 N. State St., Concord, N. H.
 Super Electric Prods. Corp., 1057 Summit Ave., Jersey City, N. J.
 United Transformer Corp., 150 Varick St., New York 13, N. Y.
 See Advertisement on Inside Front Cover

911

PULSE TRANSFORMERS

Freed Transformer Co., 72 Spring St., New York 12, N. Y.

Raytheon Mfg. Co., Electronic Equip. Div., Waltham 54, Mass.
 See Advertisement on Page 135
 S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
 Westinghouse Electric Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

912

RF AND IF TRANSFORMERS

Acme Electric & Mfg. Co., 31 Water St., Cuba, N. Y.
 Airdesign Inc., 241 Fairfield Ave., Upper Darby, Pa.
 Aladdin Radio Industries, Inc., 501 W. 35th St., Chicago 16, Ill.
 Albion Coil Co., Albion, Ill.
 Automatic Mfg. Co., 900 Passaic Ave., East Passaic, N. J.
 See Advertisement on Page 119
 Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
 Bittermann Elec. Co., 50 Henry St., Brooklyn, N. Y.
 Bridgeport Mfg. Co., Bridgeport, Ill.
 Cambridge Thermionic Corp., 445 Concord Ave., Cambridge, Mass.
 See Advertisement on Page 67
 Communication Parts, 1101 N. Paulina St., Chicago 22, Ill.
 Electronic Lab. Inc., Indianapolis, Ind.
 Federal Telephone and Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Harnett Elec. Corp., 138 Haven Ave., Port Washington, L. I., N. Y.
 See Advertisement on Page 293
 Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
 Joyner Corp., The, 462 N. Parkside Ave., Chicago 44, Ill.
 Kraft & Kraft, Hicksville, N. Y.
 Madison Electrical Products Corp., Madison, N. J.
 See Advertisement on Page 232
 McMurdo Silver Co., 1240 Main St., Hartford 3, Conn.
 Melssner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Monarch Mfg. Co., 2014 N. Major Ave., Chicago 39, Ill.
 Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
 National Co., Inc., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 Newcomb Audio Prods. Co., 2815 S. Hill St., Los Angeles 7, Calif.
 Osborne Transformer Corp., 948 E. Lafayette Ave., Detroit 7, Mich.
 Precision Tube Co., 3828 Terrace St., Phila. 28, Pa.
 See Advertisement on Page 298
 Radio Development & Research Co., 26 Cornellison Ave., Jersey City, N. J.
 S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.
 Special Prods. Co., 9115 Brookville Rd., Silver Spring, Md.
 Stanwyck Winding Co., 102 S. Lander St., Newburgh, N. Y.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Thermador Elec. Mfg. Co., 5119 S. Riverside Dr., Los Angeles 22, Calif.
 Transformer Products Inc., 143 W. 51st St., New York, N. Y.
 United Transformer Corp., 150 Varick St., New York 13, N. Y.
 See Advertisement on Inside Front Cover
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisement on Pages 17-20; 190, 191

913

RHOMBIC ANTENNA COUPLING TRANSFORMERS

Andrew Co., 363 E. 75th St., Chicago 19, Ill.

914

IGONE OSCILLATOR TRANSFORMERS

Aircraft Radio Corp., Boonton, N. J.
 See Advertisement on Pages 150, 151

915

ULTRASONIC TRANSFORMERS

Freed Transformer Co., 72 Spring St., New York 12, N. Y.

916

VACUUM MICROWAVE TRANSFORMERS

Jennings Radio Mfg. Co., 1098 E. William St., San Jose 12, Calif.
 See Advertisement on Page 250

917

VOLTAGE REGULATING TRANSFORMERS

Allied Control Co. Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28-29
 Electrical Specialty Co., 2304 Washington St., Boston, Mass.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
 Electronic Engineering Co., Inc., 3223 W. Armitage Ave., Chicago, Ill.
 Electronic Transformer Co., 207 W. 25th St., New York, N. Y.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Foster Co., A. P., 719 Wyoming Ave., Lockland 15, Ohio
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Gulow Corp., 26 Waverly Pl., New York 3, N. Y.
 Halldorson Co., 4500 Ravenswood Ave., Chicago 23, Ill.
 Miller Co., Trenton 4, N. J.
 National Transformer Corp., 56 State St., Paterson, N. J.
 Sola Electric Co., 2525 Clybourn Ave., Chicago 14, Ill.
 Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.
 See Advertisement on Page 247
 Stamford Electric Prods. Co., Inc., Sunnyside Ave., Stamford, Conn.
 Standard Elec. Prods. Co., 400 Linden Ave., Dayton 3, Ohio
 Standard Transformer Corp., 1500 N. Halsted St., Chicago, Ill.
 Stockwell Transformer Co., 295 N. State St., Concord, New Hampshire
 Superior Electric Co., 83 Laurel St., Bristol, Conn.
 Thordarson Elec. Mfg. Div., Maguire Industries, Inc., 500 W. Huron St., Chicago 10, Ill.
 Transformer Products Inc., 143 W. 51st St., New York, N. Y.
 United Transformer Corp., 150 Varick St., New York 13, N. Y.
 Walker-Jimieson, 311 S. Western Ave., Chicago 12, Ill.
 See Advertisement on Page 59
 Westinghouse Electric Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191

918

WELDING TRANSFORMERS

Airdesign Inc., 241 Fairfield Ave., Upper Darby, Pa.
 Allied Control Co. Inc., 2 East End Ave., New York 21, N. Y.
 See Advertisements on Pages 28, 29
 Dongan Elec. Mfg. Co., 2987 Franklin St., Detroit 7, Mich.
 Eisler Engrg. Co., 740 S. 13th St., Newark 3, N. J.
 Electronic Engrg. Co., Inc., 2223 W. Armitage Ave., Chicago, Ill.
 Electronic Transformer Co., 207 W. 25th St., New York, N. Y.
 Gardner Elec. Mfg. Co., 4227 Hollis St., Emeryville 8, Calif.
 General Electric Co., Schenectady, N. Y.
 See Advertisements on Pages 204, 212
 Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
 Magnetic Devices Corp., 76-14 Woodside Ave., Jackson Heights, N. Y.
 Marcus Transformer Co., 32-34 Montgomery St., Hillside 5, N. J.
 Miller Co., E. F., Trenton 4, N. J.
 New York Transformer Co., 26 Waverly Pl., New York 3, N. Y.

ELECTRONIC and ALLIED PRODUCTS

Sciaky Bros., 4915 W. 67th Street, Chicago 38, Ill.
 Sorgel Electric Co., 838 W. National Ave., Milwaukee 4, Wisc.
 Standard Transformer Corp., 1500 N. Halsted St., Chicago, Ill.

919

Traps, Wave

Kings Electronics Co., 372 Classon Ave., Brooklyn 5, N. Y.
 See Advertisement on Page 262
 Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.

920

Tube Parts

ANODES Metal Anodes

Art Wire & Stamping Co., 227 High St., Newark 2, N. J.
 duPont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Superior Tube Co., Norristown, Pa.
 See Advertisement on Page 37
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

921

Graphite Anodes

National Carbon Co., Inc., 30 E. 42nd St., New York, N. Y.
 See Advertisement on Page 207
 Speer Carbon Co., Lincoln Ave., St. Marys, Pa.
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

922

GOLD ANODES

Handy & Harman, 82 Fulton St., New York 7, N. Y.

923

Carbon Anodes

Becker Bros. Carbon Co., 3450 S. 52nd Ave., Cicero, Ill.

924

SILVER ANODES

Handy & Harman, 82 Fulton St., New York 7, N. Y.

925

METALLIZED GRAPHITE ANODES

Becker Bros. Carbon Co., 3450 S. 52nd Ave., Chicago, Ill.
 Speer Carbon Co., Lincoln Ave., St. Marys, Pa.
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

926

BASE PINS

Art Wire and Stamping Co., 227 High Street, Newark 2, N. J.
 Bead Chain Mfg. Co., 110 Mt. Grove St., Bridgeport 5, Conn.

927

BASES

American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
 See Advertisement on Page 21

Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.

See Advertisement on Page 201
 Engineering Co., 27 Wright St., Newark, N. J.

See Advertisements on Pages 266, 268
 Howard Mfg. Co., 15 Fourth St., Council Bluffs, Iowa
 Steward Mfg. Co., D. M. E., 36th St., Chattanooga, Tenn.

Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

928

BULBS and ENVELOPES

Corning Glass Wks., Corning, N. Y.
 Libbey Div., Owens Illinois Glass Co., P. O. Box 1035, Toledo 1, Ohio

929

CAPS

Engineering Co., 27 Wright St., Newark, N. J.

See Advertisements on Pages 266, 268
 Goat Metal Stampings Inc., 314 Dean St., Brooklyn, N. Y.

See Advertisements on Page 303
 Insuline Corp. of Amer., 3602-35th Ave., L. I. City, N. Y.

See Advertisement on Page 192
 Johnson Co., E. F., Waseca, Minn.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

See Advertisement on Page 220
 National Co., 61 Sherman St., Malden 48, Mass.

See Advertisement on Page 291

930

CATHODE SLEEVES AND TUBES

General Plate Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass. (seamless tubing)

Precision Labs., Inc., Irvington, N. J. (lockseam type)

Precision Tube Co., 3828 Terrace St., Phila. 28, Pa.

See Advertisement on Page 298
 Radio Corp. of America, RCA Victor Div., Camden, N. J. (lockseam type)

See Advertisement on Back Cover
 Superior Tube Co., Norristown, Pa. (lapseam, lockseam, seamless type)

See Advertisement on Page 37
 Swedish Iron & Steel Corp., East Pittsburgh, Pa.

Westinghouse Electric Corp., East Pittsburgh, Pa.

See Advertisement on Pages 17-20; 190, 191

931

CATHODE RAY TUBE POWDERS

U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

932

CATHODE RAY TUBE SIDE CONTACTS

Krenientz & Co., 49 Chestnut St., Newark 5, N. J.

933

CERAMIC TUBE PARTS

American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.

See Advertisement on Page 21
 Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.

Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.

See Advertisement on Page 118

934

FILAMENT WIRE

Art Wire & Stamping Co., 227 High St., Newark 2, N. J.

Callite Tungsten Corp., 544 39th St., Union City, N. J.

See Advertisement on Page 35

Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland, Ohio

Driver Co., Wilbur B., 150 Riverside Ave., Newark, N. J.

Fansteel Metallurgical Corp., 2200 Sheridan Rd., No. Chicago, Ill.

See Advertisement on Page 121
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.

See Advertisement on Page 125
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

935

GETTERS

Callite Tungsten Corp., 544 39th St., Union City, N. J.

See Advertisement on Page 35
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

See Advertisement on Page 121
 Foote Mineral Co., 1609 Summer St., Phila. Pa.

Kemet Lab. Co. Inc., W. 117th St. & Madison Ave., Cleveland 1, Ohio

King Labs. Inc., 205 Onelda St., Syracuse 4, N. Y.

See Advertisement on Page 280
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.

See Advertisement on Back Cover

936

GRIDS & SUPPORTS

Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio

Goat Metal Stampings, Inc., 314 Dean St., Brooklyn, N. Y.

See Advertisements on Page 303
 National Carbon Co., Inc., 30 E. 42nd Street, New York, New York

See Advertisement on Page 207
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.

See Advertisement on Page 125

937

GRID WIRE

Driver Co., Wilbur B., 150 Riverside Ave., Newark, N. J.

938

HEAT RADIATORS

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.

See Advertisements on Pages 299-302

939

METAL SUPPORTS

Art Wire and Stamping Co., 227 High St., Newark 2, N. J.

Centralab Div., Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisc.

See Advertisement on Page 146
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

See Advertisement on Page 121
 Goat Metal Stampings Inc., 314 Dean St., Brooklyn, N. Y.

See Advertisements on Page 303

940

MICA SUPPORTS

Ford Radio & Mica Corp., 538-63rd St., Brooklyn, New York.

See Advertisement on Page 126
 Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.

Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.

See Advertisement on Page 125

941

TUBE SEAL LEADS

Bead Chain Mfg. Co., 110 Mt. Grove St., Bridgeport 5, Conn.

Callite Tungsten Corp., 544 39th St., Union City, N. J.

See Advertisement on Page 35

Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland 5, Ohio
 Engineering Co., 27 Wright St., Newark, N. J.
 See Advertisements on Pages 266, 268
 Glendale Vacuum Products Co., 8816 77th Ave., Brooklyn 27, N. Y.
 Hermaseal Co., Riverside Dr., Elkhart, Ind.
 See Advertisements on Pages 44, 152, 266
 Hermetic Seal Products Co., 416 Morris Ave., Newark, N. J.
 See Advertisement on Page 233
 Litton Engineering Labs., P. O. Box 749, Redwood City, Calif.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
 See Advertisement on Page 125
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 190, 191
 York Electric & Machine Co., Carillotone Div., 30-34 N. Penn St., York, Pa.

942

WATER JACKETS

Eastern Engineering Co., 45 Fox St., New Haven, Conn.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover

943

WIRE PARTS

Art Wire and Stamping Co., 227 High St., Newark 2, N. J.
 Bead Chain Mfg. Co., 110 Mt. Grove St., Bridgeport 5, Conn.
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
 See Advertisement on Page 121
 Goat Metal Stampings Inc., 314 Dean St., Brooklyn, N. Y.
 See Advertisement on Page 303

944

Tubes

BALLAST TUBES

Amperite Co., 561 Broadway, New York, N. Y.
 See Advertisement on Page 122
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y.
 National Union Radio Corp., 15 Washington St., Newark 2, N. J.
 See Advertisement on Page 61
 Standard Arcturus Corp., 30 Court St., Newark 2, N. J.
 Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
 See Advertisement on Page 125
 Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.

945

BATTERY CHARGER TUBES

Baldor Electric Co., 4353 Duncan Ave., St. Louis, Mo.
 Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio
 General Electric Co., Bridgeport 2, Conn.
 See Advertisements on Pages 204, 212

946

BOLOMETER TUBES

Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

947

CATHODE RAY TUBES

Askania Regulator Co., 1603 So. Michigan Ave., Chicago 16, Ill.
 DuMont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
 Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Ill.
 See Advertisement on Page 278
 Electronic Tube Corp., 1200 E. Mermaid Ave., Chestnut Hill, Phila., Pa.
 See Advertisement on Page 248
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Machlett Labs., Springdale, Conn.
 See Advertisement on Page 263
 National Union Radio Corp., 15 Washington St., Newark 2, N. J.
 See Advertisement on Page 61
 North American Philips Co., 100 East 42nd St., New York 17, N. Y.
 Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
 See Advertisement on Back Cover
 Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
 Raytheon Mfg. Co., Power Tube Div., Waltham 54, Mass.
 See Advertisement on Page 135
 Standard Arcturus Corp., 99 Sussex Ave., Newark, N. J.
 Sylvania Electric Prods., Inc., 500 Fifth Ave., New York, N. Y.
 See Advertisement on Page 125
 Zetka Lab. Inc., 198 10-12 32nd Ave., Bay-side, N. Y.

948

ELECTROMETER TUBES

Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

949

GEIGER TUBES

Aerolux Light Corp., 653-11th Ave., New York 19, N. Y.
 Atomic Instruments Co., 160 Charles St., Boston, Mass.
 See Advertisement on Page 202
 Cyclotron Specialties Co., Morago 8, Calif.
 General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.
 Geophysical Instrument Co., Key Blvd. & Nash St., Arlington, Va.
 Herbach & Rademan Co., 517 Ludlow St., Phila. 6, Pa.
 Instrument Development Labs., 817 E. 55th St., Chicago 15, Ill.
 North American Philips Co. Inc., 100 E. 42nd St., New York 17, N. Y.
 Rowe Radio Research Labs., 2422 N. Pulaski Rd., Chicago 39, Ill.
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125
 Trion Electric Corp., 76 Ellicott St., Buffalo 3, N. Y.
 Victoreen Instrument Co., 3806 Hough Ave., Cleveland 3, Ohio
 Waterman Products Co., Inc., 2445-63 Emerald St., Phila. 25, Pa.
 See Advertisement on Page 232

950

HEARING AID TUBES

Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
 National Union Radio Corp., 15 Washington St., Newark 2, N. J.
 See Advertisement on Page 61
 Radio Corp. of America, Tube Div., Harrison, N. J.
 See Advertisement on Back Cover
 Raytheon Mfg. Co., Receiving Tube Div., Newton 58, Mass.
 See Advertisement on Page 135
 Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
 Standard Arcturus Corp., 99 Sussex Ave., Newark, N. J.
 Sylvania Elec. Prods., Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

Tung-Sol Lamp Works, Inc., 95 Eighth Ave., Newark 4, N. J.
 See Advertisement on Page 120
 Victoreen Instrument Co., 5806 Hough Ave., Cleveland 3, Ohio

951

INDUSTRIAL TUBES

Aerolux Light Corp., 653-11th Ave., New York 19, N. Y.
 Aireon Mfg. Corp., Fairfax & Funston Rds., Kansas City 15, Kansas
 See Advertisement on Page 130
 Atomic Instruments Co., 160 Charles St., Boston, Mass.
 See Advertisement on Page 202
 Ballantine Labs. Inc., Boonton, N. J.
 See Advertisement on Page 124
 Chatham Electronics, 457 Washington St., Newark 2, N. J.
 See Advertisement on Page 145
 Electronic Enterprises Inc., 55 7th Ave., Newark 4, N. J.
 Electrons Inc., 127 Sussex Ave., Newark, N. J.
 See Advertisement on Page 138
 Federal Telephone and Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Freeland & Oschner Prod. Inc., 611 Baronne St., New Orleans, La.
 General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 General Electronics, Inc., 1819 Broadway, New York 23, N. Y.
 Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
 Jennings Radio Mfg. Co., 1098 E. William St., San Jose 12, Calif.
 See Advertisement on Page 250
 Lewis Electronics, Los Gatos, Calif.
 Machlett Labs., Springdale, Conn.
 See Advertisement on Page 263
 Mellaphone Corp., Rochester 2, N. Y.
 Raytheon Mfg. Co., Power Tube Div., Waltham 54, Mass.
 See Advertisement on Page 135
 Standard Arcturus Corp., 99 Summer Ave., Newark, N. J.
 Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125
 Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
 United Electronics Co., 42 Spring St., Newark 2, N. J.
 See Advertisement on Page 32
 Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
 See Advertisements on Pages 182-183
 Westinghouse Elec. Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17, 18, 19, 20, 190, 191

952

KLYSTRON TUBES

Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160
 Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

953

MAGNETRON TUBES

General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
 See Advertisement on Page 125

954

MICROWAVE RECEIVING OR TRANSMITTING TUBES

General Electric Co., Syracuse, N. Y.
 See Advertisements on Pages 204, 212
 Machlett Labs., Springdale, Conn.
 See Advertisement on Page 263
 Raytheon Mfg. Co., Power Tube Div., Waltham 54, Mass.
 See Advertisement on Page 135
 Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

ELECTRONIC and ALLIED PRODUCTS

955

PHOTOTUBES & PHOTOCELLS

Bradley Laboratories, 82 Meadow St., New Haven, Conn.
See Advertisement on Page 222
Continental Electric Co., 903 Merchandise Mart, Chicago 54, Ill.
Detect-O-Ray Co., 3836 Hull Street, Skokie, Ill.
Eby, Inc., Hugh H., 18 W. Chelton Ave., Philadelphia 13, Pa.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
General Scientific Corp., 4829 S. Kedzie Ave., Chicago, Ill.
Hoffman Engineering Co., 458 Sexton Bldg., Minneapolis 4, Minn.
National Union Radio Corp., 15 Washington St., Newark 2, N. J.
See Advertisement on Page 61
Radio Corp. of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
Selenium Corp. of America, 1719 W. Pico Blvd., Los Angeles 15, Calif.
See Advertisement on Page 132
Standard Arcturus Corp., 99 Sussex Ave., Newark, N. J.
Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183
Westinghouse Electric Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191
Weston Electrical Instrument Corp., 618 Frelinghuysen Ave., Newark 5, N. J.
See Advertisement on Page 249
Worner Electronic Devices, 609 W. Lake St., Chicago 6, Ill.

956

PIRANI TUBES

Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125

957

QUARTZ TUBES FOR SHORT WAVE MEDICAL APPARATUS

Kemlite Labs., 1809 N. Ashland Ave., Chicago, Ill.

958

RECEIVING TUBES

General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
National Union Radio Corp., 15 Washington St., Newark 2, N. J.
See Advertisement on Page 61
Radio Corp. of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Raytheon Mfg. Co., Receiving Tube Div., Newton 58, Mass.
See Advertisement on Page 135
Standard Arcturus Corp., 99 Sussex Ave., Newark, N. J.
Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
See Advertisement on Page 125
Tung-Sol Lamp Works Inc., 95 Eighth Ave., Newark, N. J.
See Advertisement on Page 120
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183
Zetka Labs. Inc., 198-10-12 32nd Ave., Bay-side, N. Y.

959

RECTIFYING TUBES

Amperex Electronic Corp., 25 Washington St., Brooklyn, N. Y.
Chatham Electronics, 475 Washington St., Newark 2, N. J.
Continental Electric Co., 903 Merchandise Mart, Chicago 54, Ill.

Eitel-McCullough, Inc., San Bruno, Calif.
Electric Heat Control Co., 9123 Inman Ave., Cleveland 5, Ohio
Electronic Enterprises Inc., 65 7th Ave., Newark 4, N. J.
Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
General Electronics, Inc., 1819 Broadway, New York 23, N. Y.
Heintz & Kaufman, Ltd., South San Francisco, Calif.
See Advertisement on Page 154
Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
Industrial & Commercial Electronics, Belmont, Calif.
Lewis Electronics, Los Gatos, Calif.
Machlett Laboratories, Springdale, Conn.
See Advertisement on Page 263
Raytheon Mfg. Co., Receiving Tube Div., Newton 58, Mass.
See Advertisement on Page 135
Standard Arcturus Corp., 99 Sussex Ave., Newark, N. J.
Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
See Advertisement on Page 125
Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
Tung-Sol Lamp Works Inc., 95 8th Ave., Newark, N. J.
See Advertisement on Page 120
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183
Westinghouse Electric Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

960

SONIC GAS-FILLED TUBES

Kemlite Labs., 1809 N. Ashland Ave., Chicago, Ill.

961

STROBOTRONS

Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
See Advertisement on Page 125

962

SUBMINIATURE TUBES

Raytheon Mfg. Co., Receiving Tube Div., Newton 58, Mass.
See Advertisement on Page 135
Victoreen Instrument Co., 2806 Hough St., Cleveland 3, Ohio

963

TELEVISION PICKUP TUBES

General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Remington Rand, Electronic Div., Middletown, Conn.

964

THYRATRONS

Continental Electric Co., 903 Merchandise Mart, Chicago 54, Ill.
Du Mont Labs., Inc., Allen B., 2 Main Ave., Passaic, N. J.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
See Advertisement on Page 125
Westinghouse Electric Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

965

TRANSMITTING and POWER TUBES

Aireon Mfg. Corp., Fairfax & Funston Rds., Kansas City 15, Kansas
See Advertisements on Page 130
Amperex Electronic Corp., 25 Washington St., Brooklyn, N. Y.

Chatham Electronics, 475 Washington St., Newark 2, N. Y.

See Advertisement on Page 145
Eitel-McCullough, Inc., San Bruno, Calif.
Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.
Freeland & Olschner Prod. Inc., 611 Baronne St., New Orleans, La.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
General Electronics, Inc., 1819 Broadway, New York 23, N. Y.
Heintz & Kaufman, Ltd., South San Francisco, Calif.
See Advertisement on Page 154
Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
Industrial & Commercial Electronics, Belmont, Calif.
Jennings Radio Mfg. Co., 1098 E. William St., San Jose 12, Calif.
See Advertisement on Page 250
Kluge Electronics Co., 1031 N. Alvarado St., Los Angeles 26, Calif.
Lewis Electronics, Los Gatos, Calif.
Machlett Laboratories, Springdale, Conn.
See Advertisement on Page 263
Radio Corp. of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover
Raytheon Mfg. Co., Receiving Tube Div., Newton 58, Mass.
See Advertisement on Page 135
Standard Arcturus Corp., 99 Sussex Ave., Newark, N. J.
Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
See Advertisement on Page 125
Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
United Electronics Co., 42 Spring St., Newark 2, N. J.
See Advertisement on Page 32
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183
Zetka Labs. Inc., 198-10-12 32nd Ave., Bay-side, N. Y.

966

TR & ANTI TR TUBES

Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
See Advertisement on Page 125

967

U.H.F. TUBES

Amperex Electronic Corp., 25 Washington St., Brooklyn 1, N. Y.
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
National Union Radio Corp., 15 Washington St., Newark 2, N. J.
See Advertisement on Page 61
Standard Arcturus Corp., 99 Sussex Ave., Newark, N. J.
Sylvania Electric Products, Inc., 500 Fifth Ave., New York 18, N. Y.
See Advertisement on Page 125

968

VACUUM THERMOCOUPLE TUBES

American Thermo Elect. Co., 67 E. 8th St., New York 3, N. Y.
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

969

VOLTAGE REGULATING TUBES

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
General Electronics, Inc., 1819 Broadway, New York 23, N. Y.
Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.
Standard Arcturus Corp., 99 Sussex Ave., Newark, N. J.
Sylvania Electric Prods., Inc., 500 5th Ave., New York 18, N. Y.
See Advertisement on Page 125
Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
Western Electric Co., Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183
Westinghouse Electric Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

970

X-RAY TUBES

General Electric X-Ray Corp., 2012 Jackson Blvd., Chicago, Ill.
Machlett Laboratories, Springdale, Conn.
 See Advertisement on Page 263
 North American Phillips Co., Inc., Metallix Div., 100 East 42nd St., New York, N. Y.
 Picker X-Ray Corp., 300 Fourth Ave., New York 10, N. Y.
 Sheboygan X-Ray Co., 817 Center St., Sheboygan, Wisc.
 Standard Arcoturus Corp., 99 Sussex Ave., Newark 2, N. J.
 Standard X-Ray Co., 1932 North Burling St., Chicago 14, Ill.
 Universal X-Ray Products, Inc., 1800 N. Francisco Ave., Chicago 47, Ill.
 Westinghouse Electric Corp., East Pittsburgh, Pa.
 See Advertisements on Pages 17-20; 196, 191

971

Tuners

KLYSTRON TUNERS

Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.
 See Advertisements on Pages 155-160

972

PERMEABILITY TUNERS

Aeromotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
 Aladdin Radio Industries, Inc., 501 W. 35th St., Chicago 16, Ill.
 Electronic Labs., Inc., Indianapolis, Indiana
 Maico Co., Inc., 25 N. 3rd St., Minneapolis, Minn.

973

U.H.F. RING TUNERS

Clarkstan Corp., 11927 W. Pico Blvd., Los Angeles 34, Calif.

974

Tuning Devices, Mechanical

RECEIVER MECHANICAL TUNING DEVICES

Aeromotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 See Advertisement on Page 197
 Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.
 La Magna Mfg. Co., Inc., East Rutherford, N. J.
 Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
 Micro Ferrocart Products Div., Maguire Industries Inc., Greenwich, Conn.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 See Advertisement on Page 220
National Co., 61 Sherman St., Malden 48, Mass.
 See Advertisement on Page 291
 Radio Condenser Co., Camden, N. J.
 Radio Labs, Inc., 2701 Calif. Ave., Seattle 6, Wash.
 Self Winding Clock Co., 205 Willoughby Ave., Brooklyn 5, N. Y.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

975

TRANSMITTER MECHANICAL TUNING DEVICES

Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 See Advertisement on Page 285

Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa
 See Advertisements on Pages 105-107
 Self Winding Clock Co., 205 Willoughby Ave., Brooklyn 5, N. Y.

976

TURNTABLE UNITS

Airtronics Development Corp., 131-133 E. Third St., Dayton 2, Ohio
 Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
 General Industries Co., Taylor & Olive Sts., Elyria, Ohio
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
 Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.
 Micro-Sonic Corp., 44 West 18th St., New York, N. Y.
Robinson Recording Labs., 35 S. 9th St., Philadelphia, Pa.
 See Advertisement on Page 202

977

Valves, Solenoid

Allied Control Valve Co., Inc., South Norwalk, Conn.
 Phillips Control Corp., 612 N. Michigan Avenue, Chicago 11, Ill.

978

Voltage Supplies

DECADE VOLTAGE SUPPLIES

Clippard Instrument Lab., 1440 Chase Ave., Cincinnati 23, Ohio

979

Washers

INSULATING WASHERS

Aetna Felt Co., Centre & Hester Sts., New York, N. Y.
 American Felt Co., Glenville, Conn.
 American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
 See Advertisement on Page 44
 Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
 Felsenthal & Sons, G., 4122 W. Grand Ave., Chicago 51, Ill.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
 Kircherger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
 Melrath Supply & Gasket Co., Tioga St. & Aramingo Ave., Phila., Pa.
 Mica Insulating Co., 797 Rdway., Schenectady 1, N. Y.
 National Gasket & Washer Mfg. Co., 122 E. 25th Street, New York 10, N. Y.
National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
 See Advertisement on Page 33
 Penn Fibre & Specialty Co., 2030 E. Moreland St., Phila. 44, Pa.
 Saxonburg Potteries, Saxonburg, Pa.
 Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.
 Schoonmaker Insulation Co., Inc., A. O., 635 Greenwich Street, New York 14, N. Y.
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
 See Advertisement on Page 118
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

980

LOCK WASHERS

American Nut & Bolt Fastener Co., 2045 Doerr St., Pittsburgh, Pa.
 Federal Screw Products Co., 224 W. Huron St., Chicago 10, Ill.
 Garrett Co., Inc., G. K., 1421 Chestnut St., Phila. 2, Pa.

Harper Co., H. M., 2620 Fletcher St., Chicago 18, Ill.
 Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
 Manufacturers Screw Prods., 270 W. Hubbard St., Chicago, Ill.
 National Lock Washer Co., 40 Hermon St., Newark 5, N. J.
 Penn Union Elec. Corp., 315 State St., Erie, Pa.
 Pheoil Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
 Philadelphia Steel & Wire Corp., Penn St. & Belfield Avenue, Philadelphia, Pa.
 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, Calif.
 Shakeproof, Inc., Div. of Ill. Tool Wks., 2501 N. Keeler Avenue, Chicago 39, Ill.
 Standard Locknut & Lockwasher Inc., 33-35 W. St. Clair St., Indianapolis, Ind.
 Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill.
 Thompson-Bremer & Co., 1640 W. Hubbard St., Chicago, Ill.

981

METAL WASHERS

Allmetal Screw Prods. Co., 33 Greene St., New York 13, N. Y.
 American Electro Metal Corp., 320 Yonkers Ave., Yonkers, N. Y.
 American Nut & Bolt Fastener Co., 2045 Doerr St., Pittsburgh, Pa.
 Auburn Mfg. Co., 110 Stack St., Middletown, Conn.
 Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
 Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11, Mich.
 Carter Radio Div., Precision Parts Co., 213 Institute Pl., Chicago 10, Ill.
 Clendenin Bros., 108 South St., Baltimore, Md.
 Continental Screw Co., New Bedford, Mass.
 Corbin Screw Div., Amer. Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.
 Diebel Die & Mfg. Co., 3658 N. Lincoln Ave., Chicago 13, Ill.
 Federal Screw Prods. Co., 224 W. Huron St., Chicago 10, Ill.
 Garrett Co., Inc., G. K., 1421 Chestnut St., Phila. 2, Pa.
 Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.
 Harper Co., H. M., 2620 Fletcher St., Phila. 2, Pa.
 Hassall Inc., John, 150 Clay St., Brooklyn 22, N. Y.
 Hubbard Spring Co., M. D., Central Ave., Pontiac, Mich.
 Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
 Manufacturers Screw Prods., 270 W. Hubbard St., Chicago, Ill.
 Melrath Supply & Gasket Co., Tioga St. & Aramingo Ave., Phila., Pa.
 Moore Co., Howard J., 108 Park Row, New York 7, N. Y.
 Plume & Atwood Mfg. Co., 470 Bank St., Waterbury, Conn.
 Quadriga Mfg. Co., 213 W. Grand Ave., Chicago 11, Ill.
 St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.
 Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
 United Screw & Bolt Co., 2513 W. Cullerton St., Chicago, Ill.
 Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.
 Wrought Washer Mfg. Co., 2100 S. Bay St., Milwaukee 7, Wisc.

982

Wire

ANNUNCIATION WIRE

Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 White Electric Cable Co., Maple Ave., Haverstraw, N. Y.

ELECTRONIC and ALLIED PRODUCTS

983

ANTENNA WIRE

Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
 Cornish Wire Co., 15 Park Row, New York, N. Y.
 See Advertisement on Page 148
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.
 See Advertisement on Page 256
 Plastic Wire & Cable Corp., Norwich, Conn.
 Plastoid Corp., 19 W. 44th St., New York 18, N. Y.
 See Advertisement on Page 264
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Technical Appliance Corp., 41-06 De Long St., Flushing, N. Y.
 White Electric Cable Co., Maple Ave., Haverstraw, N. Y.

984

ASBESTOS INSULATED WIRE

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

985

CERAMIC INSULATED WIRE

Sprague Elec. Co., 189 Beaver St., North Adams, Mass.
 See Advertisement on Page 64

986

COPPER WIRE

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Flexo Wire Co., 638 Genesee St., W., Syracuse, N. Y.
 General Cable Corp., 420 Lexington Ave., New York, N. Y.
 Goldmark Wire Co., James, 116 West Street, New York 7, N. Y.
 Mineralac Electric Co., 25 N. Peoria St., Chicago, Ill.
 New England Electrical Wks. Inc., 365 Main St., Lisbon, N. H.
 Nonotuck Mfg. Co., Holyoke, Mass.
 North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Whitaker Cable Corp., Kansas City 16, Mo.

987

COPPER INSULATED WIRE

Accurate Insulated Wire Corp., 25 Fox St., New Haven 1, Conn.
 Alpha Wire Corp., 50 Howard St., New York, N. Y.
 American Steel & Wire Co., Rockefeller Bldg., Cleveland 13, Ohio
 Boston Insulated Wire & Cable Co., 65 Bay St., Dorchester, Boston, Mass.
 See Advertisement on Page 34
 Brand & Co., Wm., 276 Fourth Ave., New York 10, N. Y.
 See Advertisements on Pages 50-51
 Collyer Insulated Wire Co., 249 Roosevelt Ave., P. O. Box 61, Pawtucket, R. I.
 Columbia Wire & Supply Co., 4106 N. Pulaski Rd., Chicago 41, Ill.
 See Advertisement on Page 126
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Electric Auto Lite Co., Toledo 1, Ohio
 General Cable Corp., 420 Lexington Ave., New York, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 General Insulated Wire Wks. Inc., 69 Gordon Ave., Providence 5, R. I.
 Goldmark Wire Co., James, 116 West Street, New York 7, N. Y.
 Hazard Insulated Wire Wks., The Okonite Co. Div., Wilkes Barre, Pa.
 J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.

Lowell Insulated Wire Co., Lowell, Mass.
 North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 R. I. Insulated Wire Co., 50 Burnham Ave., Providence, R. I.
 Rockbestos Products Corp., 308 Nicoll St., New Haven 4, Conn.
 Suprenant Electrical Insulation Co., 84 Purchase St., Boston 10, Mass.
 Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Calif.

988

ENAMELED WIRE

Alpha Wire Corp., 50 Howard St., New York, N. Y.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Goldmark Wire Co., Jas., 116 West St., New York 7, N. Y.
 New England Electrical Wks. Inc., 365 Main St., Lisbon, N. H.
 Rea Magnet Wire Co., E. Pontiac St., Extended Fort Wayne, Ind.

989

FINE WIRE SPECIALTIES

Alpha Wire Corp., 50 Howard St., New York, N. Y.
 Baker & Co., 113 Astor St., Newark 5, N. J.
 Callite Tungsten Corp., 544 39th St., Union City, N. J.
 See Advertisement on Page 35
 General Electric Co., Bridgeport 2, Conn.
 See Advertisements on Pages 204, 212
 Goldmark Wire Co., James, 116 West St., New York 7, N. Y.
 Kenet Lab. Co., Inc., W. 117th St. & Madison Ave., Cleveland 1, Ohio
 Little Falls Alloys, Inc., 189 Cardwell Ave., Paterson 1, N. J.
 Makepeace Co., D. E. Attleboro, Mass.
 See Advertisement on Page 216
 North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Plastic Wire & Cable Corp., Norwich, Conn.
 Plastoid Corp., 19 W. 44th St., New York 18, N. Y.
 See Advertisement on Page 264
 Richards, Arklay S., Co., Inc., 78 Winchester St., Newton Highlands 61, Mass.
 Spencer Wire Co., West Brookfield, Mass.
 Varflex Corp., N. Jay St., Rome, N. Y.
 See Advertisement on Page 179

990

GLASS INSULATED WIRE

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

991

GUY WIRE

Alpha Wire Corp., 50 Howard St., New York 13, N. Y.
 American Steel & Wire Co., Rockefeller Bldg., Cleveland 13, Ohio
 Cornish Wire Co., Inc., 15 Park Row, New York 7, N. Y.
 See Advertisement on Page 148
 Indiana Steel & Wire Co., 700 S. Council St., Muncie, Ind.
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Porcelain Products, Inc., Parkersburg, W. Va.
 Roebing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.

992

HOOKUP WIRE

Alpha Wire Corp., 50 Howard St., New York, N. Y.
 American Electric Cable Co., Holyoke, Mass.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.

Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.
 Columbia Wire & Supply Co., 4106 N. Pulaski Road, Chicago 41, Ill.

See Advertisement on Page 126
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Cornish Wire Co., 15 Park Row, New York, N. Y.
 See Advertisement on Page 148
 Diamond Wire & Cable Co., 128 East 16th St., Chicago Heights, Ill.
 Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
 See Advertisements on Pages 299-302
 General Cable Corp., 420 Lexington Ave., New York, N. Y.

General Electric Co., Bridgeport, Conn.
 See Advertisements on Pages 204, 212
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
 New England Electrical Wks., Inc., 365 Main St., Lisbon, N. H.
 Philadelphia Insulated Wire Co., 200 N. 3rd St., Phila., Pa.
 Plastic Wire & Cable Corp., Norwich, Conn.
 Plastoid Corp., 19 W. 44th St., New York 18, N. Y.

See Advertisement on Page 264
 Rockbestos Products Corp., 308 Nicoll St., New Haven 4, Conn.
 Roebing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 Rome Cable Corp., 330 Ridge St., Rome, N. Y.

See Advertisement on Page 41
 Suprenant Electrical Insulation Co., 84 Purchase St., Boston 10, Mass.
 See Advertisement on Page 228
 White Electric Cable Co., Maple Ave., Haverstraw, N. Y.

993

LITZ WIRE

General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Goldmark Wire Co., James, 116 West Street, New York 7, N. Y.
 Guthman, Inc., E. I., 15 S. Throop St., Chicago, Ill.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 New England Electrical Wks. Inc., 365 Main St., Lisbon, N. H.
 Ross Mfg. Co., 2241 S. Indiana Ave., Chicago 27, Ill.

994

MAGNET WIRE

Acme Wire Co., New Haven 14, Conn.
 Alpha Wire Corp., 50 Howard St., New York, N. Y.
 American Steel & Wire Co., 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.
 Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne, Ind.
 General Cable Corp., 420 Lexington Ave., New York, N. Y.
 General Electric Co., Schenectady 5, N. Y.
 See Advertisements on Pages 204, 212
 Goldmark Wire Co., James, 116 West St., New York 7, N. Y.
 Guthman & Co., Edwin I., 15 S. Throop St., Chicago, Ill.
 Hudson Wire Co., Winsted Div., Winsted, Conn.
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 New England Electrical Wks., Inc., 365 Main St., Lisbon, N. H.
 Philadelphia Insulated Wire Co., 200 N. Third St., Philadelphia, Pa.
 Rea Magnet Wire Co., Inc., E. Pontiac St., Extended Fort Wayne, Ind.
 Roebing's Sons Co., John A., 640 S. Broad St., Trenton 2, N. J.
 Wheeler Insulated Wire Co., Inc., 378 Washington Ave., Bridgeport, Conn.

1946-1947 DIRECTORY of ELECTRONIC and ALLIED PRODUCTS

995

NICKEL CLAD COPPER WIRE

Alloy Metal Wire Co., Prospect Park, Pa.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.
General Plate Div. Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

996

PHOSPHOR BRONZE WIRE

Alpha Wire Corp., 50 Howard St., New York, N. Y.
Chase Brass and Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.
Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.
Little Falls Alloys, Inc., 189 Caldwell Ave., Paterson 1, N. J.

997

PLASTIC INSULATED WIRE

General Insulated Wire Wks., Inc., 69 Gordon Ave., Providence 5, R. I.
Plastic Wire & Cable Corp., Norwich, Conn.
Supremant Electrical Insulation Co., 84 Purchase St., Boston 10, Mass.
See Advertisement on Page 228

998

PLATINUM WIRE

Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

999

RESISTANCE and FILAMENT WIRE

Allegheny Ludlum Steel Corp., Brackenridge, Pa.
Alloy Metal Wire Co., Prospect Park, Pa.
Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.

Driver Co., Wilbur B., 150 Riverside Ave., Newark, N. J.

Driver-Harris Co., 201 Middlesex St., Harrison, N. J.

See Advertisement on Page 133
Essex Wire Corp., 1601 Wall St., Ft. Wayne, Ind.

Goldmark Wire Co., James, 116 West St., New York 7, N. Y.

Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.

J. F. D. Manufacturing Co., 4111 Fort Hamilton Pkway., Brooklyn, N. Y.

Jelliff Mfg. Corp., C. O., 200 Pequot Ave., Southport, Conn.

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

North American Philips Co., 100 East 42nd St., New York 17, N. Y.

Spencer Wire Co., West Brookfield, Mass.

1000

SHIELDED WIRE

Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 91, Conn.

Breeze Corp., 41 S. 6th St., Newark, N. J.

Cornish Wire Co., Inc., 15 Park Row, New York, N. Y.

See Advertisement on Page 148
Essex Wire Corp., 1601 Wall St., Fort Wayne, Ind.

General Electric Co., Schenectady 5, N. Y.

See Advertisements on Pages 204, 212
Philadelphia Insulated Wire Co., 200 N. 3rd St., Phila., Pa.

Precision Tube Co., 3828 Terrace St., Philadelphia 28, Pa.

Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.

Rome Cable Corp., 330 Ridge St., Rome, N. Y.

See Advertisement on Page 41
Spencer Wire Co., West Brookfield, Mass.
Uniform Tubes, Shurs Lane and Lauriston St., Roxborough, Phila., Pa.

1001

SILVER PLATED WIRE

Flexo Wire Co., 638 Genesee St., W., Syracuse, N. Y.

Little Falls Alloys, Inc., 189 Caldwell Ave., Paterson 1, N. J.

North American Philips Co., 100 East 42nd Street, New York 17, N. Y.

Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

1002

STAINLESS STEEL WIRE

Alloy Metal Wire Co., Prospect Park, Pa.

Little Falls Alloys, Inc., 189 Caldwell Ave., Paterson 1, N. J.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

1003

TUNGSTEN WIRE

Baker & Co., 113 Astor St., Newark 5, N. J.

CaBite Tungsten Corp., 544 39th St., Union City, N. J.

See Advertisement on Page 35
North American Philips Co., 100 East 42nd St., New York 17, N. Y.

Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.

See Advertisement on Page 125
Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

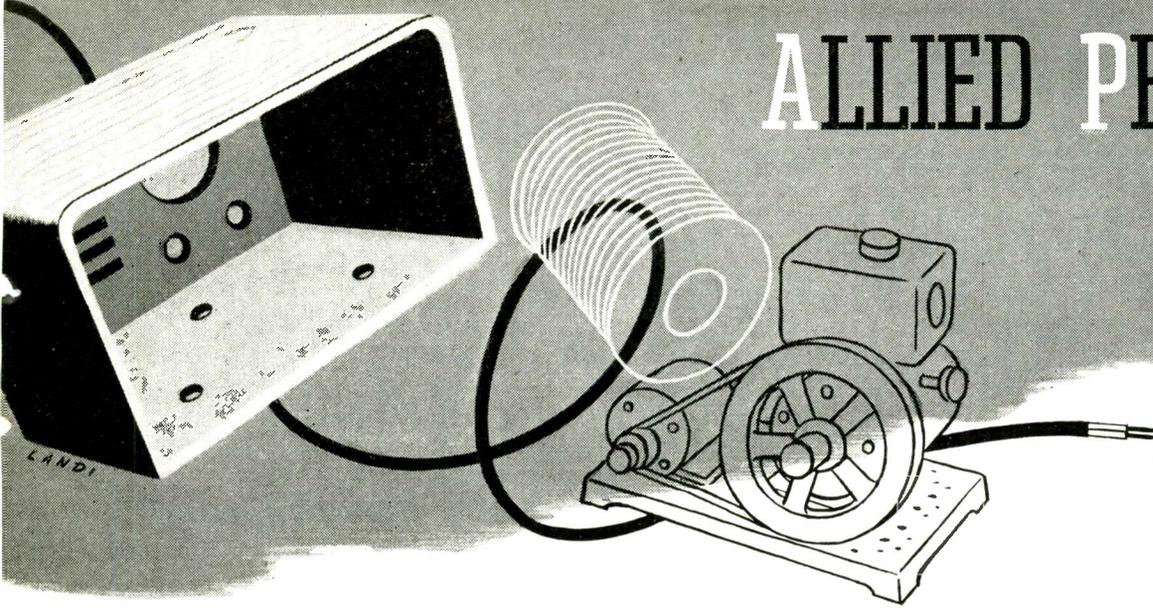
1004

Wire Recorder Assemblies—

Aurex Corp., 1117 N. Franklin, Chicago, Ill.
Wi-Recorder Corp., Detroit, Mich.

When Ordering or Inquiring
please mention the
**ELECTRONICS
BUYERS' GUIDE**

ALLIED PRODUCTS



Sources of supply listed in this section include the suppliers of those raw materials, machinery, equipment, insulation, wire, tools and other basic materials out of which components, subassemblies and completed electronic units are made

SEE INDEX FOR ALL PRODUCT LISTINGS

1005

Abrasives

Eraser Co., 231 W. Water St., Syracuse 2, N. Y.
Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.

1006

Adhesives

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
American Products Mfg. Co., 8127 Oleander St., New Orleans, La.
Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
Dolph Co., John C., 1060 Broad St., Newark, N. J.
Maas & Waldstein Co., 438 Riverside Ave., Newark, N. J.
See Advertisement on Page 45
Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
Pennsylvania Coal Products Co., Petrolia, Pa.
Resinous Products & Chemical Co., 222 W. Washington Sq., Philadelphia, Pa.

1007

WATERPROOF & CORROSION PROOF COMPOUNDS

Armstrong Cork Co., Lancaster, Pa.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
See Advertisement on Page 290
Paisley Products Inc., 1770 Canalport Ave., Chicago 16, Illinois

1008

Air Cleaners

ELECTROSTATIC AIR CLEANERS

Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

1009

Anchor

ANCHORS, SCREW OR BOLT

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago, Ill.

1010

Antenna Towers & Supports

American Bridge Co., Frick Bldg., Pittsburgh, Pa.
Blaw-Knox Co., Farmers Bank Bldg., Pittsburgh, Pa.
See Advertisement on Page 115
Gardner Mfg. Co., 2711 Union St., Oakland 7, Calif.
Harco Steel Const. Co., 1180 E. Broad St., Elizabeth 4, N. J.
International Derrick & Equipment Co., 875 Michigan Ave., Columbus 8, Ohio
Lehigh Structural Steel Co., 17 Battery Pl., New York 4, N. Y.
Lingo & Son, Inc., John E., 28th & Buren Avenue, Camden, N. J.
Tower & Antenna Div., Wind Turbine Co., West Chester, Pa.
Truscon Steel Co., Youngstown, Ohio.
Wincharger Corp., 7th & Division Sts., Sioux City, Iowa
See Advertisement on Page 142

1011

Battery Chargers

American Battery Co., 17 E. Jefferson St., Chicago, Ill.
American Communications Corp., 306 Broadway, New York, N. Y.
Baldor Electric Co., 4353 Duncan Avenue, St. Louis, Mo.
Bowers Battery & Spark Plug Co., Reading, Pa.
Cambridge Thermionic Corp., 445 Concord Ave., Cambridge, Mass.
See Advertisement on Page 67
Control Corp., 718 Central Ave., Minneapolis 14, Minn.
Electric Heat Control Co., The, 9123 Innan Ave., Cleveland 3, Ohio

Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio
Electricoil Transformer Co., 421 Canal Street, New York 13, N. Y.
Electron Equipment Corp., 917 Meridian Ave., South Pasadena, Calif.
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
Franklin Transformer Mfg. Co., 65 22nd Ave. N. E. Minneapolis 13, Minn.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
See Advertisements on Pages 296, 297
McColpin-Christie Corp., 4922 S. Figueroa St., Los Angeles 37, Calif.
Mellaphone Corp., Rochester 2, N. Y.
Rectifier Engineering Co., 1809 E. 7th St., Los Angeles 21, Calif.
Richardson Allen Corp., 15 W. 20th Street, New York 11, N. Y.
Ward Leonard Elec. Co., 31 South St., Mt. Vernon, N. Y.
See Advertisements on Pages 198, 199

1012

GAS ENGINE DRIVEN BATTERY CHARGERS

Kato Engr. Co., 530 N. Front St., Mankato, Minn.

1013

Bench Test Set-ups

DeMornay-Budd Inc., 475 Grand Conc., New York, N. Y.
See Advertisement on Page 203

1014

Bobbins

COIL WINDING BOBBINS

Precision Paper Tube Co., 2033 W. Charleston St., Chicago 47, Ill.

1015

Bolts

Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
Chandler Products Co., 1475 Chardon Rd., Cleveland, Ohio

Continental Screw Co., New Bedford, Mass.
Corbin Screw Division, American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.
Harper Co., H. M., 2620 Fletcher St., Chicago 18, Ill.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio
Manufacturers Screw Products, 270 W. Hubbard St., Chicago, Ill.
Nat'l Screw & Mfg. Co., The, Cleveland 4, Ohio
Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Pure Carbon Co., St. Marys, Pa.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio
Russell, Burdsall & Ward Bolt & Nut Co., Midland Ave., Port Chester, N. Y.
St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.
Schott Co., 8306 Santa Monica Blvd., Beverly Hills, Calif.

1016

Bolts, Expansion

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago, Ill.
Arro Expansion Bolt Co., 740 W. Center St., Marion, Ohio
Chicago Expansion Bolt Co., 2240 W. Ogden Ave., Chicago 12, Ill.
Church Expansion Bolt Co., Isaac, 1 Fourth St., East Norwalk, Conn.
Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill.
U. S. Expansion Bolt Co., York, Pa.

1017

Bolts, Eye

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago, Ill.

1018

Bolts, Toggle

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago, Ill.
Arro Expansion Bolt Co., 740 W. Center St., Marion, Ohio
Church Expansion Bolt Co., 1 Fourth St., East Norwalk, Conn.

1019

Boxes**METAL BOXES**

Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.
Federal Electric Products Co. Inc., 50 Paris St., Newark, N. J.
Karp Metal Prods. Co., Inc., 129 Thirtieth St., Brooklyn, N. Y.
See Advertisement on Page 65
Lindsay & Lindsay, 222 W. Adams Street, Chicago 6, Ill.
Worcester Pressed Steel Co., 100 Barber Ave., Worcester, Mass.

1020

WATERPROOF BOXES

Brach Mfg. Corp., L. S., 55 Dickerson St., Newark 4, N. J.

1021

Cements**RADIO CEMENTS**

Ambroid Co., 305 Franklin St., Boston 10, Mass.
American Phenolic Corp., 1330 S. 54th Ave., Chicago 50, Ill.
American Products Mfg. Co., 3127 Oleander St., New Orleans, La.

Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio
Armstrong Cork Co., Lancaster, Pa.
Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
Dolph Co., John C., 1060 Broad St., Newark, N. J.
Du Pont de Nemours Co., Inc., E. I. Plastics Dept., 626 Schuyler Ave., Arlington, N. J.
Durite Plastics, Inc., 5010 Summerdale Ave., Phila. 24, Pa.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

See Advertisement on Page 290
General Electric Co., Syracuse, N. Y.
See Advertisements on Pages 204, 212
Haynes Labs., Inc., C. W., 61 Chandler St., Springfield, Mass.
Insl-X Co. Inc., The, 857 Meeker Ave., Brooklyn 22, N. Y.

See Advertisement on Page 244
Insulatine Co., 1 Broadway, New York, N. Y.
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
Maas & Waldstein & Co., 438 Riverside Ave., Newark 4, N. J.

See Advertisement on Page 45
Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, Ill.
Plax Corp., 133 Walnut St., Hartford 5, Conn.
Rohm & Haas, 222 W. Washington Sq., Phila., Pa.
Sauereisen Cements Co., Sauereisen Building, Pittsburgh 15, Pa.
Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Cal.
Wynn Mfg. Div., Hudson Supply Co., 401 N. 27th St., Richmond, Va.

1022

Chambers**HUMIDITY TEST CHAMBERS**

Northern Labs., Ltd., 3-01 27th Ave., Long Island City, N. Y.

1023

Chemicals**RADIO CHEMICALS**

Baker Chemical Co., J. T., N. Broad St., Phillipsburg, N. J.
Dow Chemical Co., Midland, Mich.
Glyco Products Co., Inc., 26 Court Street, Brooklyn, N. Y.
Hommel Co., O., 209 Fourth Ave., Pittsburgh, Pa.
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y.
Joliet Chemicals Ltd., Industry Ave., Joliet, Ill.
Merck & Co., Inc., Rahway, N. J.
Patterson Screen Div., E. I. du Pont de Nemours & Co., Towanda, Pa.
Pennsylvania Coal Products Co., Petrolia, Pa.
Reilly Tar & Chemical Corp., Merchants Bank Bldg., Indianapolis, Ind.
Rohm & Haas, 222 W. Washington Sq., Philadelphia, Pa.
Schaar & Co., 754 W. Lexington St., Chicago 7, Ill.
Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
See Advertisements on Pages 56, 207, 277
Wynn Mfg. Div., Hudson Supply Co., 401 N. 27th St., Richmond, Va.

1024

Cloths**SPEAKER GRILLE CLOTHS**

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
See Advertisement on Page 290
Holliston Mills, Norwood, Mass.
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
Olek & Sons, Inc., A., 4757-59 Melrose St., Philadelphia 37, Pa.

1025

WOVEN WIRE CLOTHS

Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th Street, Cleveland 5, Ohio
Flock Process Co., Velvetone Div., 3 Quincy Street, Norwalk, Conn.
Jelliff Mfg. Corp., 200 Pequot Ave., Southport, Conn.

1026

Coatings**ORGANIC CONDUCTING COATINGS**

Hague & Co., Inc., A. W., 227 34th Street, Brooklyn, N. Y.

1027

PROTECTIVE COATINGS

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
Durez Plastics & Chemicals Inc., 1922 Walck Rd., No. Tonawanda, N. Y.
Reilly Tar & Chemical Corp., Merchants Bank Bldg., Indianapolis, Ind.

1028

SALT SPRAY RESISTANCE COATINGS

Special Chemicals Co., 30 Irving Pl., New York, N. Y.

1029

Code and Tab Markers

Brand & Co., Wm., 276 Fourth Ave., New York 10, N. Y.
See Advertisements on Pages 50-51
Kulka Electric Mfg. Co. Inc., 30 South St., Mt. Vernon, N. Y.
Western Lithograph Co., 2nd St., Los Angeles, Calif.

1030

Crystal Analysis Equipment

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

1031

Dehydrators, Automatic

Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.

1032

Dielectrics**LIQUIDS & SOLIDS**

Halowax Prods. Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y.

1033

Discs**BLANK RECORDING DISCS**

Advance Recording Prods. Co., 36-12 34th St., L. I. City, N. Y.
See Advertisement on Page 251
Allied Recording Products Co., 2109 43rd Ave., Long Island City 1, N. Y.
See Advertisement on Page 268
Audio Devices, Inc., 444 Madison Ave., New York 22, N. Y.
See Advertisement on Page 143

ELECTRONIC and ALLIED PRODUCTS

Duotone Co., 799 Broadway, New York, N. Y.
 Favorite Mfg. Co., 105 E. 12th St., New York 3, N. Y.
 Gould-Moody Co., 395 Broadway, New York, N. Y.

See Advertisement on Page 122

Home Recording Co., 9 E. 19th St., New York, N. Y.

Presto Recording Corp., 242 W. 55th St., New York, N. Y.

See Advertisements on Pages 48-49

Recordisc Corp., 395 Broadway, New York, N. Y.

Recotone Corp., 212 Fifth Ave., New York, N. Y.

Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.

See Advertisement on Page 221

Sound Devices Co., 160 East 116th St., New York 20, N. Y.

Zephyr Products Corp., 160 E. 116th St., New York 29, N. Y.

1034

Drafting Equipment

American Photocopy Equipment Co., 2849 N. Clark St., Chicago, Ill.

Arkwright Finishing Co., Providence, R. I.

Bruning Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.

Cardinell Corp., Montclair, N. J.

Dietzgen Co., Eugene, 2425 Sheffield Ave., Chicago, Ill.

Dixon Crucible Co., Joseph, Jersey City, N. J.

Eagle Pencil Co., 703 East 13th St., New York, N. Y.

Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N. Y.

Engineers Specialties Div., Universal Engraving & Colorplate Co., 980 Ellicott Street, Buffalo 8, N. Y.

Faber, Inc., A. W., 41 Dickerson St., Newark 4, N. J.

General Pencil Co., 67 Fleet St., Jersey City, N. J.

Holliston Mills, Inc., Norwood, Mass.

Keuffel & Esser Co., 127 Fulton St., New York, N. Y.

Koh-i-Noor Pencil Co., Bloomsbury, N. J.

Ozalid Div., General Aniline & Film Corp., 770 Anseo Rd., Johnson City, N. Y.

See Advertisement on Page 217

Paragon-Revolute Corp., 97 South Ave., Rochester 4, N. Y.

Pease Company, C. F., 2601 W. Irving Park Rd., Chicago 18, Ill.

Peck & Harvey, 5736-38 N. Western Ave., Chicago 45, Ill.

Post Co., Frederick, 3650 Avondale Ave., Chicago 90, Ill.

United States Blue Print Paper Co., 207 S. Wabash Ave., Chicago, Ill.

Universal Drafting Machine Co., 1426 W. Third St., Cleveland 13, Ohio

Weber Co., F., 1220 Buttonwood St., Philadelphia 23, Pa.

Weil & Co., J. H., 1315 Cherry St., Philadelphia, Pa.

1035

Escutcheons

American Communications Corp., 406 Broadway, New York, N. Y.

American Emblem Co., Utica, N. Y.

B. & C. Insulation Products Inc., 261 Fifth Ave., New York 16, N. Y.

Browning Labs., Inc., 750 Main, Winchester, Mass.

Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.

Continental-Diamond Fibre Co., 16 Chapel St., Newark, Del.

Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.

See Advertisement on Page 197

Etched Products Corp., 39-01 Queens Blvd., Long Island City, N. Y.

Felsenthal & Sons, G., 4122 W. Grand Ave., Chicago 51, Ill.

Gemloid Corp., 79-10 Albion Ave., Elmhurst, N. Y.

Grammes & Sons, Inc., L. F., 389 Union St., Allentown 2, Pa.

Kirkland Co., H. R., 8-10 King St., Morristown, N. J.

See Advertisement on Page 284

Meyercord Co., 5323 W. Lake St., Chicago 44, Ill.

Midwest Molding & Mfg. Co., 319 N. Whipple St., Chicago 12, Ill.

Shalleross Mfg. Co., 10 Jackson Ave., Collingsdale, Pa.

See Advertisement on Page 38

Standard Molding Corp., Dayton, Ohio

Syracuse Ornamental Co., 581 So. Clinton St., Syracuse, N. Y.

Victory Mfg. Co., 1722 W. Arcade Pl., Chicago 12, Ill.

1036

Fans and Blowers

BLOWERS, SMALL

Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester, N. Y.

Dynamic Air Engineering, Inc., 1619 So. Alameda St., Los Angeles 11, Calif.

Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.

Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.

Johnson Gas Appliance Co., 520 Ave. E, N. W., Cedar Rapids, Iowa

Kahle Engrg. Co., 1307 7th St., North Bergen, N. J.

Redmond Co. Inc., Monroe St., Owosso, Mich.

Victor Elec. Prods. Inc., 2950 Robertson Ave., Cincinnati 9, Ohio

1037

TUBE COOLING FANS

Dynamic Air Engineering Inc., 1619 S. Alameda St., Los Angeles, Calif.

Ilg Elec. Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.

Marathon Elect. Mfg. Corp., Randolph & Cherry Sts., Wausau, Wis.

Torit Mfg. Co., 292 Walnut Street, St. Paul 2, Minn.

1038

Felts & Felt Parts

Aetna Felt Co., Centre & Hester Sts., New York, N. Y.

The Felters Co., 210 South St., Boston, Mass.

1039

Finishes

CRYSTAL FINISH

Hilo Varnish Corp., 42 Stewart Ave., Brooklyn, N. Y.

1040

ENAMEL FINISH

Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.

Benjamin Franklin Paint & Varnish Co., 4820 Langdon St., Philadelphia 24, Pa.

Dolph Co., John C., 1060 Broad St., Newark, N. J.

Du Pont de Nemours & Co. Inc., Organic Chemical Dept., Wilmington 98, Delaware

Egyptian Lacquer Mfg. Co., 1270 Sixth Ave., New York, N. Y.

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

See Advertisement on Page 290

George Co., P. D., 5200 N. 2nd St., St. Louis, Mo.

Hilo Varnish Corp., 42 Stewart Ave., Brooklyn, N. Y.

Horn Co., A. C., 43-36 Tenth St., L. I. City 1, N. Y.

Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.

Interchemical Corp., Finishes Div., 432 W. 45th St., New York, New York

Maas & Waldstein & Co., 438 Riverside Ave., Newark 4, N. J.

See Advertisement on Page 45

Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio

Nukem Products Corp., 111 Colgate Ave., Buffalo 20, N. Y.

Standard Varnish Works, 2600 Richmond Terr., Staten Island, N. Y.

Zapon Div., Atlas Powder Co., Ludlow St., Stamford, Conn.

1041

LACQUER FINISH

Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.

Benjamin Franklin Paint & Varnish Co., 4820 Langdon St., Philadelphia 24, Pa.

Dolph Co., John C., 1060 Broad St., Newark, N. J.

DuPont de Nemours & Co. Inc., Organic Chemical Dept., Wilmington 98, Delaware

Egyptian Lacquer Mfg. Co., 1270 Sixth Ave., New York, N. Y.

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

See Advertisement on Page 290

Hilo Varnish Corp., 42 Stewart Ave., Brooklyn, N. Y.

Interchemical Corp., Finishes Div., 432-W. 45th St., New York, N. Y.

Maas & Waldstein & Co., 438 Riverside Ave., Newark 4, N. J.

See Advertisement on Page 45

Standard Varnish Works, 2600 Richmond Terr., Staten Island, N. J.

Zapon Div., Atlas Powder Co., Ludlow St., Stamford, Conn.

1042

LUMINOUS MATERIALS

Shannon Luminous Materials Co., 7346 Santa Monica Blvd., Hollywood 46, Calif.

1043

RIPPLE FINISH

Benjamin Franklin Paint and Varnish Co., 4820 Langdon St., Phila. 24, Pa.

Dolph Co., John C., 1060 Broad St., Newark, N. J.

Hilo Varnish Corp., 42 Stewart Ave., Brooklyn, N. Y.

Maas & Waldstein & Co., 438 Riverside Ave., Newark 4, N. J.

See Advertisement on Page 45

1044

VARNISHES

Arco Co., 7301 Bessemer Ave., Cleveland 4, Ohio

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

See Advertisement on Page 290

Standard Varnish Works, 2600 Richmond Terrace, Staten Island, N. Y.

1045

Flock and Flocked Paper

Cellusuede Products, Inc., Rockford, Ill.

Flock Process Co., 3 Quincy St., Norwalk, Conn.

1046

Flux, Soldering

Burnley Battery & Mfg. Co., Clay St., North East, Pa.

Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.

Dual-Heat Iron Co., 4370 Sunset Blvd., Los Angeles 27, Calif.

Du Pont de Nemours & Co. Inc., E. I. Organic Chemical Dept., Wilmington 98, Delaware

Farrelloy Co., 1245 N. 26th St., Phila., Pa.

General Electric Co., Schenectady 5, N. Y.

See Advertisements on Pages 204, 212

Glaser Lead Co., Inc., 31 Wycoff Ave., Brooklyn, N. Y.

See Advertisement on Page 292

Johnson Co., Lloyd S., 2241 Indiana Ave., Chicago, Ill.

Johnson Gas Appliance Co., 520 Ave. E. N. W., Cedar Rapids, Iowa

Lenk Mfg. Co., Newton Lower Falls, Mass.
 Merck & Co., Inc., Rahway, N. J.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 See Advertisement on Page 58
 Ruby Chemical Co., 68 McDowell St., Columbus, Ohio
 Superior Flux Co., 913 Public Square Bldg., Cleveland 13, Ohio
 Weaver Specialty Co., 6344 Aurelia St., Pittsburgh, Pa.

1047

BRAZING & SILVER SOLDERING FLUX

Goldsmith Bros. Smelting & Refinishing Co., 58 E. Washington St., Chicago, Ill.
 Handy & Harman, 82 Fulton St., New York 7, N. Y.
 Johnson Co., Lloyd S., 2241 Indiana Ave., Chicago, Ill.
 Superior Flux Co., 913 Public Square Bldg., Cleveland 13, Ohio

1048

BRAZING COMPOUNDS

American Solder & Flux Co., 2152 E. Norris Street, Philadelphia 25, Pa.
 Goldsmith Bros. Smelting & Refining Co., 58 E. Washington St., Chicago, Ill.
 Special Chemical Co., 30 Irving Pl., New York, N. Y.

1049

Frits, Resistor

Hommel Co., O., 209 Fourth Ave., Pittsburgh, Pa.

1050

Furnaces

ELECTRICALLY HEATED GLASS ANNEALING FURNACES

Despatch Oven Co., 619 S. E. Eighth St., Minneapolis 14, Minn.
 Eisler Engrg. Co., 740 S. 13th St., Newark 3, N. J.
 General Electric Co., Schenectady 5, N. Y. See Advertisements on Pages 204, 212
 Kahle Engrg. Co., 1405 7th St., North Bergen, N. J.
 Trent Co., Harold E., Leverington Ave. at Wilde St., Phila. 27, Pa.

1051

Gases

GASES, RARE

Air Reduction Sales Co., 80 East 42nd St., New York, N. Y.
 See Advertisement on Page 200
 American Gas & Chemical Co., Harrison, N. J.
 Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.
 Linde Air Products Co., 30 E. 42nd St., New York 17, N. Y.
 See Advertisements on Pages 56 and 277

1052

NITROGEN

Linde Air Products Co., 30 E. 42nd St., New York 17, N. Y.
 See Advertisements on Pages 56 and 277

1053

Glass, Metal Sealing

METAL-TO-GLASS SEALS

Allegheny Ludlum Steel Corp., Brackenridge, Penn.
 Corning Glass Works, Corning, N. Y.

Electrical Industries, Inc., 42 Summer Ave., Newark 4, N. J.

See Advertisement on Page 278
 Hermaseal Co., Riverside Dr., Elkhart, Ind. See Advertisements on Pages 144, 152, 266
 Hermetic Seal Prods. Co., 414 Morris Ave., Newark 3, N. J.

See Advertisement on Page 233
 Savlion Labs., Inc., 1025 Broad St., Newark 2, N. J.

Sperti, Inc., Norwood Station, Cincinnati 12, Ohio

Stupakoff Ceramic & Mfg. Co., Latrobe, Pa. See Advertisement on Page 118

Wheaton Co., T. C., Industrial Div., Millville, N. J.

Zetka Labs, Inc., 198-10-12 32nd Ave., Bay-side, N. Y.

1054

Glass Working Equipment

International Machine Works, 2207 46th St., North Bergen, N. J.

See Advertisement on Page 256

1055

Graphite

COLLOIDAL GRAPHITE

Acheson Colloids Corp., Port Huron, Mich.
 Asbury Graphite Mills Inc., Asbury, N. J.
 Grafo Colloids Corp., Sharon, Pa.
 Superior Flake Graphite Co., 33 S. Clark St., Chicago 3, Ill.

1056

Grilles

Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.

See Advertisement on Page 197

1057

MOLDED PLASTIC GRILLES

Consolidated Molded Products Corp., 309 Cherry St., Scranton 2, Pa.

See Advertisement on Page 131

G. Felsenthal & Sons, 4122 W. Grand Ave., Chicago 51, Ill.

Syracuse Ornamental Co., 581 S. Clinton St., Syracuse, N. Y.

Victory Mfg. Co., 1722 W. Arcade Pl., Chicago 2, Ill.

1058

Grilles, Speaker

Flock Process Co., Velvetone Div., 3 Quincy St., Norwalk, Conn.

New England Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.

1059

Guides

SAPPHIRE COIL WIND GUIDES

Aurele M. Gatti, Inc., 1909 Liberty Street, Trenton, N. J.

1060

Insulating Compounds

ASPHALTS

Allied Asphalt & Mineral Corp., 217 Broadway, New York, 7, N. Y.

Biwax Corp., 3445 Howard St., Skokie, Ill.

Mitchell Rand Insulation Co. Inc., 51 Murray St., New York 7, New York
 See Advertisement on Page 58

Trotter & Co., E. T., 594 Johnson Ave., Brooklyn, N. Y.

Zophar Mills Inc., 112-130—26th St., Brooklyn 32, N. Y.

See Advertisement on Page 202

1061

COIL DOPES

General Cement Mfg. Co., 919 Taylor Avenue, Rockford, Ill.

See Advertisement on Page 290

Insl-X Co. Inc., The, 857 Meeker Ave., Brooklyn 22, N. Y.

See Advertisement on Page 244

Insulative Co., 1 Broadway, New York, N. Y.

Maas & Waldstein Co., 438 Riverside Ave., Newark, N. J.

See Advertisement on Page 45

Zophar Mills Inc., 112-130—26th St., Brooklyn 32, N. Y.

See Advertisement on Page 202

1062

GILSONITE

Allied Asphalt & Mineral Corp., 217 Broadway, New York 7, N. Y.

Zophar Mills Inc., 112-130—26th St., Brooklyn 32, N. Y.

See Advertisement on Page 202

1063

IMPREGNATING COMPOUNDS

Acme Wire Co., New Haven 14, Conn.

American Prods. Mfg. Co., 8127 Oleander St., New Orleans, La.

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.

Cantol Wax Co., 211 N. Washington St., Bloomington, Ind.

George Co., P. D., 5200 N. 2nd Street, St. Louis, Mo.

Halowax Prods. Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y.

Roebing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.

Stevenson Bro. & Co., 110 Race Street, Phila. 6, Pa.

Trotter & Co., E. T., 594 Johnson Ave., Brooklyn 6, N. Y.

Zophar Mills Inc., 112-130—26th St., Brooklyn 32, N. Y.

See Advertisement on Page 202

1064

INSULATING VARNISH

Acme Wire Co., New Haven 14, Conn.

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.

Dolph, John C., 168 Emmet St., Newark 5, N. J.

Dow Corning Corp., Box 592, Midland, Mich. See Advertisement on Page 211

Du Pont de Nemours & Co., Inc., E. L., Wilmington 93, Del.

Durez Plastics & Chemicals Inc., 1922 Walsh Rd., No. Tonawanda, N. Y.

General Cement Mfg Co., 919 Taylor Ave., Rockford, Ill.

See Advertisement on Page 290

George Co., P. D., 5200 N. Second St., St. Louis, Mo.

Horn Co., A. C., 43-36 Tenth St., Long Island City 1, N. Y.

Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.

Maas & Waldstein Co., 438 Riverside Ave., Newark, N. J.

See Advertisement on Page 45

Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.

Mitchell-Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

See Advertisement on Page 58

Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

Standard Varnish Works, 2600 Richmond Terrace, Staten Island 3, N. Y.

1065

LACQUER

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.

ELECTRONIC and ALLIED PRODUCTS

Communication Products Co., Inc., Route 36, Palmer Ave., Keansburg, N. J.
George Co., P. D., 5200 N. 2nd St., St. Louis, Mo.
Haynes Labs., Inc., C. W., 61 Chandler St., Springfield, Mass.
Horn Co., A. C., 43-36 Tenth St., Long Island City 1, N. Y.
Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

1066

PHENOLIC MOLDING COMPOUNDS

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
See Advertisements on Pages 110, 111
Durite Plastics, Inc., 5010 Summerdale Ave., Philadelphia 24, Pa.
Inst-X Co. Inc., The, 857 Meeker Ave., Brooklyn 22, N. Y.
See Advertisement on Page 244

1067

PITCH

Allied Asphalt & Mineral Corp., 217 Broadway, New York 7, N. Y.
Interlake Chemical Corp., Union Commerce Bldg., Cleveland 14, Ohio
Zophar Mills Inc., 112-130—26th St., Brooklyn 32, N. Y.
See Advertisement on Page 202

1068

PROTECTIVE SEALERS

Dow Corning Corp., Box 592, Midland, Mich.
See Advertisement on Page 211
Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.
See Advertisements on Pages 299-302
George Co., P. D., 5200 N. 2nd Street, St. Louis, Mo.
Halowax Prods. Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y.
Horn Co., A. C., 43-36 Tenth Street, Long Island City 1, N. Y.
Inst-X Co., Inc., The, 857 Meeker Ave., Brooklyn 22, N. Y.
See Advertisement on Page 244
Johns-Manville Sales Corp., 22 E. 40th St., New York, N. Y.
Nukem Products Corp., 111 Colgate Ave., Buffalo 20, N. Y.
Zophar Mills Inc., 112-130—26th St., Brooklyn 32, N. Y.
See Advertisement on Page 202

1069

RESINS

Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
Biwax Corp., 3445 Howard St., Skokie, Ill.
Catalin Corp., 1 Park Ave., New York, N. Y.
Dow Chemical Co., Midland, Mich.
Dow Corning Corp., Box 592, Midland, Mich.
See Advertisement on Page 211
Durez Plastics & Chemicals Inc., 1922 Walch Rd., No. Tonawanda, N. Y.
Durite Plastics, Inc., 5010 Summerdale Ave., Philadelphia 24, Pa.
Goodyear Tire & Rubber Co., Plastics & Chemical Div., 114 E. Market St., Akron 16, Ohio
Interlake Chemical Corp., Union Commerce Bldg., Cleveland 14, Ohio
Maas & Waldstein Co., 438 Riverside Ave., Newark, N. J.
See Advertisement on Page 45
Stevenson Bro. & Co., 110 Race St., Phila. 6, Pa.
Zophar Mills Inc., 112-130—26th St., Brooklyn 32, N. Y.
See Advertisement on Page 202

1070

SILICONE COMPOUNDS

Dow Corning Corp., Box 592, Midland, Mich.
See Advertisement on Page 211
Zophar Mills Inc., 112-130—26th St., Brooklyn 32, N. Y.
See Advertisement on Page 202

1071

VARNISH CAMBRIC COATINGS

Acme Wire Co., New Haven 14, Conn.
Brand & Co., Wm., 270 Fourth Ave., New York 10, N. Y.
See Advertisement on Page 50, 51
George Co., P. D., 5200 N. 2nd St., St. Louis, Mo.

1072

WAXES

Black Bear Co., Inc., 620 Fifth Ave., New York 20, N. Y.
Cantol Wax Co., 211 N. Washington St., Bloomington, Ind.
Dolph Co., John C., 1060 Broad St., Newark, N. J.
Du Pont de Nemours & Co. Inc., Organic Chemical Dept., Wilmington 98, Delaware
Halowax Prods. Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y.
Horn Co., A. C., 43-36 Tenth St., Long Island City 1, N. Y.
Insulative Co., 1 Broadway, New York, N. Y.
Maas & Waldstein Co., 438 Riverside Ave., Newark, N. J.
See Advertisement on Page 45
Mitchell Rand Insulation Co., Inc., 51 Murray Street, New York 7, New York
See Advertisement on Page 58
Roebing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
Stevenson Bro. & Co., 110 Race St., Phila. 6, Pa.
Trotter & Co., E. T., 594 Johnson Ave., Brooklyn 6, N. Y.
Wynn Mfg. Div., Hudson Supply Co., 401 N. 27th St., Richmond, Va.
Zophar Mills Inc., 112-130—26th St., Brooklyn 32, N. Y.
See Advertisement on Page 202

1073

Insulation Materials

ALUMINUM OXIDE

Belmont Smelting & Refining Works, 330 Belmont Ave., Brooklyn 7, N. Y.
Norton Co., 1 New Bond St., Worcester 6, Mass.

1074

ASBESTOS INSULATION

Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
Johns-Manville, 20 East 40th St., New York, N. Y.
Keasbey & Mattison, Ambler, Pa.
Powhatan Mining Co., Baltimore 7, Md.
Synthane Corp., Oaks, Pa.
Taylor Fibre Co., Norristown, Pa.

1075

ASBESTOS EBONY

Johns-Manville Sales Corp., 22 E. 40th St., New York, N. Y.

1076

BEAD INSULATION

Corning Glass Works, Corning, N. Y.
Kopp Glass Inc., 1 East 42nd St., New York 17, N. Y.
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
See Advertisement on Page 118

1077

CERAMIC INSULATION

American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
Centralab Div. of Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wis.
See Advertisement on Page 146
Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1, N. J.

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
Lapp Insulator Co., 31 Gilbert St., Le Roy, N. Y.

See Advertisements on Pages 54-55
Locke Insulator Corp., P. O. Box 57, Baltimore 3, Md.
Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
Mykroy, Inc., 1917 N. Springfield Ave., Chicago 47, Ill.
National Ceramic Co., 400 Southard St., Trenton 2, N. J.
National Porcelain Co., 400 Southard St., Trenton, N. J.
Star Porcelain Co., 61 Muirhead Ave., Trenton, N. J.
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
See Advertisement on Page 118
Universal Clay Products Co., 1505 E. First St., Sandusky, Ohio
Westinghouse Electric Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

1078

FABRIC INSULATION

Bentley-Harris Mfg. Co., Conshohocken, Pa.
Carolina Narrow Fabric Co., 1636 N. Chestnut St., Winston-Salem, N. C.
Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.
Du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
Electro Technical Products, Inc., Nutley 10, N. J.
Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
See Advertisement on Page 194
General Cement Mfg. Co., 319 Taylor Ave., Rockford, Ill.
See Advertisement on Page 290
Holliston Mills, Norwood, Mass.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
See Advertisement on Page 213
Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J.
Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.
New Jersey Wood Finishing Co., Inc., Electrical Insulation Dept., Woodbridge, N. J.

1079

FIBRE INSULATION

Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
See Advertisement on Page 44
Bentley-Harris Mfg. Co., Conshohocken, Pa.
Continental-Diamond Fibre Co., 16 Chapel St., Newark, Del.
Franklin Fibre-Lamitex Corp., 12th & French Sts., Wilmington, Del.
See Advertisement on Page 194
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
See Advertisement on Page 213
National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
See Advertisement on Page 33
Pierce Paper Products Co., Rockford, Ill.
Stevens Paper Mills, Inc., Windsor, Conn.
Taylor Fibre Co., Norristown, Pa.
West Virginia Pulp & Paper Co., 230 Park Ave., New York, N. Y.
Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

1080

FIBERGLAS INSULATION

Bentley-Harris Mfg. Co., Conshohocken, Pa.
Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.
Corning Glass Works, Corning, N. Y.
Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Delaware
See Advertisement on Page 194
Insulation Mfrs. Corp., 565 W. Washington Blvd., Chicago 6, Ill.
See Advertisement on Page 213
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.

Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
See Advertisement on Page 58
National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
See Advertisement on Page 33
Synthane Corp., Oaks, Pa.
Taylor Fibre Co., Norristown, Pa.

1081

GLASS INSULATION

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
Corning Glass Works, Corning, N. Y.
Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Del.
See Advertisement on Page 194
Hermetic Seal Prods. Co., 414 Morris Ave., Newark 3, N. J.
See Advertisement on Page 233
Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
See Advertisement on Page 213
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
Kopp Glass, Inc., 1 East 42nd St., New York 17, N. Y.
Libbey Div., Owens Illinois Glass Co., P. O., Box 1035, Toledo 1, Ohio
Polan Industries, Huntington 19, W. Va.

1082

GLASS BONDED MICA INSULATION

Electronic Mechanics, Inc., 70 Clifton Blvd., Clifton, N. J.
See Advertisement on Page 201
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
International Products Corp., Baltimore 18, Md.
Macallen Co., The, 16 Macallen St., Boston 27, Mass.
Mycalex Corp. of America, 60 Clifton Blvd., Clifton, N. J.
See Advertisement on Page 43
Tar Heel Mica Co., Plumtree, N. C.
U. S. Mica Mfg. Co., 1521 Circle Ave., Forest Park, Ill.

1083

MICA INSULATION

Asheville Mica Co., 5 River Rd., Biltmore, N. C.
Brand & Co., Wm., 276 Fourth Ave., New York 10, N. Y.
See Advertisements on Pages 50-51
Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.
Ford Radio & Mica Corp., 538 63rd St., Brooklyn, N. Y.
See Advertisement on Page 126
General Electric Co., Plastics Div., 1 Plastics Ave., Pittsfield, Mass.
See Advertisements on Pages 204, 212
Huse Liberty Mica Co., 171 Camden St., Boston 18, Mass.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
Macallen Co., The, 16 Macallen St., Boston 27, Mass.
Mica Products Mfg. Co., 69 Wooster St., New York, N. Y.
Munsell & Co., Eugene, 200 Varick Street, New York, N. Y.
New England Mica Co., Waltham, Mass.
Tar-Heel Mica Co., Plumtree, N. C.
U. S. Mica Mfg. Co., 1521 Circle Ave., Forest Park, Ill.
Schoonmaker Insulation Co. Inc., A. O., 635 Greenwich St., New York 14, N. Y.

1084

PAPER INSULATION

Acme Folding Box Co. Inc., 141 E. 25th St., New York, N. Y.
Aldine Paper Co., Inc., 535 Fifth Ave., New York 17, N. Y.
B. & C. Insulation Prod. Inc., 261 Fifth Ave., New York 16, N. Y.
Central Paper Co., Muskegon, Mich.
Continental-Diamond Fibre Co., 16 Chapel St., Newark, Del.
Cottrell Paper Co., Fall River, Mass.
Dobackmun Co., Indus. Prods. Div., Cleveland 1, Ohio.
Franklin Fibre-Lamitex Corp., 12th and French Sts., Wilmington, Delaware
See Advertisement on Page 194

Insulating Fabricators of New England, Inc., 22 Elkins St., S. Boston, Mass.
Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
See Advertisement on Page 213
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
Irvington Varnish & Insulator Co., 10 Argyle Terrace, Irvington 11, N. J.
Mica Insulator Co., 797 Broadway, Schenectady, N. Y.
Moore Co., H. J., 108 Park Row, New York 7, N. Y.
National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
See Advertisement on Page 33
Pierce Paper Products Co., Rockford, Ill.
Precision Fabricators Inc., 120 N. Fitzhugh St., Rochester, N. Y.
Schweitzer Paper Co., 142 Miller St., Newark, N. J.
See Advertisement on Page 205
Stevens Paper Mills, Inc., Windsor, Conn.
Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

1085

RUBBER INSULATION

Dow Corning Corp., Box 592, Midland, Mich.
See Advertisement on Page 211
General Tire & Rubber Co., The, Mechanical Goods Div., Wabash, Ind.
Goodrich Co., B. F., 500 S. Main, Akron, Ohio
Graton & Knight Co., 356 Franklin St., Worcester 4, Mass.

1086

STEATITE INSULATION

American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
Centralab Div., of Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wis.
See Advertisement on Page 146
Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1, N. J.
Isolantite Inc., 343 Cortlandt St., Belleville 9, N. J.
See Advertisement on Page 283
Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.
Lapp Insulator Co., 31 Gilbert St., LeRoy, N. Y.
Locks Insulator Corp., P. O. Box 57, Baltimore 3, Md.
National Ceramic Co., 400 Southard St., Trenton 2, N. J.
National Porcelain Co., 400 Southard St., Trenton, N. J.
Saxonburg Potteries, Saxonburg, Pa.
Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.
See Advertisement on Page 118
Wisconsin Porcelain Co., Sun Prairies, Wisc.

1087

Irons & Tools

ELECTRIC SOLDERING IRONS

Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
American Electrical Heater Co., 6110 Cass Ave., Detroit 2, Mich.
See Advertisement on Page 44
Ave., Detroit 2, Mich.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Ill.
Dual Remote Control Co., 31776 Cowan Rd., Wayne, Mich.
Electric Soldering Iron Co., Deep River, Conn.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Hexacon Electric Company, 161 W. Clay Ave., Roselle Park, N. J.
See Advertisement on Page 285
Jackson Electro Corp., 124 Bleeker St., New York, N. Y.
Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Kelnor Mfg. Co., Central Tower Bldg., 703 Market St., San Francisco, Calif.
Kwikheat Div., Sound Equipment Corp., 3903 San Fernando Road, Glendale 4, Calif.
See Advertisement on Page 276
Lenk Mfg. Co., Newton Lower Falls, Mass.
Luman Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio

Ungar Electric Tools, Inc., 616 Ducommun St., Los Angeles 54, Calif.
Vulcan Electric Co., 88 Holten St., Danvers, Mass.
Waage Elec. Co., A. H., 54 Park Pl., New York 7, N. Y.

1088

ACETYLENE SOLDERING TOOLS

Linde Air Products Co., 30 E. 43rd St., New York 17, N. Y.
See Advertisements on Pages 56, 277

1089

INSTANTANEOUS HEATING SOLDERING GUNS

Baker-Phillips Co., 3057 Lyndale Ave. S., Minneapolis 8, Minn.
Multi-Products Tool Co., 123 Sussex Ave., Newark 5, N. J.
Weller Mfg. Co., 516 Northampton St., Easton, Pa.
Wyse Labs., 211 S. Ludlow St., Dayton 2, Ohio

1090

RESISTANCE SOLDERING TOOLS

Luman Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio

1091

SCREWDRIVERS and SMALL INSULATED TOOLS

Burndy Engrg. Co., Inc., 107 Bruckner Blvd., New York 54, N. Y.
General Cement Mfg. Co., 919 Taylor, Rockford, Ill.
See Advertisement on Page 290
O'Neil-Irvin Mfg. Co., 316 Eighth Ave. S., Minneapolis 15, Minn.
See Advertisement on Page 232
Park Metalware Co., 28 Bank St., Orchard Park, N. Y.
Speedway Mfg. Co., 1834 South 52nd Ave., Cicero 50, Ill.
Stevens Walden, Inc., 459 Schrewsbury St., Worcester, Mass.
Webster Chicago Corp., Manufacturing Div., 5622 Bloomingdale Ave., Chicago 39, Ill.
Willor Mfg. Co., 794 East 140th St., New York 54, N. Y.

1092

Leads, Test

Alden Prods. Co., 117 N. Main St., Brockton, 64, Mass.
Alpha Wire Corp., 50 Howard St., New York, N. Y.
Birnbach Radio Co. Inc., 145 Hudson St., New York, N. Y.
Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkway., Brooklyn, N. Y.
Keystone Electronics Co., 50-52 Franklin St., New York 13, N. Y.
Telegraph Apparatus Co., 325 W. Huron St., Chicago, Ill.

1093

Leatherette

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
See Advertisement on Page 290

1094

Machines

BLUEPRINT MACHINES

Paragon-Revolute Corp., 97 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.
Shaw Blue Print Machine Co. Inc., 12 E. Park St., Newark 2, N. J.

ELECTRONIC and ALLIED PRODUCTS

1095

CARBON FILLING MACHINES FOR MICROPHONES

Tech Labs., 7 Lincoln St., Jersey City, N. J.
See Advertisement on Page 246

1096

COIL WINDING MACHINES

Armature Coil Equipment, Inc., 2605 Vega Ave., Cleveland 3, Ohio
Callite Tungsten Corp., 544 39th St., Union City, N. J.
See Advertisement on Page 35
Eisler Engrg. Co., 740 S. 13th St., Newark 3, N. J.
Gatti, Inc., Aurele, 1909 Liberty St., Trenton, N. J.
Magnetic Products Corp., Norwalk, Conn.
Production Equip. Co., 182 South St., Oyster Bay, L. I., New York
Seifert Inc., E. R., 202 South Beech St., Syracuse, N. Y.
Universal Winding Co., 1655 Elmwood Ave., Cranston 3, R. I.

1097

CRYSTAL DISC LAPPING AND MANUFACTURING MACHINES

Commercial Equipment Co., 1416 McGee St., Kansas City, Mo.
Felker Mfg. Co., 1128 Border Ave., Torrance, Calif.
National Gasket & Washer Mfg. Co., 122 E. 25th St., New York 10, N. Y.
Vokel Bros. Machine Wks., 1943 W. Manchester St., Los Angeles 44, Calif.

1098

CRYSTAL MFG. & FINISHING MACHINES

Hoffman Co., P. R., 321 Cherry St., Carlisle, Pa.

1099

CUTTING HEAD MACHINES

Audak Co., 500 Fifth Ave., New York, N. Y.
See Advertisement on Page 27
Fairchild Camera & Instrument Corp., 475—10th Ave., New York 18, N. Y.
Presto Recording Corp., 842 W. 55th St., New York 19, N. Y.
See Advertisements on Pages 48, 49
Rek-O-Kut Co., 148 Grand St., New York 18, N. Y.
See Advertisement on Page 265
Robinson Recording Labs., 35 S. 9th St., Phila., Pa.
See Advertisement on Page 202
Techno-Craft Prods., 200 Hudson St., New York 13, N. Y.
See Advertisement on Page 252
Western Electric Co. Inc., 120 Broadway, New York 5, N. Y.
See Advertisement on Page 182, 183

1100

ELECTRIC SOLDERING MACHINES

Cole Radio Works, 86 Westville Ave., Caldwell, N. J.
Electric Soldering Iron Co., 1845 W. Elm St., Deep River, Conn.
Waage Elec. Co., A. H., 54 Park Pl., New York 7, N. Y.

1101

ENGRAVING & PROFILING MACHINES

Auto Engraver Co., 1776 Broadway, New York, N. Y.
See Advertisement on Page 286

1102

FLEXIBLE SHAFT EQUIPMENT

Foredom Electric Co., 27 Park Place, New York 7, N. Y.
Haskins Co., R. G., 615 S. California Ave., Chicago 12, Ill.

1103

GLASS BLOWING MACHINES

Eisler Engrg. Co., 740 S. 13th St., Newark 3, N. J.
Kahle Engrg. Co., 1307 7th St., North Bergen, N. J.

1104

HIGH TEMPERATURE FATIGUE MACHINES

Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

1105

IMPREGNATING MACHINES

Production Engrg. Corp., 66 Van Houten Ave., Clifton, N. J.
See Advertisement on Page 225

1106

INSTRUMENT CLEANING MACHINES

Naxon Utilities Corp., 2101-11 W. Walnut St., Chicago 12, Ill.

1107

INSTRUMENT SHOCK TESTING MACHINES

Radio Frequency Labs., 708 Main St., Boonton, N. J.
See Advertisement on Page 144

1108

METAL & GLASS MARKING MACHINES

Kahle Engrg. Co., 1307 7th St., North Bergen, N. J.
Markem Machine Co., Keene, N. H.
Peerless Roll Leaf Co. Inc., 4511 New York Ave., Union City, N. J.
Preis Engraving Machine Co., 155 Summit St., Newark, 4, N. J.
Rogan Bros., 2001 S. Michigan Ave., Chicago, Ill.

1109

PHOTOCOPY MACHINES

American Photocopy Equipment Co., 2849 N. Clark St., Chicago, Ill.
Paragon-Revolute Corp., 97 South Street, Rochester 4, N. Y.
Photo Reproducing Equipment Co., Chatham, N. J.

1110

PORTABLE SCREW DRIVING EQUIPMENT

Haskins Co., R. G., 615 S. California Ave., Chicago 12, Ill.

1111

RECORD MANUFACTURING MACHINERY

Pointsetta, Inc., 95 Cedar Ave., Pitman, N. J.
Scully Machine Co., 62 Walter St., Bridgeport, Conn.

1112

TUBE MANUFACTURING MACHINES

Automatic Mfg. Co., 900 Passaic Ave., E. Newark, N. J.
See Advertisement on Page 119
Callite Tungsten Corp., 544 39th St., Union City, N. J.
See Advertisement on Page 35
International Machine Wks., 2027-46th St., North Bergen, N. J.
See Advertisement on Page 256
Litton Engrg. Labs., Redwood City, Calif.
Marlboro Tool & Mfg. Co., Charles St. & New Brunswick Ave., Matawan, N. J.
Radio Corp. of America, RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover

1113

VIBRATION FATIGUE TESTING MACHINES

All American Tool & Mfg. Co., 1014 W. Fullerton St., Chicago 14, Ill.
L. A. B. Corp., Summit, N. J.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

1114

WHITEPRINT MACHINES

General Aniline & Film Corp., Special Prods. Sales Dept., 270 Park Ave., New York 17, N. Y.
See Advertisement on Page 257
Paragon-Revolute Corp., 97 South Ave., Rochester 4, N. Y.

1115

WIRE DRAWING MACHINES

Kahle Engrg. Co., 1307 7th St., North Bergen, N. J.

1116

WIRE STRIPPING MACHINES

Pyramid Products Co., 2224 S. State St., Chicago, Ill.

1117

Magnetizers & Demagnetizers

Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind.
Grayhill Corp., 1 N. Pulaski Rd., Chicago, Ill.
Luman Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio
Magnetic Analysis Corp., 42-44 Twelfth St., Long Island City 1, N. Y.
Radio Frequency Labs., 708 Main St., Boonton, N. J.
See Advertisement on Page 144
Smith Mfg. Co., Nathan R., 105 Pasadena Ave., So. Pasadena, Calif.
Westinghouse Elec. Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

1118

Metals

ALUMINUM

Aluminum Co. of Amer., Gulf Bldg., Pittsburgh, Pa.
Aluminum Prods. Co., 120 W. Calendar Ave., La Grange, Ill.
American Materials Co., 150 Nassau St., New York 7, N. Y.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Bohm Alum. & Brass Corp., Lafayette Bldg., Detroit 26, Mich.
Fairmont Aluminum Co., Fairmont, West Va.
Reynolds Metal Co., Third & Grace Sts., Richmond 19, Va.
Sheet Alum. Corp., 701 Liberty St., Jackson, Mich.
United Smelting & Alum. Co. Inc., 187 Commerce St., New Haven, Conn.

1119

ALNICO-SINTERED METALS

Stackpole Carbon Co., St. Marys, Pa.

1120

ANTIMONY

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.

1121

ARSENIC

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.

1122

BARIUM METAL

King Laboratories Inc., 205 Onelda St.,
Syracuse 4, N. Y.
See Advertisement on Page 280

1123

BERYLIUM & BERYLIUM ALLOYS

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Brush Beryllium Co., The, 3714 Chester Ave., Cleveland 14, Ohio
Riverside Metal Co., Riverside, N. J.

1124

BRASS & BRONZE

American Materials Co., 150 Nassau St., New York 7, N. Y.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Bridgeport Brass Co., E. Main, Bridgeport 2, Conn.
La Magna Mfg. Co., Inc., East Rutherford, N. J.
Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
Riverside Metal Co., Riverside, N. J.
Titan Metal Mfg. Co., Bellefonte, Pa.
Western Brass Mills, Div. of Olin Industries, Inc., East Alton, Ill.

1125

CADMIUM

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.

1126

CESIUM COMPOUNDS
(for phototubes)

Foot Mineral Co., 1609 Summer St., Phila., Pa.

1127

CHROMIUM

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Driver Harris Co., 201 Middlesex St., Harrison, N. J.
See Advertisement on Page 133

1128

COEFFICIENT METALS

Keystone Carbon Co., Inc., 1935 State St., St. Marys, Pa.

1129

COLUMBIUM

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
See Advertisement on Page 121

1130

COPPER

American Materials Co., 150 Nassau St., New York 7, N. Y.
Baker & Co., 113 Astor St., Newark 5, N. J.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Bridgeport Brass Co., E. Main, Bridgeport, Conn.
Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
Riverside Metal Co., Riverside, N. J.

1131

ELECTRIC SHEETS

American Rolling Mill Co., The, 2441 Curtis St., Middletown, Ohio
Carnegie Illinois Steel Corp., Carnegie Bldg., Pittsburgh, Pa.
Follansbee Steel Corp., 3rd & Liberty Sts., Pittsburgh, Pa.

1132

ALUMINUM, TIN & LEAD FOIL

Aluminum Co. of Amer., Gulf Bldg., Pittsburgh, Pa.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Johnston Tin Foil & Metal Co., 6100 S. Broadway, St. Louis 11, Mo.
Reynolds Metal Co., Foil Division, Federal Reserve Bldg., Richmond, Va.

1133

GOLD & GOLD ALLOYS

American Platinum Works, N. J. R. R. Ave. at Oliver St., Newark 5, N. J.
See Advertisement on Page 260
Baker & Co., 113 Astor St., Newark 5, N. J.
General Plate Div. Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
Goldsmith Bros. Smelting & Refining Co., 58 E. Washington St., Chicago, Ill.
Handy & Harman, 82 Fulton St., New York 7, N. Y.
Ney Co., J. M., Hartford, Conn.
Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

1134

HIGH PERMEABILITY ALLOYS

Simmonds Saw & Steel Co., Lockport, N. Y.

1135

LAMINATED METAL PRODUCTS

Thomas & Skinner Steel Prod. Co., 1120 E. 23rd St., Indianapolis, Ind.
See Advertisement on Page 278

1136

LEAD

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Division Lead Co., 836 W. Kinzie Street, Chicago 22, Ill.

1137

LITHIUM COMPOUNDS
(for cathode tube screen settling)

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Foot Mineral Co., 1609 Summer St., Phila., Pa.

1138

MANGANESE

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.

1139

MAGNESIUM

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Dow Chemical Co., Midland, Mich.

1140

MAGNETIC IRON OXIDE
(for cores)

Foot Mineral Co., 1609 Summer St., Phila., Pa.

1141

MERCURY

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Callite Tungsten Corp., 544 39th St., Union City, N. J.
See Advertisement on Page 35
Goldsmith Bros. Smelting & Refining Co., 58 E. Washington St., Chicago, Ill.

1142

MOLYBDENUM

Baker & Co., 113 Astor St., Newark 5, N. J.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Callite Tungsten Corp., 544 39th St., Union City, N. J.
See Advertisement on Page 35
Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland, Ohio
Cross, H., 15 Beekman St., New York, N. Y.
See Advertisement on Page 294
Fansteel Metallurgical Corp., 2200 Sheridan Rd., No. Chicago, Ill.
See Advertisement on Page 121
Kemet Lab. Co. Inc., W. 117th St. & Madison Ave., Cleveland 1, Ohio
North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

1143

MONEL

Alloy Metal Wire Co., Prospect Park, Pa.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.

1144

NICKEL & NICKEL ALLOYS

Alloy Metal Wire Co., Prospect Park, Pa.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Bridgeport Brass Co., E. Main, Bridgeport, Conn.
Driver Harris Co., 201 Middlesex St., Harrison, N. J.
See Advertisement on Page 133
Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.
International Nickel Co., 67 Wall St., New York 5, N. Y.
Lukens Steel Co., Coatesville, Pa.
Riverside Metal Co., Riverside, N. J.
Simmonds Saw & Steel Co., Lockport, N. Y.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

1145

NICKEL RIBBON

Driver Co., Wilbur B., 150 Riverside Ave., Newark, N. J.
Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.

1146

PALLADIUM

American Platinum Works, N. J. R. R. Ave. at Oliver St., Newark 5, N. J.
See Advertisement on Page 260
Baker & Co., 113 Astor St., Newark 5, N. J.
Goldsmith Bros. Smelting & Refining Co., 58 E. Washington St., Chicago, Ill.

1147

PHOSPHOR BRONZE

Western Brass Mills, Div. of Olin Industries, E. Alton, Illinois

1148

PLATINUM

American Platinum Works, N. J. R. R. Ave. at Oliver St., Newark 5, N. J.
See Advertisement on Page 260
Baker & Co., 113 Astor St., Newark 5, N. J.
Cohn & Co., Sigmund, 44 Gold St., New York, N. Y.
General Plate Div. Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
Goldsmith Bros. Smelting & Refining Co., 58 E. Washington St., Chicago, Ill.
Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

1149

POWDERED METALS

American Solder & Flux Co., 2152 E. Norris St., Phila. 25, Pa.
Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland, Ohio

ELECTRONIC and ALLIED PRODUCTS

General Aniline & Film Corp., Special Prods. Sales Dept., 270 Park Ave., New York 17, N. Y.

See Advertisement on Page 257
Mephram Corp., G. S., 2001 Lynch Ave., East St. Louis, Ill.
Plastic Metals Div., The Nat'l Radiator Co., 169 Bridge St., Johnstown, Pa.

1150

SILICON

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.

1151

SILVER

American Platinum Works, N. J. R. R. Ave. at Oliver St., Newark 5, N. J.

See Advertisement on Page 260
Baker & Co., 113 Astor St., Newark 5, N. J.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.
Callite Tungsten Corp., 544 39th St., Union City, N. J.

See Advertisement on Page 35
General Plate Div. Metals & Controls Corp., 34 Forest St., Attleboro, Mass.

Goldsmith Bros. Smelting & Refining Co., 58 E. Washington St., Chicago, Ill.
Handy & Harman, 82 Fulton St., New York 7, N. Y.

North American Phillips Co. Inc., 100 E. 42nd St., New York 17, N. Y.

Riverside Metal Co., Riverside, N. J.
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

1152

SILVER ALLOYS & COMPOUNDS

American Platinum Works, N. J. R. R. Ave. at Oliver St., Newark 5, N. J.

See Advertisement on Page 260
Handy & Harman, 82 Fulton St., New York 7, N. Y.

Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

1153

STAINLESS STEEL

Alloy Metal Wire Co., Prospect Park, Pa.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio

1154

STEEL

Carnegie Illinois Steel Corp., Carnegie Bldg., Pittsburgh, Pa.

La Magna Mfg. Co., Inc., East Rutherford, N. J.

Philadelphia Steel & Wire Corp., Penn St. & Belfield Ave., Philadelphia, Pa.

Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio

Rustless Iron and Steel Div., American Rolling Mill Co., 3400 E. Chase St., Baltimore 13, Md.

Swedish Iron & Steel Corp., 17 Battery Pl., New York, N. Y.

U. S. Steel Corp., 71 Bdway, New York 6, N. Y.

Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

1155

STEEL ELECTRICAL

Allegheny Ludlum Steel Corp., Brackenridge, Pa.

Carnegie-Illinois Steel Corp., Carnegie Bldg., Pittsburgh, Pa.

Empire Steel Corporation, N. Bowman St., Mansfield, Ohio

Newport Rolling Mill Co., Ninth & Lowell Sts., Newport, Ky.

Union Drawn Steel Div., Republic Steel Corp., Harsh Ave., S. E. Massillon, Ohio

U. S. Steel Corp., 71 Broadway, New York 6, N. Y.

1156

STRONTIUM

King Labs. Inc., 205 Oneida St., Syracuse 4, N. Y.

See Advertisement on Page 280

1157

TANTALUM

Fansteel Metallurgical Corp., 2200 Sheridan Rd., No. Chicago, Ill.

See Advertisement on Page 121

1158

THERMOSTATIC BI-METALS

Baker & Co., 113 Astor St., Newark 5, N. J.
Brainin Co., C. S., 233 Spring St., New York 13, N. Y.

See Advertisement on Page 270
Callite Tungsten Corp., 544 39th St., Union City, N. J.

See Advertisement on Page 35
Wilson Co., H. A., 105 Chestnut St., Newark 5, N. J.

1159

TIN

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.

1160

TUNGSTEN

Baker & Co., 113 Astor St., Newark 5, N. J.
Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.

Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland, Ohio

Cross Co., H., 15 Beekman St., New York 7, N. Y.

See Advertisement on Page 294
Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

See Advertisement on Page 121
North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

1161

TUNGSTEN RIBBON

Cross, H., 15 Beekman St., New York, New York

See Advertisement on Page 294

1162

ZINC

Belmont Smelting & Refining Wks., 330 Belmont Ave., Brooklyn 7, N. Y.

1163

ZIRCONIUM

Foot Mineral Co., 1609 Summer St., Phila., Pa.

1164

Optical Equipment & Optical Specialties

American Lens Co. Inc., 45 Lispenard St., New York 13, N. Y.

American Optical Co., Scientific Instr. Div., Buffalo 11, N. Y.

Andrews & Perillo, 39-30 Crescent St., Long Island City, N. Y.

Argus Inc., Ann Arbor, Mich.

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.

Buhl Optical Co., 420 Blvd. of Allies, Pittsburgh, Pa.
Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.

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.

Geophysical Instrument Co., Key Blvd. & Nash St., Arlington, Va.

Herron Optical Co., 705 W. Jefferson Blvd., Los Angeles 7, Calif.

Instrument Optic Co., 1872 Genesee St., Buffalo 11, N. Y.

Mogey & Sons, Inc., Wm., 76 Interhaven Ave., Plainfield, N. J.

Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles, Calif.

Perkin Elmer Corp., Glenbrook, Conn.
Spencer Lens Co., Buffalo 11, N. Y.
Valpey Crystals, Highland St., Holliston, Mass.

Zenith Optical Co., 123 W. 64th St., New York 23, N. Y.

1165

Ovens

INFRA-RED DRYING OVENS

Infra-Red Engineers & Designers, E. 73rd & Grand Ave., Cleveland 4, Ohio

1166

Phosphors

du Pont de Nemours Co. Inc., Organic Chemical Dept., Wilmington 98, Delaware.

1167

Plastic Materials

ALLYLS

Columbia Chem. Div., Pittsburgh Plate Glass Co., Grant Bldg., Pittsburgh 15, Pa.

Goodrich Chemical Co., B. F., Cleveland 15, Ohio

1168

CELLULOSE ACETATE

American Molding Powder & Chemical Corp., 44 Hewes St., Brooklyn, N. Y.

Bamberger A., 44 Hewes St., Brooklyn, N. Y.

Celanese Plastics Corp., 180 Madison Ave., New York 16, N. Y.

Chemaco Corp.—Subsidiary of Manufacturers Chemical Corp., Berkeley Heights, N. J.

Davis Plastics Co., Joseph, Schuyler & Ft. of Quincy Aves., Arlington, N. J.

du Pont de Nemours Co., Inc., E. I. Plastics Dept., 626 Schuyler Ave., Arlington, N. J.

G. Felsenthal & Sons, 4122 W. Grand Ave., Chicago 51, Ill.

Gering Products, Kenilworth, N. J.

Jersey Plastic Corp., Lodi, N. J.

Kuhn & Jacob Moulding & Tool Co., 1200 Southard St., Trenton, N. J.

La Magna Mfg. Co., Inc., East Rutherford, N. J.

Mudane Co., The, 110 Bleecker St., New York, N. Y.

Nixon Nitration Wks., Nixon, N. J.

Oppenheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y.

Tennessee Eastman Corp., Div. Eastman Kodak Co., Kingsport, Tenn.

1169

CELLULOSE ACETATE BUTYRATE

G. Felsenthal & Sons, 4122 W. Grand Ave., Chicago 51, Ill.

Oppenheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y.

Tennessee Eastman Corp., Div. Eastman Kodak Co., Kingsport, Tenn.

1170

CELLULOSE NITRATE

Celanese Plastics Corp., 180 Madison Ave., New York 16, N. Y.

Davis Plastics Co., Joseph, Schuyler & Ft. of Quincy Aves., Arlington, N. J.
 du Pont de Nemours Co., Inc., E. I. Plastics Dept., 626 Schuyler Ave., Arlington, N. J.
Industrial Synthetics Corp., Irvington 11, N. J.
 See Advertisement on Page 123
 Nixon Nitration Wks., Nixon, N. J.

1171

ETHYL CELLULOSE

Chemaco Corp.—Subsidiary of Manufacturers Chemical Corp., Berkeley Heights, N. J.
 Dow Chemical Co., Midland, Mich.
 Hercules Powder Co., 921 Market St., Wilmington 99, Del.

1172

MELAMINE FORMALDEHYDE

American Cyanamid Co., Plastics Div., 30 Rockefeller Plaza, New York 20, N. Y.
 Ciba Products Co., Inc., 627 Greenwich St., New York 14, N. Y.
 Durite Plastics Inc., 5010 Summerdale Ave., Philadelphia 24, Pa.
 Monsanto Chemical Co., Plastics Div., Springfield 2, Mass.
 Plaskon Div., Libbey-Owens-Ford Glass Co., 2112-14 Sylvan Ave., Toledo 6, Ohio

1173

METHYL METHACRYLATE

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 American Resinous Chemical Co., 104 Foster St., Peabody, Mass.
 du Pont de Nemours Co., Inc., E. I. Plastics Dept., 626 Schuyler Ave., Arlington, N. J.
 G. Felsenthal & Sons, 4122 W. Grand Ave., Chicago 51, Ill.
 General Dyestuff Corp., 435 Hudson St., New York 14, N. Y.
 Peters Chemical Mfg. Co., 3623 Lake St., Melrose Park, Ill.
 Rohm & Haas, 222 W. Washington Sq., Philadelphia, Pa.

1174

NYLON

du Pont de Nemours Co., Inc., E. I. Plastics Dept., 626 Schuyler Avenue, Arlington, N. J.

1175

PHENOL FORMALDEHYDE (Phenolics)

Accurate Molding Corp., 116 Nassau St., Brooklyn 1, N. Y.
 Adhesive Prods. Co., 522 5th Ave., Seattle, Wash.
 American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
 Catalin Corp., 1 Park Ave., New York, N. Y.
 Drackett Co., 5020 Spring Grove Ave., Cincinnati 27, Ohio
 Durez Plastics & Chemicals Inc., 1922 Walek Rd., No. Tonawanda, N. Y.
 Durite Plastics, Inc., 5010 Summerdale Ave., Phila. 24, Pa.
 General Electric Co., Plastics Div., 1 Plastics Ave., Pittsfield, Mass.
 See Advertisements on Pages 204, 212
 Heresite & Chemical Co., 822 S. 14th St., Manitowoc, Wis.
 Interlake Chemical Corp., Union Commerce Bldg., Cleveland 14, Ohio
 Kuhn & Jacob Moulding & Tool Co., 1200 Southard St., Trenton, N. J.
 Monsanto Chemical Co., Plastics Div., Springfield 2, Mass.
 Monsanto Chemical Co., St. Louis 4, Mo.
 Pennsylvania Coal Prods. Co., Petrolia, Pa.
 Reilly Tar & Chemical Corp., Merchants Bank Bldg., Indianapolis, Ind.

Skoning Corp., 319-325 Taunton Ave., E. Providence 14, R. I.
 Synvar Corp., 415 E. Front St., Wilmington, Del.
 Valite Div., Valentine Sugars, Whitney Bldg., New Orleans 12, La.
 Watertown Mfg. Co., Watertown, Conn.

1176

POLYSTYRENE

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
 Blum & Co., Julius, 532 W. 22nd St., New York, N. Y.
 Catalin Corp., 1 Park Ave., New York, N. Y.
 Chemaco Corp.—Subsidiary of Manufacturers Chemical Corp., Berkeley Heights, N. J.
 Gering Prods. Inc., Kenilworth, N. J.
 Manufacturers Chemical Co., Inc., 222 W. Washington St., Phila. 5, Pa.
 Sylvan Plastics Inc., 122 E. 42nd St., New York, N. Y.
 Dow Chemical Co., Midland, Mich.
 G. Felsenthal & Sons, 4122 W. Grand Ave., Chicago 51, Ill.
 Monsanto Chemical Co., Plastics Div., Springfield 2, Mass.
 Monsanto Chemical Co., St. Louis 4, Mo.

1177

POLYETHYLENE

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
 du Pont de Nemours Co., Inc., E. I. Plastics Dept., 626 Schuyler Ave., Arlington, N. J.

1178

UREA FORMALDEHYDE

Accurate Molding Corp., 116 Nassau St., Brooklyn 1, N. Y.
 American Cyanamid Co., Plastics Div., 30 Rockefeller Plaza, New York 20, N. Y.
 Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
 Kuhn & Jacob Moulding & Tool Co., 1200 Southard St., Trenton, N. J.
 Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-14 Sylvan Ave., Toledo 6, Ohio
 Resinous Products & Chemical Co. Inc., 222 W. Washington St., Phila. 5, Pa.
 Sylvania Industrial Corp., 122 E. 42nd St., New York, N. Y.
 Synvar Corp., Wilmington, Del.

1179

VINYL COMPOUNDS

American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
 See Advertisements on Pages 110, 111
 Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
 Chemaco Corp.—Subsidiary of Manufacturers Chemical Corp., Berkeley Heights, N. J.
 Dow Chemical Co., Midland, Mich.
 du Pont de Nemours Co., Inc., E. I. Plastics Dept., 626 Schuyler Ave., Arlington, N. J.
 Felsenthal & Sons, G., 4122 W. Grand Ave., Chicago 51, Ill.
 Goodrich Chemical Co., B. F., Cleveland 15, Ohio
 Manufacturers Chemical Corp., Berkeley Heights, N. J.
 Monsanto Chemical Co., Plastics Div., Springfield 2, Mass.
 Respro, Inc., Wellington Ave., Cranston 10, R. I.
 Shawinigan Products Corp., 350 Fifth Ave., New York 1, N. Y.

1180

Plastic Resins

American Cyanamid Co., Plastics Div., 30 Rockefeller Plaza, New York 20, N. Y.
 Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.

Barrett Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
 Bryant Electric Co., The (Hemco Plastics Div.), Bridgeport, Conn.
 Carbide and Carbon Chemicals Corp., Plastics Div., 30 E. 42nd St., New York 17, N. Y.
 Catalin Corp., One Park Ave., New York 16, N. Y.
 Celanese Plastics Corp., Div. Celanese Corp. of Amer., 180 Madison Ave., New York 16, N. Y.
 Ciba Co., Inc., 627 Greenwich St., New York 14, N. Y.
 Columbia Chem. Div., Pittsburgh Plate Glass Co., Grant Bldg., Pittsburgh 19, Pa.
 Continental-Diamond Fibre Co., Newark 29, Del.
 Dow Chemical Co., Midland, Mich.
 du Pont de Nemours, E. I. & Co., Inc., Plastics Dept., 626 Schuyler Ave., Arlington, N. J.
 Durez Plastics & Chemicals, Inc., N. Tonawanda, N. Y.
 Durite Plastics Inc., 5000 Summerdale Ave., Philadelphia 24, Pa.
 Firestone Tire & Rubber Co., 1 Firestone Ave., Fall River, Mass.
 General Aniline & Film Corp., Special Prods. Sales Dept., 270 Park Ave., New York 17, N. Y.

See Advertisement on Page 257
 General Elec. Co., Plastics Div., 1 Plastics Ave., Pittsfield, Mass.

See Advertisements on Pages 204, 212
 Goodrich Chemical Co., B. F., Ross Bldg., Cleveland 15, Ohio
 Goodyear Tire & Rubber Co., Plastics and Chemical Div., 1144 E. Market St., Akron, Ohio
 Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.
 Irvington Varnish & Insulator Co., 6 Argyle Terrace, Irvington 11, N. J.
 Knoedler Co., A., Lancaster, Pa.
 Makalot Corp., 262 Washington St., Boston 9, Mass.
 Monsanto Chemical Co., Plastics Div., 600 Monsanto Ave., Springfield 2, Mass.
 Nixon Nitration Works, Nixon, N. J.
 Owens-Illinois Glass Co., Plastics Div., Toledo, Ohio
 Plaskon Div., Libbey-Owens-Ford Glass Co., 2112 Sylvan Ave., Toledo 6, Ohio
 Reichold Chemicals, Inc., 601 Woodward Heights Blvd., Ferndale Sta., Detroit 20, Mich.
 Resinous Products & Chemical Co., Inc., 222 W. Washington St., Philadelphia 5, Pa.
 Rohm & Haas Co., 222 W. Washington Square, Philadelphia 5, Pa.
 Shawinigan Products Corp., 350 5th Ave., New York 1, N. Y.
 Synvar Corp., 415 E. Front St., Wilmington, Delaware
 Tennessee-Eastman Corp., Kingsport, Tenn.
 U. S. Rubber Co., 1230 6th Ave., New York, New York
 U. S. Stoneware Co., Akron 9, Ohio
 Westinghouse Electric & Mfg. Co., Milcarta Dept., Trafford, Pa.
 See Advertisements on Pages 17-20; 190, 191

1181

Plates

FLOCK TURNTABLE PLATES

Flock Process Co., Velvetone Div., 3 Quincy St., Norwalk, Conn.

1182

INSTRUCTION PLATES

Colonial Brass Co., 100 Vine St., Middleboro, Mass.
 Etched Products Corp., 39-01 Queens Blvd., Long Island City, N. Y.
 Hopp Press Inc., 460 W. 34th St., New York, N. Y.
 See Advertisement on Page 180
 Plastic Fabricators Co., 440 Sansome Street, San Francisco 11, Calif.
 Premier Metal Etching Co., 21-03 44th Ave., Long Island City, N. Y.
 See Advertisement on Page 260

1183

NAME PLATES

American Emblem Co., Utica, N. Y.
 Ansonia Clock Co. Inc., 103 Lafayette St., New York 13, N. Y.

ELECTRONIC and ALLIED PRODUCTS

B & C Insulation Prod. Inc., 261 Fifth Ave., New York 16, N. Y.

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio

Colonial Brass Co., 100 Vine St., Middleboro, Mass.

Control Corp., 718 Central Ave., Minneapolis 14, Minn.

Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.

Etched Products Corp., 39-01 Queens Blvd., Long Island City, N. Y.

General Electric Co., Schenectady 5, N. Y.

Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.

Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.

Hopp Press Inc., 460 W. 34th St., New York, N. Y.

Long Island Engraving Co., 19 W. 21st St., New York 10, N. Y.

New England Etching & Plating Co., 25 Spring Street, Holyoke, Mass.

Plastic Fabricators Co., 440 Sansome Street, San Francisco 11, Calif.

Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 3, Calif.

Premier Metal Etching Co., 21-03 44th Ave., Long Island City, N. Y.

Sillcocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.

1184

Plating, Metal, on Plastics

Electro Plastic Processes, 2035 West Charleston St., Chicago 47, Ill.

Headen Co., The, 17 Academy St., Newark 2, N. J.

Slevering, Inc., Philip, 199 Lafayette Street, New York, N. Y.

1185

Pots, Soldering

Electric Soldering Iron Co., 1845 W. Elm St., Deep River, Conn.

Lectrohm, Inc., 5141 W. 25th St., Cicero 50, Ill.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Sta-Warm Electric Co., N. Chestnut St., Ravenna, Ohio

Trent Co., Harold E., Leverington Ave. at Wilde St., Philadelphia 27, Pa.

Vulcan Electric Co., Danvers, Mass.

Waage Electric Co., A. H., 54 Park Place, New York 7, N. Y.

1186

Pots and Tanks, Heating

(for melting and dispensing insulating compounds)

Aeroll Products Co., 5701 Park Ave., West New York, N. J.

General Electric Co., Schenectady 5, N. Y.

Sta-Warm Elec. Co., N. Chestnut Street, Ravenna, Ohio

Vulcan Electric Co., 88 Holton St., Danvers, Mass.

Waage Elec. Co., A. H., 54 Park Pl., New York 7, N. Y.

1187

Powders, Polishing

Linick Chemical Co., 29 E. Madison Street, Chicago 2, Ill.

1188

Presses, Hydraulic Molding

(for electronic molding of plastics)

Hydraulic Press Mfg. Co., Mt. Gilead, Ohio

1189

Probes

HIGH FREQUENCY VOLTMETER PROBES

Barber Labs., A. W., 34-04 Francis Lewis Blvd., Flushing, N. Y.

See Advertisement on Page 288

1190

Pullers

RADIO TUBE PULLERS

Kellems Co., Saugatuck, Conn.

1191

Punches, Metal

Greenlee Tool Co., 2136 12th St., Rockford, Ill.

Parker-Kalon Corp., 200 Varick St., New York 14, New York

1192

Quartz—Crystals Crude

American Gem & Pearl Co., 6 West 48th St., New York 19, N. Y.

Cadie Chemical Products, Inc., 621 Sixth Ave., New York 11, N. Y.

Diamond Drill Carbon Co., 53-63 Park Row, New York 7, N. Y.

1193

Quartz, Raw

Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.

1194

Records

PHONOGRAPH RECORDS

ARA Records, 686 N. Robertson Blvd., Hollywood 46, Calif.

Bibletone, 354 Fourth Ave., New York 10, N. Y.

Coda Record Co., 1291 Sixth Ave., New York 19, N. Y.

Commodore Record Co., 415 Lexington Ave., New York, N. Y.

Decca Records, Inc., 50 West 57th St., New York 19, N. Y.

Harmonia Records, 1326 Broadway, New York, New York

Kismet Record Co., 227 E. 14th St., New York 3, N. Y.

Radio Corp. of America, RCA Victor Div., Camden, N. J.

Riggs & Jeffreys, Inc., 73 Winthrop St., Newark 4, N. J.

Robinson Recording Laboratories, 35 S. Ninth St., Philadelphia, Pa.

Scriber & Gustafson, Rm. 1008-1600 Broadway, N. Y. 19, N. Y.

1195

Solder

Alpha Metals, Inc., 363 Hudson Ave., Brooklyn 1, N. Y.

American Smelting & Refining Co., Federated Metals Div., 120 Broadway, New York 5, N. Y.

Eutetic Welding Alloys Co., 40 Worth St., New York, N. Y.

Gardner Metal Co., 1356 W. Lake St., Chicago 6, Ill.

General Electric Co., Schenectady 5, N. Y.

Johnson Co., Lloyd S., 2241 Indiana Ave., Chicago, Ill.

Kester Solder Co., 4212 Wrightwood Ave., Chicago 33, Ill.

Lenk Mfg. Co., Newton Lower Falls, Mass.

Makepeace Co., D. E., Attleboro, Mass.

National Lead Co., 111 Broadway, New York 6, N. Y.

New York Solder Co., 15 Crosby St., New York, N. Y.

Ruby Chemical Co., 68 McDowell St., Columbus 1, Ohio

Stevens Arnold Co., 22 Elkins St., So. Boston, Mass.

Vulcan Electric Co., 88 Holten St., Danvers, Mass.

1196

PLATINUM SOLDER

Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco, Calif.

1197

SILVER SOLDER

Baker & Co., 113 Astor St., Newark 5, N. J.

General Plate Div. Metals & Controls Corp., 34 Forest St., Attleboro, Mass.

Johnson Co., Lloyd S., 2241 Indiana Ave., Chicago, Ill.

1198

SOLDER RINGS & PREFORMS

Alpha Metals, Inc., 363 Hudson Ave., Brooklyn 1, N. Y.

Electronic Specialties Mfg. Co., 125 N. Main St., Elkhart, Indiana

See Advertisement on Page 274

1199

Sources, Alpha Ray

U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

1200

Special Nails

John Hassall, Inc., Clay & Oakland Sts., Brooklyn, N. Y.

See Advertisement on Page 272

1201

Stencils

METAL MARKING STENCILS

Luman Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio

1202

TUBE PIN STRAIGHTENERS

Star Expansion Prods. Co., 147-149 Cedar St., New York 6, N. Y.

Stedman, Robert L., E. Main St., Oyster Bay, N. Y.

1203

Straps, Leather

Auburn Mfg. Co., 110 Stack St., Middletown, Conn.

1946-1947 DIRECTORY of ELECTRONIC and ALLIED PRODUCTS

1204

Strippers, Wire

Eraser Co., 231 W. Water St., Syracuse 2, N. Y.
Pyramid Products Co., 2224 S. State St., Chicago, Ill.

1205

Testers

VOLTAGE NEON TESTERS

Fordham Mfg. Co., 2736 Creston Ave., New York 58, N. Y.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
See Advertisement on Page 290
MB Mfg. Co., Inc., 1060 State St., New Haven 11, Conn.
See Advertisements on Pages 140, 141, 193

1206

MOISTURE DETECTION TESTERS

Delmhorst Instrument Co., 115 Cornelia St., Boonton, N. J.
Sidward Products Co., 261 Broadway, New York 7, N. Y.

1207

Thermometers

PLATINUM CONTACT THERMOMETERS

Weksler Thermometer Corp., 52 W. Houston St., New York, N. Y.

1208

RESISTANCE THERMOMETERS

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
Wheelco Instruments Corp., 847 W. Harrison St., Chicago 7, Ill.

1209

Tubing

BRASS & COPPER TUBING

American Brass Co., Waterbury 88, Conn.
Bundy Tubing Co., 10951 Hern Ave., Detroit 13, Mich.
Precision Tube Co., 3828 Terrace St., Philadelphia 28, Pa.
See Advertisement on Page 298
Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
Uniform Tubes, Shurs Lane & Lauriston St., Roxborough, Philadelphia, Pa.

1210

KNITTED WIRE TUBES AND TUBING

Alden Prods. Co., 117 North Main Street, Brockton 64, Mass.
Alpha Wire Corp., 50 Howard Street, New York, N. Y.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Chicago Metal Hose Corp., 1315 S. 34d Ave., Maywood, Ill.
Electric Auto-Lite Co., Toledo 1, Ohio
Essex Wire Corp., 1601 Wall St., Fort Wayne, Ind.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212

1211

METAL AND ALLOY TUBING

Agaloy Tubing Co., 75 West St., New York 6, N. Y.
American Brass Co., Waterbury 88, Conn.
American Materials Co., 150 Nassau St., New York 7, N. Y.

Bundy Tubing Co., 10951 Hern Ave., Detroit 13, Mich.
General Plate Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
International Nickel Co., 67 Wall St., New York 5, N. Y.
Johnson Co., E. F., Waseca, Minn.
Makepeace Co., D. E., Attleboro, Mass.
See Advertisement on Page 216
National Lead Co., 111 Broadway, New York 6, N. Y.
Precision Tube Co., 3828 Terrace St., Phila. 28, Pa.
See Advertisement on Page 298
Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
Summerill Tubing Co., Montgomery County, Bridgeport, Pa.
Superior Tube Co., Norristown, Pa.
See Advertisement on Page 37
Swedish Iron & Steel Corp., 17 Battery Place, New York, N. Y.
Uniform Tubes, Shurs Lane & Lauriston St., Roxborough, Phila., Pa.
Westinghouse Electric Corp., East Pittsburgh, Pa.
See Advertisements on Pages 17-20; 190, 191

1212

MONEL TUBING

International Nickel Co., Inc., The, 67 Wall St., New York 5, N. Y.

1213

NICKEL TUBING

General Plate Div. Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
International Nickel Co., Inc., The, 67 Wall St., New York 5, N. Y.

1214

PRECIOUS METAL TUBING

Callite Tungsten Corp., 544 39th St., Union City, N. J.
See Advertisement on Page 35
Makepeace Co., D. E., Attleboro, Mass.
See Advertisement on Page 216

1215

STEEL TUBING

Van Huffel Tube Corp., Warren, Ohio

1216

Vacuum Indicating, Recording & Control Equipment

Beech-Russ Co., 50 Church St., New York 7, N. Y.
Distillation Products, Inc., 755 Ridge Rd. W., Rochester, N. Y.
Ecco High Frequency Elec. Corp., 7020 Hudson Blvd., North Bergen, N. J.
Fish-Schurman Corp., 230 East 45th St., New York 17, N. Y.
Fredericks Co., Geo. E., Bethayres, Pa.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.
Zetka Labs. Inc., 198-10-12 32nd Ave., Bayside, N. Y.

1217

Vacuum Pumps

HIGH-VACUUM PUMPS

Allis Chalmers Mfg. Co., Milwaukee 1, Wis.
Callite Tungsten Corp., 544 39th St., Union City, N. J.
See Advertisement on Page 35
Central Scientific Co., 1700 Irving Park Blvd., Chicago 13, Ill.
Distillation Products, Inc., 755 Ridge Rd. W., Rochester, N. Y.
Eisler Engrg. Co., 740 S. 13th St., Newark 3, N. J.
Eitel-McCullough, Inc., San Bruno, Calif.
General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212

Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.
International Machine Works, 2207 46th St., North Bergen, N. J.
See Advertisement on Page 256
Kahle Engineering Co., 1307 Seventh St., North Bergen, N. J.
Kinney Mfg. Co., 3529 Washington St., Boston, Mass.
Kraissl Co., Inc., 303 Williams Ave., Hackensack, N. J.
Leiman Bros., 203 Christie St., Newark 5, N. J.
National Research Corp., Vacuum Engrg. Div., 100 Brookline Ave., Boston 15, Mass.
Nelson Vacuum Pump Co., Geo. F., 2133 Fourth St., Berkeley 2, Calif.
Savilion Labs., Inc., 1025 Broad St., Newark 2, N. J.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

1218

Vacuum Units

Radio Corp. of Amer., RCA Victor Div., Camden, N. J.
See Advertisement on Back Cover

1219

Vibration Analysis Equipment

Commercial Research Labs. Inc., 20 Bartlett Ave., Detroit 3, Mich.
See Advertisement on Page 126
Conn Ltd., C. G., 1101 E. Beardsley Ave., Elkhart, Ind.
Consolidated Engrg. Corp., 595 E. Colorado St., Pasadena 1, Calif.
Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
General Electric Co., Schenectady 5, N. Y.
Globe Industries, Inc., 125 Sunrise Pl., Dayton 7, Ohio
Heiland Research Corp., 130 E. 5th St., Denver 9, Colo.
MB Manufacturing Co., Inc., 1060 State St., New Haven 11, Conn.
See Advertisements on Pages 140, 141, 193
Miles Reproducer Co. Inc., 812 Broadway, New York 3, N. Y.
See Advertisement on Page 294
Televiso Products Inc., 6533 N. Olmstead Ave., Chicago, Ill.
Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio
See Advertisement on Page 275
Western Electric Co. Inc., 120 Broadway, New York 5, N. Y.
See Advertisements on Pages 182, 183

1220

ELECTRONIC BALANCING EQUIPMENT

Gisholt Machine Co., 1125 E. Washington Ave., Madison 3, Wis.
Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
See Advertisements on Pages 17-20; 190, 191

1221

HIGH TEMPERATURE FATIGUE EQUIPMENT

Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
See Advertisements on Pages 17-20; 190, 191

1222

VIBRATION FATIGUE EQUIPMENT

General Electric Co., Schenectady 5, N. Y.
See Advertisements on Pages 204, 212
MB Manufacturing Co., Inc., 1060 State St., New Haven 11, Conn.
See Advertisements on Pages 140, 141, 193
Westinghouse Elec. Corp., 2519 Wilkens Ave., Baltimore 3, Md.
See Advertisements on Pages 17-20; 190, 191

1946-1947 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.

- Abbott Instrument, Inc., 8 W. 18th St., New York, N. Y.
- A B C Products, Inc., 2131-35 Stoner Ave., W. Los Angeles 25, California
- A B C Radio Labs, 3334 N. New Jersey St., Indianapolis 5, Ind.
- Abel & Bach, 1000 W. St. Paul Ave., Milwaukee, Wisconsin
- Accurate Insulated Wire Corp., 25 Fox St., New Haven 1, Conn.
- Accurate Mfg. Co., Inc., 6122 N. 21st Street, Philadelphia 32, Pa.
- Accurate Molding Corp., 116 Nassau St., Brooklyn 1, N. Y.
- Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Illinois
- Ace Mfg. Corp., 1255 E. Erie Ave., Philadelphia, Pa.
- Acheson Colloids Corp., Port Huron, Michigan
- Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago, Illinois
- Acklin Stamping Co., 1923 Nebraska Avenue, Toledo 7, Ohio
- Acme Battery Corp., 59 Pearl St., Brooklyn, N. Y.
- Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
- Acme Electric & Mfg. Co., 31 Water St., Cuba, N. Y.
- Acme Fire Alarm Co., Inc., 106 Seventh Ave., New York, N. Y.
- Acme Folding Box Co., Inc., 141 E. 25th St., New York, N. Y.
- Acme Radio & Sound Labs., 3528 City Terr. Dr., Los Angeles, California
- Acme Tool & Die Co., 426 Ingle St., Evansville 8, Indiana
- Acme Wire Co., New Haven 14, Conn.
- Acro Electric Co., 1316 Superior Ave., Cleveland, Ohio
- Acromark Co., 9-13 Morrell St., Elizabeth 4, N. J.
- Acton Co., H. W., 370 7th Avenue, New York, N. Y.
- Adams & Westlake Co., Michigan St., Elkhart, Indiana
- Adel Precision Prods. Corp., 10777 Van Buren St., Burbank, California
- Admiral Corp., 3800 W. Cortland St., Chicago, Illinois
- Adhesive Products Co., 522 5th Ave., Seattle, Wash.
- Adrem Co., 143 Newbury Street, Boston 16, Massachusetts
- Advance Elec. & Relay Co., 1260 W. Second St., Los Angeles, California
- Advance Recording Prods. Co., 36-12 34th St., L. I. City, N. Y.
- Aeromotive Equipment Corp., 1632-8 Central St., Kansas City 10, Missouri
- Aero Communications, Inc., 231 Main Street, Hempstead, L. I., N. Y.
- Aero Instrument Co., 3907 San Fernando Road, Glendale 4, Calif.
- Aero Needle Co., 619 N. Michigan Ave., Chicago 11, Illinois
- Aeroil Products Co., 5701 Park Ave., West New York, N. J.
- Aerolux Light Corp., 653 11th Ave., New York 19, N. Y.
- Aeronautical Radio Mfg. Co., 155 First Street, Mineola, L. I., N. Y.
- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
- Aetna Felt Co., Centre & Hester Sts., New York, N. Y.
- Agaloy Tubing Co., 75 West Street, New York, N. Y.
- Airadio Inc., Melrose Ave & Battery Pl., Stamford, Conn.
- Air Associates, Inc., 5827 W. Century Blvd., Los Angeles 45, Calif.
- Aircraft-Marine Prods., Inc., 1523 No. 4th St., Harrisburg, Pa.
- Aircraft Radio Corp., Boonton, N. J.
- Aircraft Screw Products Co., Inc., 47-23 35th St., Long Island City 1, N. Y.
- Airdesign Inc., 241 Fairfield Ave., Upper Darby, Pa.
- Aireon Mfg. Corp., Fairfax and Funston Rds., Kansas City 15, Kansas
- Air-King Products Co., Inc., 1523 63rd St., Brooklyn, N. Y.
- Airpax Products Co., P. O. Box 6741, Baltimore 4, Maryland
- Airplane & Marine Instruments, Inc., Clearfield, Pennsylvania
- Air Reduction Sales Co., 60 E. 42nd St., New York, N. Y.
- Airtronics Development Corp., 131-133 E. Third St., Dayton 2, Ohio
- Airtronics Mfg. Co., 5145 W. San Fernando Rd., Los Angeles 26, California
- Ajax Electrothermic Corp., Ajax Park, Trenton, N. J.
- Aladdin Radio Industries, Inc., 501 W. 35th St., Chicago 16, Illinois
- Albion Coil Co., Albion, Illinois
- Alco Valve Co., 865 Kingsland, St. Louis 5, Missouri
- Alden Products Co., 117 No. Main St., Brockton 64, Massachusetts
- Aldine Paper Co., Inc., 535 Fifth Ave., New York 17, N. Y.
- Algene Radio Corp., 305 Throop Ave., Brooklyn 6, N. Y.
- All American Tool & Mfg. Co., 1014 W. Fullerton St., Chicago 14, Illinois
- Allegheny Ludlum Steel Corp., Brackenridge, Pennsylvania
- Allen Mfg. Co., Hartford, Conn.
- Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio
- Allied Asphalt & Mineral Corp., 217 Broadway, New York 7, N. Y.
- Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
- Allied Control Valve Co., Inc., South Norwalk, Connecticut
- Allied Recording Products Co., 21-09 43rd Ave., L. I. C. 1, N. Y.
- Allis Chalmers Mfg. Co., Milwaukee 1, Wisconsin
- Allmetal Screw Prods. Co., 33 Greene Street, New York 13, N. Y.
- Alloy Metal Wire Co., Prospect Park, Pennsylvania
- All Weather Springs, 140 Cedar St., New York 6, N. Y.
- Alpha Metals, Inc., 365 Hudson Ave., Brooklyn, N. Y.
- Alpha Wire Corp., 50 Howard St., New York, N. Y.
- Altec Lansing Corp., 1161 N. Vine St., Hollywood 38, California
- Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa.
- Amalgamated Electronics Associated, 60 E. 42nd St., New York 17, N. Y.
- Amalgamated Radio & Television Corp., 476 Broadway, New York 13, N. Y.
- Ambroad Co., 305 Franklin St., Boston 10, Massachusetts
- American Battery Co., 17 E. Jefferson St., Chicago, Illinois
- American Brass Co., Waterbury 88, Connecticut
- American Bridge Co., Frick Bldg., Pittsburgh, Pennsylvania
- American Chain & Cable Co., Bridgeport 2, Connecticut
- American Coil & Engineering Co., 1271 N. Hermitage Ave., Chicago 22, Ill.
- American Communications Corp., 306 Broadway, New York, N. Y.
- American Condenser Co., 4410 Ravenswood Ave., Chicago, Illinois
- American Cyanamid Co., Plastic Div., 38 Rockefeller Plaza, New York 20, N. Y.
- American Diathermy Productions, 10860 Santa Monica Blvd., Los Angeles 25, California
- American Earphone Co., 10 E. 43rd St., New York 17, N. Y.
- American Electric Cable Co., Holyoke, Massachusetts
- American Electrical Heater Co., 6110 Cass Ave., Detroit 2, Mich.
- American Electro Metal Corp., 320 Yonkers Ave., Yonkers, N. Y.
- American Electronics, 37 E. 18th St., New York 3, N. Y.
- American Emblem Co., Utica, N. Y.
- American Felt Co., Glenville, Connecticut
- American Gas Accumulator Co., 1029 Newark Ave., Elizabeth, N. J.
- American Gas & Chemical Co., Harrison, 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 Springs, Md.
- American Lava Corp., Kruesi Bldg., Chattanooga 5, Tenn.
- American Lens Co., Inc., 45 Lispenard St., New York 13, N. Y.
- American Materials Co., 150 Nassau St., New York 7, N. Y.
- American Microphone Co., 1915 S. Western Ave., Los Angeles, Calif.
- American Molding Powder & Chemical Corp., 44 Hewes St., Brooklyn, N. Y.
- American Nut & Bolt Fastener Co., 2045 Doerr St., Pittsburgh, Pennsylvania
- American Optical Co., Scientific Instr. Div., Buffalo 11, N. Y.
- American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, Ill.
- American Photocopy Equip. Co., 2849 N. Clark Street, Chicago, Illinois
- American Platinum Works, N. J. R. R. Ave., at Oliver St., Newark 5, N. J.
- American Products Mfg. Co., 8127 Oleander St., New Orleans, La.
- American Radio Co., 611 E. Garfield Ave., Glendale, Calif.
- American Resinous Chemical Co., 104 Foster St., Peabody, Mass.
- American Rivet Co., 1301 W. Congress St., Chicago 7, Illinois
- American Rolling Mill Co., The, 2441 Curtis St., Middletown, Ohio
- American Screw Co., Providence, R. I.
- American Smelting & Refining Co., Federated Metals Div., 120 Broadway, New York 5, N. Y.
- American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.
- American Spiral Spring & Mfg. Co., 5528 Harrison St., Pittsburgh, Pa.
- American Steel & Wire Co., Rockefeller Bldg., Cleveland 13, Ohio
- American Television & Radio Co., 300 E. 4th St., St. Paul 1, Minnesota
- American Thermo Elect. Co., 67 E. 8th St., New York 3, N. Y.
- American Time Products Inc., 580 5th Ave., 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., 60 Wall Tower, New York 5, N. Y.
- Anglo Corp., 4234 Lincoln Ave., Chicago 18, Illinois
- Amperex Electronic Corporation, 25 Washington St., Brooklyn 1, N. Y.
- Amperite Co., 561 Broadway, New York, N. Y.
- Amplex Div., Chrysler Corp., Detroit 31, Michigan
- Amplifier Co. of America, 396 Broadway, New York, 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.
- Anchor Webbing Co., 1005 Main, Pawtucket, R. I.
- Anco Products Corp., Paterson, N. J.
- Andrea Radio Corp., 43-20 34th St., Long Island City, N. Y.
- Andrew Co., 363 E. 75th St., Chicago, Illinois
- Andrews & Perillo, 39-30 Crescent St., Long Island City, N. Y.
- Annis Co. R. B., 1101 N. Delaware St., Indianapolis, Indiana

Ansley Radio Corp., 41 St. Joes Ave., Trenton 9, N. J.
Ansonia Clock Co., Inc., 103 Lafayette St., New York 13, N. Y.
Ansonia Elec. Co., Ansonia, Conn.
Applied Research Labs., 4336 San Fernando Rd., Glendale 4, Calif.
ARA Records, 686 N. Robertson Blvd., Hollywood 46, California
Arco Co., 7301 Bessemer Ave., Cleveland, 4, Ohio
Arens Controls Inc., 2253 S. Halsted St., Chicago 8, Illinois
A.R.F. Products, 7713 Lake St., River Forest, Illinois
Argus Inc., Ann Arbor, Michigan
Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass.
Arkwright Finishing Co., Providence, R. I.
Armature Coll Equipment Inc., 2695 Vega Ave., Cleveland 3, Ohio
Armstrong Cork Co., Lancaster, Pennsylvania
Arnessen Electric Co., Inc., 116 Broad St., New York 4, N. Y.
Arnold Engrg. Co., 147 E. Ontario St., Chicago, Illinois
Arro Expansion Bolt Co., 740 W. Center St., Marion, Ohio
Arrow-Hart & Hegeman Elec. Co., 103 Hawthorn St., Hartford 6, Conn.
Art Specialty Co., 3245 W. Lake St., Chicago, Illinois
Art Wire & Stamping Co., 227 High St., Newark 2, N. J.
Asbury Graphite Mills, Asbury, N. J.
Asheville Mica Co., 5 River Rd., Biltmore, N. C.
Askania Regulator Co., 1603 So. Michigan Ave., Chicago 16, Ill.
Assembly Products, Inc., Chagrin Falls, Ohio
Associated Research Inc., 231 S. Green St., Chicago 7, Ill.
Astatic Corp., Conneaut, Ohio
Atlas Aircraft Products Corp., 405 E. 42nd St., New York 17, N. Y.
Atlas Condenser Products Co., 548 Westchester Ave., Bronx, N. Y.
Atlas Resistor Co., 423 Broome St., New York, N. Y.
Atlas Sound Corp., 1443 39th St., Brooklyn, N. Y.
Atlas Tack Corp., Pleasant Street, Fairhaven, Mass.
Atlas Tool & Designing Co., Caster & Kensington Aves., Philadelphia 24, Pa.
Atomic Instruments Co., 160 Charles St., Boston, Mass.
Auburn Button Works Inc., 48 Canoga St., Auburn, N. Y.
Auburn Mfg. Co., 110 Stack St., Middletown, Conn.
Audak Co., 500 5th 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 Industries, 1404 Franklin St., Michigan City, Indiana
Audio Products Co., 2101 West Olive Ave., Burbank, California
Aurex Corp., 1117 N. Franklin, Chicago, Illinois
Austin Co. O., 42 Greene St., New York, N. Y.
Autocrat Radio Co., 3855 N. Hamilton Ave., Chicago, Ill.
Automatic Electric Co., 1033 W. Van Buren St., Chicago 7, Ill.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
Automatic Electrical Devices Co., 324 E. 3rd St., Cincinnati 2, Ohio
Auto Engraver Co., 1776 Broadway, New York, N. Y.
Automatic Mfg. Co., 900 Passaic Ave., E. Newark, N. J.
Automatic Metal Prods. Co., 315 Berry St., Brooklyn 1, N. Y.
Automatic Nut Co., Inc., Lebanon, Pennsylvania
Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.
Automatic Switch Co., 41 E. 11th St., New York 3, N. Y.
Automatic Temperature Control Co., 18 W. Chelton Ave., Phila. 44, Pa.
Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
Autotron Co., The, Danville, Ill.
Avia Prods. Co., 7266 Beverly Blvd., Los Angeles 36, California
Aviometer Corp., 370 W. 35th St., New York 1, N. Y.
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., 1050 Ivanhoe Road, Cleveland 10, Ohio
Bakelite Corp., 30 E. 42nd St., New York 17, N. Y.
Baker & Co., 113 Astor St., Newark 5, N. J.
Baker Chemical Co. J. T., N. Broad St., Phillipsburg, N. J.
Baker Instrument Co., 310 Main St., Orange, N. J.
Baker-Phillips Co., 3057 Lyndale Ave., S., Minneapolis 8, Minn.
Baldor Electric Co., 4353 Duncan Ave., St. Louis, Mo.
Baldwin Instrument Co., Oceanside, N. Y.
Ballantine Labs., Inc., Boonton, N. J.
Banks Mfg. Co., 1106 W. Lawrence Ave., Chicago 40, Illinois
Bamberger A., 44 Hewes St., Brooklyn, N. Y.
Barber Labs. Alfred W., 34-04 Francis Lewis Blvd., Flushing, N. Y.
Barber Colman Co., River & Loomis Sts., Rockford, Ill.
Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
Barnes-Gibson-Raymond Div. of Associated Spring Corp., 6400 Miller Ave., Detroit 11, Michigan
Barr Electronic Co., 1314 Forest Ave., Dallas, Texas
Barrett Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
Barry Co. L. N., 119 Sidney St., Cambridge, Mass.
Bart Labs., Inc., 227 Main Street, Belleville 9, N. J.
Bassett Inc., Rex, 500 S. E. 2nd St., Ft. Lauderdale, Florida
Baxter & Turner Mfg. Co., 148 E. Larned St., Detroit 26, Michigan
B & C Insulation Prod., Inc., 261 5th Ave., New York 16, N. Y.
Bead Chain Manufacturing Co., 110 Mt. Grove St., Bridgeport 5, Conn.
Beaver Gear Works, Inc., Rockford, Illinois
Becker Bros. Carbon Co., 3450 S. 52nd Ave., Chicago, Illinois
Beech-Russ Co., 50 Church St., New York 7, N. Y.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Illinois
Bell Sound Systems, Inc., 1183 Essex Ave., Columbus, Ohio
Belmont Radio Corp., Div. Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago 39, Illinois
Belmont Smelting & Refining Works, 330 Belmont Ave., Brooklyn 7, N. Y.
Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, North Hollywood, California
Bendix Radio Corp., Baltimore 4, Md.
Benjamin Franklin Paint & Varnish Co., 4820 Langdon St., Philadelphia 24, Pa.
Bentley Harris Mfg. Co., Conshohocken, Pa.
Benwood Linze Co., 1815 Locust St., St. Louis, Missouri
Best Manufacturing Co., Inc., 1200 Grove St., Irvington 11, N. J.
Betts & Betts Corp., 551 W. 52nd St., New York, N. Y.
Bibletone, 354 4th Ave., New York 10, New York
Biddle Co. Jas. G., 1213 Arch St., Philadelphia, Pa.
Biltmore Radio Corp., 15 Ave. A, New York 3, N. Y.
Bird Electronic Corp., 1800 E. 38th St., Cleveland 14, Ohio
Birnback Radio Co., Inc., 145 Hudson St., New York, N. Y.
Birtcher Corp., 5087 Huntington Dr., Los Angeles 32, Calif.
Bittermann Elec. Co., 50 Henry St., Brooklyn, N. Y.
Biwax Corp., 3445 Howard St., Skokie, Illinois
Black Bear Co., Inc., 620 5th Ave., New York 20, N. Y.
Blaw-Knox Co., Farmers Bldg., Pittsburgh, Pa.
Bliley Electric Co., Union Station Bldg., Erie, Pennsylvania
Blum & Co. Julius, 532 W. 22nd St., New York, N. Y.
Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago, Illinois
Boehme, Inc., H. O., 915 Broadway, New York, N. Y.
Bogen Co. David, 663 Broadway, New York 12, N. Y.
Bond Electric Corp., Div. of Olin Industries Inc., New Haven 4, Conn.
Bone Engrg. Corp., 701 W. Broadway, Glendale 4, Calif.
Bonney Forge & Tool Works, Allentown, Pennsylvania
Boonton Molding Co., Boonton, N. J.
Boonton Radio Corp., Boonton, N. J.
Boots Aircraft Nut Corp., New Canaan, Connecticut
Boston Gear-Works, Inc., 14 Hayward St., N. Quincy 71, Mass.
Boston Insulated Wire & Cable Co., 65 Bay St., Dorchester, Boston, Mass.
Bostonian Process Co., 40 W. 13th St., New York 11, N. Y.
Bound Brook Oil-Less Bearing Co., Bound Brook, N. J.
Bowers Battery & Spark Plug Co., Reading, Pennsylvania
Brach Mfg. Corp., 55 Dickerson St., Newark, New Jersey
Bradley Labs., 82 Meadow St., New Haven, Connecticut
Bradley Co. Allen, 136 W. Greenfield Ave., Milwaukee 2, Wisconsin
Brainin Co. C. S., 233 Spring St., New York 13, N. Y.
Brand & Co. Wm., 276 4th Ave., New York 10, N. Y.
Branston Elect. Mfg. Co., 61-65 Gill Pl., Buffalo 13, N. Y.
Breeze Corp., 41 S. 6th St., Newark, N. J.
Brelco Corp., 55 Van Dam Street, New York 13, N. Y.
Breon Labs., 607 Rose St., Williamsport, Pennsylvania
Bridgeport Brass Co., E. Main, Bridgeport, Conn.
Bridgeport Hardware Mfg. Corp., Iranistan Ave., Bridgeport, Conn.
Bridgeport Mfg. Co., Bridgeport, Illinois
Bright Star Battery Co., 200 Crooks Ave., Clifton, N. J.
Bristol Co., The, Waterbury 91, Connecticut
Brook Electronics, Inc., 45 Hamilton St., Newark 5, N. J.
Brown Brookemeyer Co., 1000 S. Smithville Rd., Dayton 1, Ohio
Brown Engineering Co., 4635 S. E. Hawthorne Blvd., Portland 15, Ore.
Browning Laboratories, Inc., 750 Main, Winchester, Mass.
Brown Instrument Co., 4428 Wayne Ave., Philadelphia 44, Pa.
Bruce Electronics Co., 1478 Coney Island Ave., Brooklyn, N. Y.
Bruning Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.
Brush Beryllium Co., The, 3714 Chester Ave., Cleveland 14, Ohio
Brush Development Co., 3405 Perkins Ave., Cleveland 14, Ohio
Bryant Electric Co., The (Hemco Plastics Div.), Bridgeport, Conn.
Buchmann Spark-Wheel Corp., 4-20 47th Ave., Long Island City 1, N. Y.
Buda Co., Harvey, Illinois
Budd Induction Heating Inc., Detroit, Michigan
Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio
Buggie Co., H. H., Toledo, Ohio
Buhl Optical Co., 420 Blvd. of Allies, Pittsburgh, Pa.
Bundy Tubing Co., 10951 Hern Ave., Detroit 13, Michigan
Bunnell & Co., J. H., 215 Fulton St., New York, N. Y.
Burgess Battery Co., Handcraft Div., Vibro Tool Dept., 180 N. Wabash Ave., Chicago 1, Ill.
Burke Elect. Co., 12th & Cranberry Sts., Erie, Pa.
Burlington Instrument Co., 214 N. 4th St., Burlington, Iowa
Burnam Co., C. N., 781 River St., Paterson, N. J.
Burndy Engrg. Co., 107 Bruckner Blvd., New York 54, N. Y.
Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego, California
Burnley Battery & Mfg. Co., Clay St., North East, Pennsylvania
Burton-Rogers Co., 857 Boylston St., Boston 16, Mass.
Bussmann Mfg. Co., University at Jefferson, St. Louis 7, Mo.
C. W. Mfg. Co., 3800 Brooklyn Ave., Los Angeles 33, Calif.
Cadie Chemical Products, Inc., 621 Sixth Ave., New York 11, N. Y.
California Telephone & Elect. Co., 6075 W. Pico Blvd., Los Angeles 35, California
Callite Tungsten Corp., 544 39th St., Union City, N. J.
Caltron Co., 11916 W. Pico Blvd., Los Angeles 34, Calif.
Cambridge Thermionic Corp., 445 Concord Ave., Cambridge, Mass.
Camloc Fastener Corp., 420 Lexington Ave., New York 17, N. Y.
Campbell-Reeder, 1027 W. McKinley St., Milwaukee, Wisconsin
Cannon Co. C. F., Springwater, N. Y.
Cannon Electric Development Co., 3209 Humboldt St., Los Angeles 31, Calif.
Cantol Wax Co., 211 N. Washington St., Bloomington, Indiana
Capacitron Co., 849 No. Kedzie Ave., Chicago 51, Illinois
Carbide & Carbon Chemicals Corp., Plastics Div., 30 E. 42nd St., New York 17, N. Y.
Carbone Corp., Myrtle Ave., Boonton, New Jersey
Carborundum Co., Gload Div., Niagara Falls, N. Y.
Cardinell Corp., Montclair, N. J.

Cardox Western Inc., 151 North Avenue 19, Los Angeles 31, California

Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.

Cardy-Lundmark Co., 1801 W. Byron St., Chicago 13, Illinois

Carnegie Ill. Steel Corp., Carnegie Bldg., Pittsburgh, Pa.

Carolina Narrow Fabric Co., 1636 N. Chestnut St., Winston-Salem, N. C.

Carpenter Mfg. Co., Master Light Bldg., Boston 45, Mass.

Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Illinois

Carson Machine & Supply Co., Box 4547, Oklahoma City 9, Okla.

Carter Motor Co., 1606 Milwaukee Ave., Chicago 47, Ill.

Carter Products Co., 6921 Carnegie Ave., Cleveland, Ohio

Carter Radio Div., Precision Parts Co., 213 Institute Place, Chicago 10, Illinois

Castlewood Mfg. Co., 12th & Burnett Sts., Louisville, Ky.

Caswell Runyon Co., Huntington, Ind.

Catalin Corp., 1 Park Avenue, New York, N. Y.

Cavalcade Industries, Inc., 39 S. La Salle St., Chicago, Illinois

Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.

Celanese Plastics Corp., 180 Madison Ave., New York 16, N. Y.

Cellusuede Products Inc., Rockford, Illinois

Centralab Div. of Globe Union Inc., 900 Keefe Ave., Milwaukee 1, Wisconsin

Central Paper Company, Muskegon, Michigan

Central Scientific Company, 1700 Irving Park Blvd., Chicago 13, Illinois

Central Screw Co., 3511 Shields Ave., Chicago 9, Illinois

Century Elect. Company, 1806 Pine St., St. Louis 3, Missouri

Chace Company, W. M., 1600 Beard St., Detroit, Michigan

Chandler Products Co., 1475 Chardon Rd., Cleveland, Ohio

Chase Brass & Copper Co., Inc., 236 Grand Street, Waterbury 91, Conn.

Chase Shawmut Company, Newburyport, Massachusetts

Chaslyn Company, 1952 Irving Park Rd., Chicago 13, Illinois

Chatham Electronics, 475 Washington St., Newark 2, N. J.

Chattillon & Sons, John, 93 Cliff St., New York 7, N. Y.

Chemaco Corporation—Subsidiary of Manufacturers Chemical Corporation, Berkeley Heights, N. J.

Chicago Condenser Corp., 3255 W. Armitage Avenue, Chicago 47, Illinois

Chicago Die Mold Corp., 4001 Wrightwood Avenue, Chicago 39, Illinois

Chicago Expansion Bolt Co., 2240 W. Ogden Ave., Chicago 12, Ill.

Chicago Metal Hose Corp., 1309 S. Third Ave., Maywood, Illinois

Chicago Molded Products Corp., 1020 N. Kolmar Ave., Chicago 51, Ill.

Chicago Rivet & Machine Co., 9600 W. Jackson Blvd., Chicago, Ill.

Chicago Sound Systems Co., 2124 S. Michigan Ave., Chicago, Ill.

Chicago Telephone Supply Co., 1142 W. Beardsley Ave., Elkhart, Ind.

Chicago Transformer Div. Essex Wire Corp., 3501 W. Addison St., Chicago 18, Illinois

Church Expansion Bolt Co., 1 Fourth St., East Norwalk, Conn.

Ciba Co., Inc., 627 Greenwich St., New York 14, N. Y.

Cinaudagraph Corp., 2 Selleck St., Stamford, Conn.

Cinaudagraph Speakers Inc., Subsidiary of Aireon Mfg. Corp., 1401 Fairfax Trafficway, Kansas City, Kan.

Cinch Mfg. Corp., 2335 W. Van Buren St., Chicago 12, Ill.

Cincinnati Electric Products Co., Carthage at Hannaford, Cincinnati 12, Ohio

Cincinnati Molding Co., 2037 Florence Ave., Cincinnati 6, Ohio

Cinema Engineering Co., 1508 W. Verdugo Ave., Burbank, Calif.

Clare & Co. C. P., 4719 Sunnyside Ave., Chicago 30, Illinois

Clark Controller Co., 1146 E. 152nd St., Cleveland, Ohio

Clark Radio Equipment Corp., 4313 Lincoln Ave., Chicago 18, Ill.

Clarkstan Corp., 11927 W. Pico Blvd., Los Angeles 34, California

Clarostat Mfg. Co., Inc., 285-7 6th St., Brooklyn, N. Y.

Clendenin Bros., 108 South Street, Baltimore, Maryland

Cleveland Plastics, Inc., 1611 E. 21st St., Cleveland 14, Ohio

Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland, Ohio

Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio

Clifford Mfg. Co., 564 E. First St., Boston, Massachusetts

Climax Engineering Co., Clinton, Iowa

Cline Electric Mfg. Co., 4550 W. Lexington Ave., Chicago, Illinois

Clippard Instrument Laboratory, 1440 Chase Ave., Cincinnati 23, Ohio

Clough Brengle Co., 5501 N. Broadway, Chicago 22, Ill.

Coda Record Co., 1291 Sixth Ave., New York 19, N. Y.

Cohn & Co. Sigmund, 44 Gold St., New York, N. Y.

Coleman Elec. Co., 318 Madison St., Maywood, Illinois

Cole Radio Works, 86 Westville Ave., Caldwell, N. J.

Cole Steel Equipment, 349 Broadway, New York 13, N. Y.

Collins Radio Co., 855 35th St., N. E., Cedar Rapids, Iowa

Collyer Insulated Wire Co., 249 Roosevelt Ave., P.O. Box 61, Pawtucket, R. I.

Colonial Brass Co., 100 Vine St., Middleboro, Mass.

Colonial Radio Corp., 234 Rano St., Buffalo 7, N. Y.

Colt's Patent Fire Arms Mfg. Co., Plastics Div., Hartford, Conn.

Columbia Chem. Div., Pittsburgh Plate Glass Co., Grant Bldg., Pittsburgh 19, Pa.

Columbia Elec. Mfg. Co., 4519 Hamilton Ave., N.E., Cleveland 14, Ohio

Columbia Electronics Inc., 185 East 122nd St., New York 35, N. Y.

Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.

Columbia Nut & Bolt Co., 945 Main St., Bridgeport, Conn.

Columbia Wire & Supply Co., 4106 N. Pulaski Rd., Chicago 41, Ill.

Columbus Process Co., Inc., State & Maple St., East Columbus, Ind.

Combustion Control Corp., 77 Broadway, Cambridge 42, Mass.

Commercial Enclosed Fuse Co., of N. J., 1317 Willow Ave., Hoboken, N. J.

Commercial Equipment Co., 1416 McGee St., Kansas City, Mo.

Commercial Radio Equip. Co., 321 E. Gregory Blvd., Kansas City 5, Mo.

Commercial Radio Sound Corp., 575 Lexington Ave., New York 22, N. Y.

Commercial Research Labs., Inc., 20 Bartlett Ave., Detroit 3, Mich.

Commodore Record Co., 415 Lexington Ave., New York, N. Y.

Communicating Systems Inc., 203 E. 18th St., New York 3, N. Y.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

Communications Equipment Corp., 134 W. Colorado St., Pasadena, Calif.

Communication Equipment & Engrg. Co., 5646 W. Race St., Chicago 44, Ill.

Communication Measurements Laboratory, 120 Greenwich St., New York, N. Y.

Communication Parts, 1101 N. Paulina St., Chicago 22, Ill.

Communication Products Co., Inc., Route 36, Palmer Ave., Keansburg, N. J.

Conant Electrical Labs., 6500 O St., Lincoln, Nebraska

Concord Radio Corp., 901 W. Jackson Blvd., Chicago, Illinois

Condenser Corp. of America, 1000 Hamilton Blvd., S. Plainfield, N. J.

Condenser Products Co., 1375 N. Branch St., Chicago, Illinois

Congress Tool & Die Co., Congress Die Casting Div., 3750 E. Outer Dr., Detroit, Michigan

Connecticut Cable Corp., Jewett City, Conn.

Connecticut Telephone & Elec. Div. Great American Industries, 70 Brittanla St., Meriden, Conn.

Conn Ltd., C. G., 1101 E. Beardsley Ave., Elkhart, Indiana

Consolidated Engrg. Corp., 595 E. Colorado St., Pasadena 1, Calif.

Consolidated Molded Prods. Corp., 309 Cherry St., Scranton 2, Pa.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.

Consolidated Wire & Associated Corps., 1635 S. Clinton St., Chicago 16, Ill.

Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio

Continental Diamond Fibre Co., 16 Chapel St., Newark, Del.

Continental Electric Co., 903 Merchandise Mart, Chicago 54, Illinois

Continental Electric Co., Inc., 332 Ferry St., Newark, N. J.

Continental Electronics, Ltd., 81 Pine, New York, N. Y.

Continental Machines, Inc., 1366 S. Washington Ave., Minneapolis 4, Minn.

Continental Screw Co., New Bedford, Mass.

Control Corp., 718 Central Ave., Minneapolis 14, Minnesota

Controis Laboratories, Inc., 98 Union St., Worcester 8, Mass.

Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1, N. J.

Cook Elect. Co., 2700 Southport Ave., Chicago, Illinois

Corbin Screw Division, American Hardware Corp., High, Myrtle & Grove Sts., New Britain, Conn.

Cords Ltd., Inc., 26 Camp St., Newark 5, N. J.

Cornell Dubilier Elect. Corp., 1000 Hamilton Blvd., South Plainfield, N. J.

Corning Glass Works, Corning, New York

Cornish Development Corp., 123 William St., New York, N. Y.

Cornish Wire Co., 15 Park Row, New York, New York

Coronet Radio & Television Corp., Front St., Hempstead, L. I.

Coto-Coll Co., Inc., 65 Pavilion Ave., Providence, R. I.

Cottrell Paper Co., 88 Purchase St., Fall River, Mass.

Cover Dual Signal Systems, Inc., Div. of Electra Voice Corp., 5215-25 Ravenswood Ave., Chicago 40, Illinois

Cramer Co. R. W., Centerbrook, Conn.

Creative Plastics Corp., 963 Kent Ave., Brooklyn, N. Y.

Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.

Crocker-Wheeler Elect. Mfg. Co., Div., Joshua Hendy Iron Wks., Amperre, N. J.

Croname, Inc., 3701 Ravenswood Ave., Chicago, Illinois

Crosley Corp., 1329 Arlington St., Cincinnati 3, Ohio

Cross, H., 15 Beekman St., New York, N. Y.

Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.

Crucible Steel Co. of America, 405 Lexington Ave., New York 17, N. Y.

Crystal Labs., 801 West Maple St., Wichita 12, Kansas

Crystal Products Co., 1519 McGee Trafficway, Kansas City, Mo.

Crystal Research Labs., Inc., 29 Allyn St., Hartford, Conn.

Curtis Development & Mfg. Co., 1 N. Crawford Ave., Chicago 24, Ill.

Cutler-Hammer, Inc., 315 No. 12th St., Milwaukee 1, Wisconsin

Cuyahoga Spring Co., 10272 Berea Rd., Cleveland, Ohio

Cyclotron Specialties Co., Morago 8, California

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.

Dalmo, Victor, San Carlos, Calif.

Dante Elect. Mfg. Co., Bantam, Conn.

Daven Co., 191 Central Avenue, Newark 4, N. J.

Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.

Davis & Co., Dean W., Kentland, Indiana

Davis & Murphy, 5252 Broadway, Chicago 40, Illinois

Davis Plastics Co., Joseph, Schuyler & Ft. of Quincey Aves., Arlington, N. J.

Dayco Radio Corp., 915 Valley St., Dayton 4, Ohio

Dayton Acme Co., 930 York St., Cincinnati, Ohio

Dayton Insulating Molding Co., Dayton, Ohio

Dayton Rogers Mfg. Co., 2835 12th Ave., So. Minneapolis 7, Minn.

Decca Records, Inc., 50 W. 57th St., New York 19, N. Y.

DeJur-Amsco Corp., Northern Blvd., at 45th St., L. I. C. 1, N. Y.

Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester, N. Y.

Delaware Industries, Inc., Middletown, Delaware

Delco Radio Division, General Motors Corp., Kokomo, Indiana

Delmhorst Instrument Co., 115 Cornelia St., Boonton, N. J.

DeMornay-Budd Inc., 475 Grand Conc., New York, N. Y.

Denham & Co., Book Bldg., Detroit 26, Michigan

Despatch Oven Co., 619 S. E. Eighth St., Minneapolis 14, Minn.

Detect-O-Ray Co., 3836 Hull St., Skokie, Illinois

Detroit Power Screwdriver Co., 2801 W. Fort St., Detroit 16, Mich.

Deuschmann Corp., Tobe, Filterete Div., Canton, Mass.

De Wald Radio Mfg. Corp., 440 Lafayette St., New York, N. Y.

Diacoustic Lab., 1678 Channing Way, Pasadena 3, Calif.

Dial Light Co. of America, 900 Broadway, New York 5, N. Y.

Diamond Drill Carbon Co., 53-63 Park Row, New York 7, N. Y.

Diamond Instrument Co., North Ave., Wakefield, Massachusetts

Diamond Wire & Cable Co., 128 E. 16th St., Chicago Hts., Illinois

Dictaphone Corp., 420 Lexington Ave., New York, N. Y.
 Diebel Die & Mfg. Co., 3658 N. Lincoln Ave., Chicago 13, Illinois
 Diehl Manufacturing Co., 1129 Finnerne Ave., Somerville, N. J.
 Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City, N. J.
 Diemolding Corp., Rasbach St., Canastota, N. Y.
 Dietzgen Co., Eugene, 2425 Sheffield Ave., Chicago, Illinois
 Dilks, Inc., Norwalk, Conn.
 Dillon, W. C., & Co., Inc., 5410 W. Harrison St., Chicago 44, Ill.
 Dimco Plastics, 207 E. 6th St., Dayton, Ohio
 Dine and Co., Inc., F. E., 2221 Warwick Avenue, Santa Monica, Calif.
 Dinion Coll Co., Inc., Caledonia, N. Y.
 Distillation Products, Inc., 755 Ridge Rd., W., Rochester, N. Y.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Illinois
 Dixon Crucible Co., Joseph, Jersey City, N. J.
 Do-All Co., 1301 Washington Ave., S. Minneapolis 4, Minn.
 Dobeckmun Co., The Industrial Prods. Div., Cleveland 1, Ohio
 Doehler-Jarvis Corp., Robertson St., Batavia, N. Y.
 Dolph Co., John C., 1060 Broad St., Newark, N. J.
 Dongan Electric Mfg. Co., 2987 Franklin St., Detroit, Michigan
 Doolittle Radio, 7421 Loomis Bldg., Chicago 36, Illinois
 Dow Chemical Co., Midland, Michigan
 Dow Corning Corp., Box 592, Midland, Michigan
 Drackett Co., 5020 Spring Grove Ave., Cincinnati 27, Ohio
 Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Illinois
 Drake Mfg. Co., 1713 Hubbard St., Chicago, Illinois
 Driver Co., Wilbur B., 150 Riverside Ave., Newark, N. J.
 Driver Harris Co., 201 Middlesex St., Harrison, N. J.
 Dual-Heat Iron Co., 4370 Sunset Blvd., Los Angeles 27, Calif.
 Dual-Remote Control Co., 31776 Cowan Road, Wayne, Michigan
 Dumont Elec. Co., 34 Hubert St., New York, N. Y.
 Du Mont Lab., Allen B., Inc., 2 Main Ave., Passaic, N. J.
 Dumore Co., 14th & Racine Sts., Racine, Wisconsin
 Duotone Co., 799 Broadway, New York, N. Y.
 duPont de Nemours & Co., Inc., E. I., Organic Chemical Dept., Wilmington 98, Delaware
 duPont de Nemours & Co., Inc., E. I., Plastics Dept., 626 Schuyler Ave., Arlington, N. J.
 Durakool Inc., 1010 N. Main, Elkhart, Indiana
 Durez Plastics & Chemicals Inc., 1922 Waick Rd., No. Tonawanda, N. Y.
 Durite Plastics, Inc., 5010 Summerdale Ave., Philadelphia 24, Pa.
 DX Radio Products Co., Inc., 1200 N. Claremont Ave., Chicago 22, Illinois
 Dynamic Air Engineering Inc., 1619 S. Alameda St., Los Angeles, Calif.
 Dzus Fasteners Co., Inc., Box 605, Babylon, N. Y.
 Eagle Elec. Mfg. Co., Inc., 23-10 Bridge Plaza S. L. I. C., N. Y.
 Eagle Pencil Co., 703 E. 13th St., New York, N. Y.
 Eagle Signal Corp., 202-20th St., Moline, Illinois
 Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y.
 Eastern Amplifier Corp., 794 E. 140th St., New York 54, N. Y.
 Eastern Electronics Corp., 41 Chestnut St., New Haven, Conn.
 Eastern Engineering Co., 45 Fox St., New Haven, Conn.
 Eastern Specialty Co., 3617 N. 8th St., Philadelphia 40, Pa.
 Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N. Y.
 Eby, Inc., Hugh H., 18 W. Chelton Ave., Philadelphia 13, Pa.
 Ecco High Frequency Elect. Corp., 7020 Hudson Blvd., North Bergen, N. J.
 Echophone Radio Div. of Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Illinois
 Eckstein Radio & Telev. Co., 914 LaSalle St., Minneapolis 2, Minnesota
 Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
 Edin Electronics Co., 207 Main St., Worcester, Mass.
 Edison Storage Battery Div., Thomas A. Edison Inc., Main St., at Lakeside Ave., W. Orange, N. J.
 Edison Inc., Thomas H., Instrument Div., Orange, N. J.
 Edison, Inc., Thos. A., 51 Lakeside Ave., West Orange, N. J.
 Edwards, Inc., T. J., 121 Beach St., Boston 3, Mass.
 Egyptian Lacquer Mfg. Co., 1270 Sixth Ave., New York, N. Y.
 Eicor, Inc., 1501 W. Congress St., Chicago 7, Illinois
 Eidson's, 1309 N. Second St., Temple, Texas
 Eisler Engrg. Co., 740 S. 13th St., Newark 3, N. J.
 Eitel-McCullough Inc., San Bruno, California
 Elastic Stop Nut Corp. of Amer., 2330 Vauxhall Rd., Union, N. J.
 Elco Resistors Co., 114 W. 18th St., New York, N. Y.
 Eldeen Co., 504 N. Water St., Milwaukee, Wisconsin
 Electric Auto-Lite Co., The, Toledo 1, Ohio
 Electric Engineering & Mfg. Co., Los Angeles, California
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Electric Furnace Co., West Wilson St., Salem, Ohio
 Electric Heat Control Co., The, 9123 Inman Ave., Cleveland 5, Ohio
 Electric Indicator Co., 21 Parker Ave., Stamford, Conn.
 Electric Motor Corp., Racine, Wisc.
 Electric Products Co., 1725 Clarkstone Rd., Cleveland 12, Ohio
 Electric Products Sup. Co., 1140 Venice Blvd., Los Angeles 15, Calif.
 Electric Soldering Iron Co., 1845 W. Elm St., Deep River, Conn.
 Electric Sorting Machine Co., 410 Dennis Rd., S. W., Grand Rapids, Michigan
 Electric Specialty Co., 211 South St., Stamford, Conn.
 Electric Storage Battery Co., Allegheny Ave. & 19th St., Philadelphia 32, Pa.
 Electrical Coil Winding Co., 2733 Saunder St., Camden, N. J.
 Electrical Engineering & Mfg. Corp. 4606 W. Jefferson Blvd., Los Angeles 16, Calif.
 Electrical Industries, Inc., 42 Summer Ave., Newark 4, N. J.
 Electrical Insulation Co., 12 Vestry St., New York, N. Y.
 Electrical Reactance Corp., Franklinville, N. Y.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio
 Electrical Specialty Co., 2304 Washington St., Boston, Mass.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Illinois
 Electrical Transformer Co., 421 Canal St., New York 13, N. Y.
 Electrix Corp., 150 Middle St., Pawtucket, R. I.
 Electrolux Corp., Old Greenwich, Conn.
 Electromatic Mfg. Co., 88 University Place, New York, N. Y.
 Electromatic Typewriters, Inc., Rochester, N. Y.
 Electro Medical Lab. Inc., Holliston, Massachusetts
 Electro Motive Mfg. Co., South Park & John St., Willimantic, Conn.
 Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia, Pa.
 Electro Physical Laboratories, 45 W. 18th St., New York 11, N. Y.
 Electro Plastic Processes, 2035 W. Charleston St., Chicago 47, Illinois
 Electro Prods. Labs., 549 W. Randolph St., Chicago 6, Illinois
 Electro-Tech Equipment Co., 331 Canal St., New York 13, N. Y.
 Electro Technical Products Inc., Nutley 10, N. J.
 Electro Voice Inc., 1239 S. Bend Ave., South Bend, Indiana
 Electrovox Co., 169 Maplewood Ave., Maplewood, N. J.
 Electron Equipment Corp., 917 Meridian Ave., South Pasadena, Calif.
 Electrons Inc., 127 Sussex Ave., Newark, N. J.
 Electronic Apparatus, Inc., 347 Madison Ave., New York 17, N. Y.
 Electronic Components, 423 N. Western Ave., Los Angeles 4, Calif.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Michigan
 Electronic Controls, Inc., 44 Summer Ave., Newark, N. J.
 Electronic Corp. of America, 170 53rd St., Brooklyn, N. Y.
 Electronic Development Co., 1336 N. Saddle Creek Rd., Omaha 3, Nebraska
 Electronic Devices Co., 601 W. 26th St., New York, N. Y.
 Electronic Engineering Co., 616 G. Street, San Diego 1, Calif.
 Electronic Engineering Co., Inc., 3223 W. Armitage Ave., Chicago, Illinois
 Electronic Engineers, 611 E. Garfield Ave., Glendale 5, Calif.
 Electronic Enterprises Inc., 65 7th Ave., Newark 4, N. J.
 Electronic Labs., Inc., Indianapolis, Indiana
 Electronic Mfg. Co., 20 Orange St., Newark 2, N. J.
 Electronic Mfg. Co., 714 Race St., Harrisburg, Pa.
 Electronic Measurements Co., Red Bank, N. J.
 Electronic Mechanics Inc., 70 Clifton Blvd., Clifton, N. J.
 Electronic Power Co., Inc., 18 W. 44th St., New York, N. Y.
 Electronic Processes Corp., 249 Richards Road, Ridgewood, N. J.
 Electronic Products Co., 111 E. 3rd St., Mt. Vernon, N. Y.
 Electronic Products Co., 19 No. First St., Geneva, Illinois
 Electronic Products Mfg. Co., 7300 Huron River Dr., Dexter, Mich.
 Electronic Radio Alarm, Inc., 1920 Lincoln-Liberty Bldg., Philadelphia 7, Pa.
 Electronic Sound Engineering Co., 109 N. Dearborn St., Chicago 2, Ill.
 Electronic Specialties Mfg. Co., 125 N. Main St., Elkhart, Indiana
 Electronic Specialty Co., 3456 Glendale Blvd., Los Angeles, Calif.
 Electronic Supply Co., 207 Main St., Worcester, Mass.
 Electronic Transformer Co., 207 W. 25th St., New York, N. Y.
 Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.
 Electronic Winding Co., 5031 Broadway, Chicago 40, Illinois
 Elematic Equipment Corp., 6046 S. Wentworth Ave., Chicago 21, Illinois
 Elkay Radio Products, 305 E. Walnut St., Oglesby, Illinois
 Ellinwood Industries, 180 W. Slauson, Los Angeles 3, Calif.
 Emeloid Co., Inc., 291 Laurel Ave., Arlington, N. J.
 Emerson Radio & Phonograph Corp., 111 8th Ave., New York, N. Y.
 Engineering Co., 27 Wright St., Newark, N. J.
 Engineering Lab. Inc., 602 E. 4th St., Tulsa 3, Okla.
 Engineers Specialties Div., The Universal Engraving & Colorplate Co., 980 Ellicott St., Buffalo 8, N. Y.
 Englewood Electrical Supply Co., 5801 S. Halsted St., Chicago, Illinois
 Eppley Lab., Inc., Newport, R. I.
 Eraser Co., 231 W. Water St., Syracuse 2, N. Y.
 Erco Radio Labs. Inc., Fenimore Ave., Hempstead, N. Y.
 Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.
 Erie Can Co., 816 W. Erie St., Chicago 22, Illinois
 Erie Resistor Corp., 644 W. 12th St., Erie, Pennsylvania
 Erwood Co., 223 W. Erie St., Chicago, Illinois
 Espey Mfg. Co., Inc., 33 W. 46th St., New York 19, N. Y.
 Essex Electronics, 1060 Broad St., Newark 2, N. J.
 Essex Wire Corp., 1601 Wall St., Ft. Wayne, Ind.
 Ess Instrument Co., 963 Washington St., Bergenfield, N. J.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Indiana
 Etched Products Corporation, 39-01 Queens Blvd., L. I. C., N. Y.
 Eutetic Welding Alloys Co., 40 Worth St., New York, N. Y.
 Ever Ready Label Corp., 141-155 E. 25th St., New York 10, N. Y.
 Executone Inc., 415 Lexington Ave., New York 17, N. Y.
 Empire Steel Corp., N. Bowman St., Mansfield, Ohio
 Faber Inc., A. W., 41 Dickerson St., Newark 4, N. J.
 Fada Radio & Electric Co., Inc., 30-20 Thomson Avenue, L. I. C., N. Y.
 Fafnir Bearing Co., Booth St., New Britain, Conn.
 Fairchild Camera & Instrument Corp., 475 10th Ave., New York 18, N. Y.
 Fairfield Lumber Co., 1700 Post Road, Fairfield, Conn.
 Fairmont Aluminum Co., Fairmont, W. Va.
 Fairmount Tool & Forge Co., 10611 Quincy Ave., Cleveland, Ohio
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., No. Chicago, Ill.
 Farley & Loetscher Mfg. Co., Dubuque, Iowa
 Farmers' Engineering & Mfg. Co., Union Trust Bldg., Pittsburgh, Pa.
 Farnsworth Television & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.

Farrand Optical Co., Inc., Bronx Blvd., at 238th St., New York 66, N. Y.

Farrelloy Co., 1245 N. 26th St., Philadelphia, Pa.

Fast & Co., John E., 3101 N. Pulaski Rd., Chicago 41, Ill.

Favorite Mfg. Co., 105 E. 12th St., New York 3, N. Y.

Federal Elect. Co., Inc., 8700 S. State St., Chicago 19, Ill.

Federal Electric Products Co., Inc., 50 Paris St., Newark, N. J.

Federal Engineering Co., 37 Murray St., New York 7, N. Y.

Federal Instrument Corp., 3609 Vernon Blvd., L. I. City 1, N. Y.

Federal Recorder Co., Elkhart, Ind.

Federal Screw Products Co., 224 W. Huron St., Chicago 10, Illinois

Federal Telephone & Radio Corp., 591 Broad St., Newark, N. J.

Felker Mfg. Co., 1123 Border Ave., Torrance, Calif.

Felsenthal & Sons, G., 4122 W. Grand Ave., Chicago 51, Illinois

Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Illinois

Felters Co., The, 210 South St., Boston, Mass.

Fenwal Inc., 43 Pleasant St., Ashland, Mass.

Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N. Y.

Ferris Instrument Co., 110-112 Cornelia St., Boonton, N. J.

Fidelity Amplifier Co., 1632 North Halsted St., Chicago 14, Ill.

Fidelity Electric Co., 332 N. Arch St., Lancaster, Pennsylvania

Field Electric Instr. Co., 109 E. 184th St., New York 53, N. Y.

Finch Telecommunications Inc., Passaic, N. J.

Firestone Tire & Rubber Co., 1 Firestone Ave., Fall River, Mass.

Fischer & Porter Co., Hatboro, Pennsylvania

Fischer-Smith, Inc., 162 State St., West Englewood, N. J.

Fisher-Pierce Co., 80 Ceylon St., Boston, Mass.

Fisher Radio Co., 41 E. 47th St., New York, N. Y.

Fisher Scientific Co., 717 Forbes St., Pittsburgh 16, Pa.

Fisher Research Laboratory, 1961 University Ave., Palo Alto, Calif.

Fish-Schurman Corp., 230 East 45th St., New York 17, N. Y.

Fishwick Radio Co., 430 Colorado Bldg., Washington, D. C.

Five Star Radio Co., 416 Broadway, Cambridge, Mass.

Fleron & Son Inc., M. M., 113 N. Broad St., Trenton, N. J.

Flexo Wire Co., 638 Genesee St., W., Syracuse, N. Y.

Flock Process Co., Velvetone Div., 3 Quincy St., Norwalk, Conn.

Flush Wall Radio Co., 15 Washington St., Newark, N. J.

Follansbee Steel Corp., 3d & Liberty St., Pittsburgh, Pa.

Fonda Corp., 245 East 23rd St., New York 10, N. Y.

Foote Bros., Gear & Machine Corp., 5225 S. Western Blvd., Chicago 9, Ill.

Foote Mineral Co., 1609 Summer St., Philadelphia, Pa.

Foote, Pierson & Co., Inc., 75 Hudson St., Newark 4, N. J.

Ford Radio & Mica Corp., 538 63rd St., Brooklyn, N. Y.

Fordham Mfg. Co., 2736 Creston Avenue, New York 58, N. Y.

Foredom Electric Co., 27 Park Place, New York 7, N. Y.

Formica Insulation Co., 4662 Spring Grove Ave., Cincinnati, Ohio

Foster Co., A. P., 719 Wyoming Ave., Lockland 15, Ohio

Foxboro Co., Foxboro, Mass.

Frankel Connector Co., 117 Hudson St., New York, N. Y.

Franklin Airloop Corp., 175 Varick St., New York 14, New York

Franklin Mfg. Co., A. W., 175 Varick St., New York, N. Y.

Franklin Fibre-Lamitex Corp., 12th & French St., Wilmington, Del.

Franklin Transformer Mfg. Co., 65 22nd Ave., N. E., Minneapolis 13, Minn.

Fredricks Co., Geo. E., Bethayres, Pennsylvania

Freed Radio Corp., 20 Hudson St., New York, N. Y.

Freed Transformer Co., 72 Spring St., New York 12, N. Y.

Freeland & Olschner Prod., Inc., 611 Baronne St., New Orleans, La.

Friez Instrument Div., Bendix Aviation Corp., Taylor Ave., near Loch Raven Blvd., Baltimore 4, Md.

Fulton Siphon Co., Knoxville, Tenn.

G-M Laboratories, Inc., 4313 N. Knox Ave., Chicago, Ill.

Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, Ill.

Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Illinois

Gamewell Co., 1238 Chestnut St., Newton Upper Falls 64, Mass.

Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8, Calif.

Gardner Mfg. Co., 2711 Union St., Oakland 7, Calif.

Gardner, Henry A. Laboratory, Inc., 4723 Elm St., Bethesda 14, Md.

Gardner Metal Co., 1356 W. Lake St., Chicago 6, Illinois

Gardner Electronics Corp., 1100 W. Washington Blvd., Chicago 7, Ill.

Garod Radio Corp., 70 Washington St., Brooklyn 1, N. Y.

Garrard Sales Corp., 401 Broadway, New York 13, N. Y.

Garrett Co., Inc., George K., 1421 Chestnut St., Philadelphia 2, Pa.

Gaston Power Tools, 2659 W. 95th St., Chicago 42, Illinois

Gates Radio Co., 200 Hampshire St., Quincy, Illinois

Gatti, Inc., Aurele M., 1909 Liberty St., Trenton, N. J.

Gear Specialties, 2635 W. Medill Ave., Chicago 47, Ill.

Gemold Corp., 79-10 Albion Ave., Elmhurst, N. Y.

Gem Radio & Television Co., 72 Cortlandt St., New York 6, N. Y.

General Aniline & Film Corp., Special Products Sales Dept., 270 Park Ave., New York 17, N. Y.

General Aviation Equipment Co., Inc., 630 5th Ave., New York 20, N. Y.

General Cable Corp., 420 Lexington Ave., New York, N. Y.

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

General Ceramics & Steatite Corp., Keasbey, N. J.

General Communication Co., 530 Commonwealth Ave., Boston 15, Mass.

General Controls Co., 801 Allen Ave., Glendale, Calif.

General Control Co., 1200 Soldiers Field Rd., Boston 34, Mass.

General Dry Batteries, Inc., 13000 Athens Ave., Cleveland, Ohio

General Dyestuff Corp., 435 Hudson St., New York 14, N. Y.

General Electric Co., Nela Park, Cleveland, Ohio

General Electric Co., Bridgeport 2, Connecticut

General Electric Co., Schenectady 5, New York

General Electric Co., Syracuse, New York

General Electric Co., Plastics Div., 1 Plastics Ave., Pittsfield, Mass.

General Electric X-Ray Corp., 2012 Jackson Blvd., Chicago, Ill.

General Electronics, Inc., 101 Hazel St., Paterson, N. J.

General Electronics Inc., 1819 Broadway, New York 23, N. Y.

General Industries Co., Taylor & Olive Sts., Elyria, Ohio

General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J.

General Insulated Wire Wks., Inc., 69 Gordon Ave., Providence 5, R. I.

General Lead Batteries Co., 196 W. Railway Ave., Paterson, N. J.

General Magnetic Corp., 2126 E. Fort St., Detroit 7, Michigan

General Motors Corp., Detroit, Michigan

General Pencil Co., 67 Fleet St., Jersey City, N. J.

General Plate Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.

General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.

General Scientific Corp., 4829 S. Kedzie Ave., Chicago, Ill.

General Television & Radio Corp., 2701 No. Lehmann St., Chicago 14, Ill.

General Tire & Rubber Co., The, Mechanical Goods Div., Wabash, Indiana

General Transformer Corp., 1250 W. Van Buren St., Chicago 7, Illinois

General Winding Co., 420 W. 45th St., New York 19, N. Y.

Gentleman Products, Div. Henney Motor Co., 1702 Cuming St., Omaha, Neb.

Geophysical Instrument Co., Key Blvd. & Nash St., Arlington, Virginia

George Co., P. D., 5200 N. 2nd St., St. Louis, Mo.

Gering Products, Kenilworth, N. J.

Giannini & Co., Inc., 161 E. California St., Pasadena, Calif.

Gibbs & Co., Thomas B., Div. of George W. Borg, 314 Michigan St., Delavan, Wisconsin

Gibson Co., Wm. D., Div. of Association Spring Corp., 1800 Clybourn Ave., Chicago, Illinois

Gibson Elec. Company, 8350 Frankstown Ave., Pittsburgh 21, Pa.

Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 15, Calif.

Gilner Manufacturing Co., Steger, Illinois

Gilundun Electronics, 14 Union Ave., Campbell, California

Girard-Hopkins, 1000 40th Ave., Oakland 1, California

Girdler Corp., Thermex Div., 224 E. Broadway, Louisville 1, Ky.

Gisholt Machine Co., 1125 E. Washington Ave., Madison 3, Wisconsin

Gits Molding Corp., 4600 Huron St., Chicago, Ill.

Glaser Lead Co., Inc., 31 Wycoff Ave., Brooklyn, N. Y.

Glendale Vacuum Prods. Co., 8816 77th Ave., Brooklyn 27, N. Y.

Global Div., Carborundum Co., Buffalo Ave., Niagara Falls, N. Y.

Globe Electronics, Inc., 225 W. 17th St., New York, N. Y.

Globe Industries, Inc., 125 Sunrise Pl., Dayton 7, Ohio

Globe Phone Mfg. Co., 2 Linden St., Reading, Mass.

Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.

Goat Metal Stampings, Inc., 314 Dean St., Brooklyn, N. Y.

Godfrey Mfg. Co., 171 S. 2nd St., Milwaukee 4, Wisconsin

Goldmark Wire Co., Jas., 116 West St., New York 7, N. Y.

Gold Shield Products, 25 W. Broadway, New York 7, N. Y.

Goldsmith Bros., Smelting & Refining Co., 58 E. Washington St., Chicago, Ill.

Goodall Electric Mfg. Co., Third & Main St., Ogallala, Neb.

Goodyear Tire & Rubber Co., Plastics & Chemical Div., 1144 E. Market St., Akron 16, Ohio

Goodrich Chemical Co., B. F., Cleveland 15, Ohio

Gordon Specialties Co., 823 S. Wabash Ave., Chicago 5, Ill.

Gorrell & Gorrell, 40 Littlefield Rd., Newton Center, Mass.

Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.

Gould Moody Co., 395 Broadway, New York, N. Y.

Gould Storage Battery Corp., 35 Neoga St., Depew, N. Y.

Grady Instrument Co., 11 Bailey Ave., Watertown 72, Mass.

Grafo Colloids Corp., Sharon, Pa.

Gramer Company, The, 2736 N. Pulaski Rd., Chicago 39, Ill.

Grammes & Sons Inc., L. F., 389 Union St., Allentown 2, Pa.

Graphite Metallizing Corp., 1055 Nepperhan Ave., Yonkers 3, N. Y.

Graton & Knight Co., 356 Franklin St., Worcester 4, Mass.

Grayhill Corp., 1 N. Pulaski Rd., Chicago, Illinois

Gray Mfg. Co., 16-30 Arbor St., Hartford, Conn.

Gray Radio Co., 730 Okeeshobee Rd., W. Palm Beach, Fla.

Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago, Illinois

Green Elec. Co., Inc., 130 Cedar St., New York 6, N. Y.

Greene Mfg. Corp., G. G., Warren, Pa.

Greenhut Insulation Co., 31 W. 21st St., New York, N. Y.

Greenlee Tool Co., 2136 12th St., Rockford, Illinois

Gregory Mfg. Co., 67 Franklin St., New Haven 11, Conn.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

Gross Communication Products, 1865-71 Prospect Ave., Cleveland 15, Ohio

Groves Corp., 41 N. Sprigg St., Cape Girardeau, Mo.

Guardian Elec. Mfg. Co., 1400 Washington Blvd., Chicago 7, Illinois

Guided Radio Corp., 161 6th Ave., New York 13, N. Y.

Gulow Corp., 26 Waverly Pl., New York 3, N. Y.

Gurley, W. & L. E., 514 Fulton St., Troy, N. Y.

Guthman Inc., E. I., 15 S. Throop St., Chicago, Illinois

Hadley Co., Robert M., 711 E. 61st St., Los Angeles, California

Haft & Sons Inc., 79 Third St., Brooklyn, N. Y.

Hague & Co., Inc., Alfred, 227 34th St., Brooklyn, N. Y.

Halldorson Co., The, 4500 Ravenswood Ave., Chicago 28, Ill.

Hallett Mfg. Co., 603 S. Redondo Blvd., Inglewood, Calif.

Hallcrafters Co., 2611 S. Indiana Ave., Chicago, Ill.

Halowax Products Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y.

Hamilton Kent Mfg. Co., Inc., Kent, Ohio

Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.

Handy & Harman, 82 Fulton St., New York 7, N. Y.

Hanovia Chemical & Mfg. Co., 233 N. J. RR Ave., Newark, N. J.

Harco Steel Const. Co., 1180 E. Broad St., Elizabeth 4, N. J.

Hardwick, Hindle Inc., 40 Harmon St., Newark, N. J.

Harmonia Records, 1328 Broadway, New York, N. Y.

Harnett Elec. Corp., 138 Haven Ave., Port Washington, L. I., N. Y.

Harper Co., The H. M., 2620 Fletcher St., Chicago 18, Ill.

Harris Mfg. Co., 2422 W. 7th St., Los Angeles 5, Calif.

Harris Products Co., 5105 Cowan Ave., Cleveland, Ohio

Hart & Co., Inc., Frederick, Recordgraph Div., 350 Madison Ave., New York 17, N. Y.

Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.

Hartford Machine Screw Co., 476 Capitol Ave., Hartford 2, Conn.

Hartley-Holt, 730 Fifth Avenue, New York 19, N. Y.

Hartman Electrical Mfg. Co., 175 N. Diamond St., Mansfield, O.

Harvey Machine Co., Inc., 6200 Avalon Blvd., Los Angeles 3, Calif.

Harvey Radio Labs., Inc., 447 Concord Ave., Cambridge, Mass.

Harvey Wells Electronics Inc., North St., Southbridge, Mass.

Hassall, Inc., John, Clay & Oakland Sts., Brooklyn, N. Y.

Haskins Co., R. G., 615 S. California Ave., Chicago 12, Ill.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Hawley Products Co., St. Charles, Ill.

Haydon Co., A. W., The, Waterbury 32, Conn.

Haydon Mfg. Co., Inc., Forestville, Conn.

Haydu Bros., Mt. Bethel Rd., Plainfield, N. J.

Haynes Laboratories Inc., C. W., 61 Chandler St., Springfield, Mass.

Hazard Insulated Wire Wks., The Okonite Co. Div., Wilkes Barre, Pa.

Hazeltine Electronics Corp., 1775 Broadway, New York, N. Y.

H-B Instrument Co., 2618 North Broad St., Philadelphia 32, Pa.

Headden Co., The, 17 Academy St., Newark 2, N. J.

Heath Co., Benton Harbor, Mich.

Helland Research Corp., 130 E. 5th St., Denver 9, Colo.

Heinemann Circuit Breaker Co., 97 Plum St., Trenton 2, N. J.

Heintz & Kaufman Ltd., South San Francisco, Calif.

Helipot Corp., 1011 Mission St., So. Pasadena, Calif.

Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.

Herbach & Rademan Co., 517 Ludlow Street, Philadelphia 6, Pa.

Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.

Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.

Herlec Corp., The, 422 N. Fifth St., Milwaukee 3, Wis.

Hermaseal Co., Riverside Drive, Elkhart, Ind.

Heresite & Chemical Co., 822 S. 14th St., Manitowoc, Wis.

Hermetic Seal Products Co., 414 Morris Ave., Newark 3, N. J.

Herron Optical Co., 705 W. Jefferson Blvd., Los Angeles 7, Calif.

Hertner Elec. 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., 161 W. Clay Ave., Roselle Park, N. J.

Heyman Mfg. Co., Kenilworth, N. J.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio

Higgins Industries, Inc., 2221 Warwick Ave., Santa Monica, Calif.

High Tension Co., Inc., 36 N. Main Street, Phillipsburg, N. J.

Hilo Varnish Corp., 42 Stewart Ave., Brooklyn, N. Y.

Hipower Crystal Co., 2033 W. Charleston St., Chicago, Ill.

Hobart Mfg. Co., Troy, Ohio

Hofmann Corp., C. L., 436 Boulevard of the Allies, Pittsburgh, Pa.

Hoffman Co., P. R., 321 Cherry St., Carlisle, Pa.

Hoffman Radio Corp., 3430 S. Hill St., Los Angeles 7, Calif.

Hoffman Engineering Co., 458 Sexton Bldg., Minneapolis 4, Minn.

Holland Sound Engineering, 3730 Division St., Chicago, Ill.

Hollister Crystal Co., Boulder, Colo.

Holliston Mills, Norwood, Mass.

Hollywood Radio Cab. Co., 924 N. Formosa Ave., Hollywood, Calif.

Hollywood Transformer Co., 11034 Blix St., North Hollywood, Calif.

Holtzer-Cabot, Division of First Industrial Corp., 125 Amory Street, Boston, Mass.

Home Recording Co., 9 E. 19th St., New York, N. Y.

Homelite Corp., Port Chester, N. Y.

Hommel Co., O., 209 Fourth Avenue, Pittsburgh, Pa.

Hope Webbing Co., Providence, R. I.

Hopp Press Inc., 460 W. 34th St., New York, N. Y.

Horn Co., A. C., 43-36 Tenth St., Long Island City 1, N. Y.

Horton Machine Prods. Co., Horton & Rockaway Aves., Valley Stream, L. I., N. Y.

Hose-McCann Products Co., 177 Pacific St., Brooklyn 2, N. Y.

Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.

Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke, Mich.

Howard Mfg. Co., 15 Fourth Street, Council Bluffs, Iowa

Howard Plastics, Inc., 2600 Grand Ave., Kansas City 8, Mo.

Howard Radio Co., 1735 Belmont Ave., Chicago 13, Ill.

Howell Electric Motors Co., Howell, Mich.

Hubbard Spring Co., M. D., Central Ave., Pontiac, Mich.

Hubbell Inc., Harvey, Bridgeport 2, Conn.

Huber Radio Co., 260 S. Center Street, Casper, Wyo.

Hudson American Corp., 25 W. 43rd St., New York, N. Y.

Hudson Wire Co., Winsted, Conn.

Hunt Corporation, The, 544 Hanover Street, Carlisle, Pa.

Hunter Pressed Steel Co., Lansdale, Penna.

Huse Liberty Mica Co., 171 Camden St., Boston, Mass.

H-W Mfg. Co., 3124 Larga Ave., Los Angeles, Calif.

Hydraulic Press Mfg. Co., Mt. Gilead, Ohio

Hydraulic Tool & Die Corp., 4625 Third Ave., New York 57, N. Y.

Hy-Pro Tool Co., New Bedford, Mass.

Hytron Radio & Electronics Corp., 76 Lafayette St., Salem, Mass.

Ideal Industries Inc., 1291 Park Ave., Syracuse, Ill.

Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.

Illinois Condenser Co., 1160 N. Howe St., Chicago, Ill.

Illinois Testing Labs. Inc., 420 N. La Salle St., Chicago 10, Ill.

Illinois Tool Works, Electronics Div., 2501 N. Keeler Ave., Chicago 39, Ill.

Illinois Wood Products Corp., 2512 S. Damen Ave., Chicago 8, Ill.

Ilasco Copper Tube & Products Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio

Indiana Steel Prod. Co., 6 N. Michigan Ave., Chicago, Ill.

Indiana Steel & Wire Co., 700 S. Council Street, Muncie, Ind.

Induction Heating Corp., 389 Lafayette Street, New York 3, N. Y.

Industrial & Commercial Electronics, Belmont, Calif.

Industrial Condenser Corp., 3243 No. Calif. Ave., Chicago 18, Ill.

Industrial Instruments Inc., 17 Pollack Ave., Jersey City 5, N. J.

Industrial Molded Products Co., 2035 Charleston Street, Chicago, Ill.

Industrial Prods. Co., Danbury, Conn.

Industrial Synthetics Corp., 60 Woolsey St., Irvington, N. J.

Industrial Timer Corp., 117 Edison Pl., Newark 5, N. J.

Industrial Tool & Die Works, Inc., 2824 University Ave., S. E., Minneapolis, Minn.

Industrial Transformer Corp., 2540 Belmont Ave., New York 58, N. Y.

Infra-Red Engineers & Designers, E. 73rd & Grand Ave., Cleveland 4, Ohio

Insl-X Co., Inc., The, 857 Meeker Ave., Brooklyn 22, N. Y.

Instrument Development Labs., 817 E. 55th St., Chicago 15, Ill.

Instrument Electronics, 253-21 Northern Blvd., Little Neck, L. I., N. Y.

Instrument Optic Co., 1872 Genesee St., Buffalo 11, N. Y.

Instrument Parts Corp., Ossining, N. Y.

Instrument Resistors Co., 25 Amity St., Little Falls, N. J.

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., 22 Elkins St., S. Boston, Mass.

Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.

Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.

Insulation Mfrs. Corp., 565 W. Washington Blvd., Chicago 6, Ill.

Insuline Corp. of America, 3602-35th Avenue, Long Island City, N. Y.

Intercall Systems, Inc., 201 Hickory Street, Dayton, Ohio

Interchemical Corp., Finishes Division, 432 West 45th St., New York, N. Y.

Interlake Chemical Corp., Union Commerce Bldg., Cleveland 14, Ohio

International Derrick & Equipment Co., 875 Michigan Ave., Columbus 8, Ohio

International Detrola Corp., 1501 Beard Ave., Detroit, Mich.

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 Street, New York 5, N. Y.

International Products Corp., Baltimore 18, Md.

International Register Co., 2620 W. Washington Blvd., Chicago 12, Ill.

International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.

International Transformer Co., 396 Broadway, New York, N. Y.

Interstate Mfg. Corp., 125 Sussex Ave., Newark 4, N. J.

Intex Co., 303 W. 42nd Street, New York 18, N. Y.

Invincible Tool Co., 611 Empire Bldg., Pittsburgh 22, Pa.

Irrington Varnish & Insulator Co., 10 Argyle Terr., Irvington 11, N. J.

Islip Radio Mfg. Co., Beech Street, Islip, N. Y.

Isolatite Inc., 343 Cortlandt St., Belleville 9, N. J.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Phila. 30, Pa.

Jack & Heintz Precision Industries, Inc., Cleveland 1, Ohio

Jackson Electrical Instr. Co., 16 S. Patterson Blvd., Dayton 1, Ohio

Jackson Electro Corp., 124 Bleecker St., New York, N. Y.

Jacksonville Metal Mfg. Co., 247 Riverside Avenue, Jacksonville 4, Fla.

Jacobson Mfg. Co., 747 Washington Avenue, Racine, Wis.

Janette Mfg. Co., 556 W. Monroe St., Chicago 61, Ill.

Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass.

J B L Instrument Co., 420 E. Providence Rd., Aldan, Pa.

J B T Instruments Inc., 441 Chapel St., New Haven 8, Conn.

Jefferson, Inc., Ray., 40 E. Merrick Rd., Freeport, L. I., N. Y.

Jefferson Electric Co., Bellwood, Ill.

Jefferson-Travis Radio Mfg. Corp., 245 E. 23rd St., New York 10, N. Y.

Jelliff Mfg. Corp., 200 Pequot Ave., Southport, Conn.

Jennings Radio Mfg. Co., 1098 E. William St., San Jose 12, Calif.

Jensen Industries Inc., 737 N. Michigan Ave., Chicago 11, Ill.

Jensen Radio Mfg. Co., 6601 S. Laramie Ave., Chicago, Ill.

Jerome Engineering Co., Massapequa, L. I., N. Y.

Jersey Plastic Corp., Lodi, N. J.

J F D Mfg. Co., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y.

Johns-Manville Sales Corp., 22 E. 40th St., New York, N. Y.

Johnson Co., E. F., Waseca, Minn.

Johnson Co., Lloyd S., 2241 Indiana Ave., Chicago, Ill.

Johnson Gas Appliance Co., 520 Ave. E. N. W., Cedar Rapids, Iowa

Johnston Tin Foil & Metal Co., 6100 S. Broadway, St. Louis 11, Mo.

Joliet Chemicals Ltd., Industry Avenue, Joliet, Ill.

Jones, Howard B., 2460 W. George St., Chicago 18, Ill.

Jones Spring Co., W. B., 124 E. 7th St., Cincinnati, Ohio

Jorgensen Mfg. Co., 1547 West Farms Rd., New York 60, N. Y.

Joyner Corp., The, 462 N. Parkside Ave., Chicago 44, Ill.

Kaar Engineering Co., 619 Emerson St., Palo Alto, Calif.

Kable Engrg. Co., 1307 7th Street, North Bergen, N. J.

Karp Metal Products Co., Inc., 129 Thirtieth St., Brooklyn, N. Y.

Katron Inc., 4101 Rhodes Ave., North Hollywood, Calif.

Kato Engrg. Co., 530 N. Front St., Man-kato, Minn.

Kay Electric Co., 8 Eaton Place, Newark, N. J.

Keasbey & Mattison, Ambler, Pa.

Kellems Co., Saugatuck, Conn.

Kellogg Switchboard & Sup. Co., 6650 S. Cicero Ave., Chicago 33, Ill.

Kelnor Mfg. Co., 703 Market St., San Francisco 4, Calif.

Kemet Lab. Co. Inc., W. 117th St. & Madison Ave., Cleveland 1, Ohio

Kemlite Labs., 1809 N. Ashland Ave., Chicago, Ill.

Kenyon Transformer Co., 840 Barry St., New York 59, N. Y.

Kester Solder Co., 4212 Wrightwood Ave., Chicago 33, Ill.

Keuffel & Esser Co., 127 Fulton Street, New York, N. Y.

Keystone Carbon Co., Inc., 1935 State St., St. Marys, Pa.

Keystone Electronics Co., 50-52 Franklin Street, New York 13, N. Y.

Kilburn Glass Co., Inc., J. R., 22 S. Worcester Street, Chartley, Mass.

Kings Electronics Co., 372 Classon Ave., Brooklyn 5, N. Y.

King Laboratories Inc., 205 Oneida St., Syracuse 4, N. Y.

Kingston Radio Co., Inc., Kokomo, Ind.

Kinney Mfg. Co., 3529 Washington St., Boston, Mass.

Kirchberger & Co., Inc., M., 1425 37th St., Brooklyn 18, N. Y.

Kirkland Co., H. R., 8 King St., Morristown, N. J.

Kirkman Engrg. Corp., 121 6th Avenue, New York 13, N. Y.

Klismet Record Co., 227 E. 14th Street, New York 3, N. Y.

Kling Metal Spinning Co., 174 Centre Street, New York 13, N. Y.

Klise Mfg. Co., 50 Cottage Grove St., S. W. Grand Rapids, Mich.

Kluge Electronics Co., 1031 N. Alvarado St., Los Angeles 26, Calif.

Knights Co. Jas., 131 S. Wells St., Sandwich, Ill.

Knoedler Co., A., Lancaster, Pa.

Koh-I-Noor Pencil Co., Bloomsbury, N. J.

Kohler Co., Kohler, Wis.

Kollath Mfg. Co., 4061 W. Addison Street, Chicago, Ill.

Kollsman Instrument Div. of Square D Co., 80-08 45th Avenue, Elmhurst, N. Y.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

Kopp Glass Inc., 1 East 42nd St., New York 17, N. Y.

Korfund Co., Inc., 48-15 32nd Pl., L. I. City 1, N. Y.

Kraft & Kraft, Hicksville, N. Y.

Krementsz & Co., 49 Chestnut Street, Newark 5, N. J.

Kuhn & Jacob Moulding & Tool Co., 1200 Southard St., Trenton, N. J.

Kulka Electric Mfg. Co. Inc., 30 South St., Mt. Vernon, N. Y.

Kurman Elec. Co., 35-18 37th St., Long Island City 1, N. Y.

Kurz-Kasch Co., 1415 S. Broadway, Dayton 1, Ohio

Kwikheat Division, Sound Equipment Corp., 3903 San Fernando Rd., Glendale 4, Calif.

Kyle Corp., South Milwaukee, Wis.

L A B Corp., Summit, N. J.

Lake Mfg. Co., 2323 Chestnut St., Oakland 7, Calif.

La Magna Mfg. Co., Inc., East Rutherford, N. J.

Lamicoid Fabricators, 3600 W. Potomac Ave., Chicago 51, Ill.

Laminated Shlm Co., Inc., 56 Union Street, Glenbrook, Conn.

La Motte Chemical Products Co., Towson 4, Baltimore, Md.

Lampkin Laboratories, Bradenton, Fla.

Lamson & Sessions Co., 1971 W. 85th St., Cleveland, Ohio

Landis & Gvr, Inc., 104 Fifth Avenue, New York, N. Y.

Lane-Wellis Co., 5610 S. Soto Street, Los Angeles 11, Calif.

Langevin Co., Inc., 37 W. 65th St., New York, N. Y.

Lansing Stamping Co., 1159 S. Pennsylvania Ave., Lansing, Mich.

Lapp Insulator Co., 31 Gilbert St., LeRoy, N. Y.

LaRose, W. T. & Associates, 635 Second Avenue, Troy, N. Y.

Larrimore Sales Co., 311 Locust Street, St. Louis 2, Mo.

Laurehk Radio Mfg. Co., 3931 Monroe Ave., Wayne, Mich.

Lavole Labs., Morganville, N. J.

Leach Relay Co., 5915 Avalon Blvd., Los Angeles, Calif.

Lear, Inc., 110 Ionia Avenue, N. W., Grand Rapids 2, Mich.

Lectradio Corp., 4-42 St. Francis St., Newark 5, N. J.

Lectrohm, Inc., 5125 W. 25th St., Cicero 50, Ill.

Leeds & Northrup Co., 4901 Stenton Ave., Phila., Pa.

Lee Spring Co., 30 Main St., Brooklyn, N. Y.

Lehigh Structural Steel Co., 17 Battery Place, New York 4, N. Y.

Leich Electric Co., 565 W. Washington Blvd., Chicago 6, Ill.

Leiman Bros., 203 Christie St., Newark 5, N. J.

Lektra Labs, 30 E. 10th St., New York, N. Y.

Leland Elec. Co., 1501 Webster St., Dayton, Ohio

Leland, George H., 123 Webster Street, Dayton 2, Ohio

Lenk Mfg. Co., Newton Lower Falls, Mass.

Lenkurt Electric Co., 1138 Howard Street, San Francisco 3, Calif.

Lenoxite Div., Lenox Inc., 65 Prince Street, Trenton 5, N. J.

Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 4, Ill.

Leotone Radio Co., 65 Dey St., New York 7, N. Y.

Lepel High Frequency Labs., 39 W. 60th St., New York, N. Y.

Lester Radio Co., 3103 Mermaid Avenue, Brooklyn, N. Y.

Leuck Crystal Lab., 245 S. 11th St., Lincoln, Nebr.

Leupold & Stevens Instruments, 4445 N. E. Glisan Street, Portland 13, Ore.

Lewis Electronics, Los Gatos, Calif.

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

Lewyt Corp., 60 Broadway, Brooklyn, N. Y.

Libbey Division, Owens Illinois Glass Co., P. O. Box 1035, Toledo 1, Ohio

Liebel-Flarshelm Co., 303 W. Third Street, Cincinnati 2, Ohio

Lincoln Electronics Corp., 653 11th Avenue, New York, N. Y.

Lincophone Co., 1661 Howard Ave., Utica, N. Y.

Linde Air Products Co., 30 E. 42nd St., New York 17, N. Y.

Lindsay & Lindsay, 222 W. Adams St., Chicago 6, Ill.

Lindsay & Thomas, Inc., 60 E. 42nd Street, New York 17, N. Y.

Lingo & Son, Inc., John E., 28th St. & Buren Ave., Camden, N. J.

Linick Chemical Co., 29 E. Madison Street, Chicago 2, Ill.

Linick & Co., Leslie L., 29 E. Madison St., Chicago, Ill.

Link, Fred M., 125 W. 17th St., New York, N. Y.

Link Engineering Co., 13581 Elmira Street, Detroit 27, Mich.

Linton & Bro. Inc., Horace, 3081 Ruth St., Phila. 34, Pa.

Littelfuse Inc., 4755 Ravenswood Ave., Chicago, Ill.

Little Falls Alloys, Inc., 189 Caldwell Avenue, Paterson 1, N. J.

Litton Engineering Labs., P. O. Box 749, Redwood City, Calif.

Locke Insulator Corp., P. O. Box 57, Baltimore 3, Md.

Logan Co. Les., 530 Gough Street, San Francisco 2, Calif.

Loge Sound Engineers, J. M., 986 S. Western Ave., Los Angeles 6, Calif.

Long, L. J. Co., 186 Grand Street, New York 13, N. Y.

Long Island Engraving Co., 19 W. 21st St., New York 10, N. Y.

Lord Mfg. Co., 1635 W. 12th St., Erie, Pa.

Lorentzen, H. K. Inc., 391 W. Broadway, New York 12, N. Y.

Lowell Insulated Wire Co., Lowell, Mass.

Lukens Steel Co., Coatesville, Pa.

Luman Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio

Luminate Electric Co., 407 S. Dearborn St., Chicago, Ill.

Lyman Electronic Corp., 12 Cass Street, Springfield, Mass.

McColpin-Christie Corp., 4922 S. Figueroa St., Los Angeles 37, Calif.

McElroy Mfg. Corp., 82 Brookline Ave., Boston 15, Mass.

McInerney Plastics Co., 25 Commerce Avenue, S. W., Grand Rapids 2, Mich.

McLaughlin, J. L. A., P. O. Box 529, La Jolla, Calif.

McMurdo Silver Co., 1240 Main Street, Hartford 3, Conn.

Maas & Waldstein Co., 438 Riverside Ave., Newark, N. J.

Macallen Co., The, 16 Macallen Street, Boston 27, Mass.

Machlett Labs., Springdale, Conn.

MacLeod & Hanopol, 24 Chelsea St., Charlestown 29, Mass.

Madison Electrical Products Corp., 74 Main St., Madison, N. J.

Magnavox Co., The, Fort Wayne 4, Indiana

Magnecord, Inc., 304 W. 63rd Street, Chicago 21, Ill.

Magnetic Analysis Corp., 42-44 Twelfth Street, Long Island City 1, N. Y.

Magnetic Devices, Inc., Frederick, Md.

Magnetic Devices Corp., 76-14 Woodside Avenue, Jackson Heights, N. Y.

Magnetic Products Corp., Norwalk, Conn.

Magnetic Windings Co., Div. Essex Wire Corp., 416 S. 16th St., Easton, Pa.

Magnograph Corp., 5800 W. 3rd St., Los Angeles, Calif.

Maguire Industries Inc., Electronics Dept., Bridgeport, Conn.

Maico Co. Inc., 25 North 3d St., Minneapolis, Minn.

Majestic Radio & Television Corp., St. Charles, Ill.

Makalot Corp., 262 Washington St., Boston 9, Mass.

Makan Inc., 79 Thurman Ave., Columbus 6, Ohio

Makepeace Co., D. E., Attleboro, Mass.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Manross & Sons, F. N. Div., Associated Spring Corp., Bristol, Conn.

Manufacturers Chemical Corp., Berkeley Heights, N. J.

Manufacturers Screw Products, 270 W. Hubbard St., Chicago, Ill.

Marathon Battery Co., Wausau, Wisc.

Marathon Elect. Mfg. Corp., Randolph & Cherry Sts., Wausau, Wisc.

Marco Industries, 245 S. Beverly Dr., Beverly Hills, Calif.

Marcus Transformer Co., 32-34 Montgomery Street, Hillside 5, N. J.

Marion Electrical Instrument Co., Manchester, N. H.

Markem Machine Co., Keene, N. H.

Marlboro Tool & Mfg. Co., Charles St. & New Brunswick Avenue, Matawan, N. J.

Market Forge Co., Everett, Mass.

Martindale Electric Co., 1371 Hird Ave., Cleveland, Ohio

Massa Labs. Inc., 3868 Carnegie Ave., Cleveland, Ohio

Master Vibrator Co., 200 Davis Avenue Dayton 1, Ohio

Mattern F. Mfg. Co., 4647 N. Cicero Avenue, Chicago 30, Ill.

Mayfair Molded Products Corp., 4440 N. Elston Avenue, Chicago 30, Ill.

MB Manufacturing Co. Inc., 1060 State Street, New Haven 11, Conn.

Measurements Corp., Boonton, N. J.

Mecantron Corp., 711 Boylston Street, Boston 16, Mass.

Meck Industries, John, Liberty at Pennsylvania, Plymouth, Ind.

Mec-Rad Div., Black Industries, 1440 E. 222nd Street, Cleveland 17, O.

Megard Corp., 1601 S. Burlington St., Los Angeles 6, Calif.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Meletron Corp., 950 N. Highland Avenue, Los Angeles 38, Calif.

Mellaphone Corp., Rochester 2, N. Y.

Melrath Supply & Gasket Co., Tioga St. & Aramingo Avenue, Philadelphia, Pa.

Mendelsohn Speedgun Co., Inc., 457 Bloomfield Avenue, Bloomfield, N. J.

Mepharm Corp., G. S., 2001 Lynch Avenue, East St. Louis, Ill.

Merck & Co. Inc., Rahway, N. J.

Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.

Metallic Arts Co., 243 Broadway, Cambridge 39, Mass.

Metaplast Co., 205 W. 19th St., New York 11, N. Y.

Meters, Inc., 915 Riveria Dr., Indianapolis 5, Ind.

Metroloy Co., 57 E. Alpine St., Newark, N. J.

Metron Instrument Co., 432 Lincoln St., Denver 9, Colo.

Metzger & Son, F. F., 2600 N. 6th St., Phila. 33, Pa.

Meyercord Co., 5323 W. Lake St., Chicago 44, Ill.

Mica Insulator Co., 797 Broadway, Schenectady 1, N. Y.

Micarnold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y.

Mica Products Mfg. Co., 69 Wooster St., New York, N. Y.

Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.

Micro Ferrocarb Products Div., Maguire Industr. Inc., Greenwich, Conn.

Micro-Sonic Corp., 44 West 18th Street, New York, N. Y.

Micro Switch Div., First Industrial Corp., 7 Spring St., Freeport, Ill.

Midco Mfg. & Distr. Co., S. 13th & Kentucky Ave., Sheboygan, Wisc.

Midland Paint & Varnish Co., 9115 Reno Avenue, Cleveland 5, Ohio

Midwest Molding & Mfg. Co., 319 N. Whipple Street, Chicago 12, Ill.

- Midwest Radio Corp., 909 Broadway, Cincinnati 2, Ohio
- Mid-West Screw Products Co., 3662 Park Avenue, St. Louis 10, Mo.
- Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, Ill.
- Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
- Milford Rivet & Machine Co., Milford, Conn.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Miller Co., B. F., Trenton 4, N. J.
- Miller, M. A. Mfg. Co., 1169 E. 43rd Street, Chicago 15, Ill.
- Miller Corp., Wm., 362 W. Colorado St., Pasadena, Calif.
- Miller, August E., 9226 Hudson Blvd., No. Bergen, N. J.
- Miller Co., J. W., 5917 S. Main St., Los Angeles, Calif.
- Milwaukee Resistor Co., 748 W. Virginia Street, Milwaukee 4, Wis.
- Milwaukee Stamping Co., 824 S. 7th St., Milwaukee, Wis.
- Minerallac Electric Co., 25 N. Peoria St., Chicago, Ill.
- Minerva Corp. of America, 238 William St., New York City
- Miniature Precision Bearings, Keene, N. H.
- Minneapolis-Honeywell Reg. Co., 2753 Fourth Ave., S. Minneapolis, Minn.
- Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul, Minn.
- Mirror Record Corp., 1133 Broadway, New York 10, N. Y.
- Mitchell Rand Insulation Co. Inc., 51 Murray Street, New York 7, N. Y.
- Mogey & Sons, Inc., Wm., 76 Interhaven Ave., Plainfield, N. J.
- Moisture Register Co., 133 No. Garfield, Alhambra, Calif.
- Molded Insulation Co., Aircraft Control Div., 335 E. Price St., Philadelphia, Pa.
- Monarch Mfg. Co., 2014 N. Major Ave., Chicago 39, Ill.
- Monitor Controller Co., 51 S. Gay St., Baltimore 2, Md.
- Monitor Piezo Products Co., 815 Fremont St., So. Pasadena, Calif.
- Monroe Coil Co., 2659 W. 19th St., Chicago, Ill.
- Monsanto Chemical Co., Plastics Div., Springfield 2, Mass.
- Monsanto Chemical Co., St. Louis 4, Mo.
- Mooradian High Frequency Labs., 137 Park Place, Bogota, N. J.
- Howard J. Moore Co., 108 Park Row, New York 7, N. Y.
- Morse Co., Frank W., 301 Congress St., Boston 10, Mass.
- Mossman, Donald P., 612 N. Michigan Avenue, Chicago 11, Ill.
- Moulic Specialties Co., 1005-1007 W. Washington Street, Bloomington, Ill.
- Mudane Co., The, 110 Bleeker St., New York, N. Y.
- Muelhausen Spring Corp., 255 Michigan Ave., Logansport, Ind.
- Mueller Elec. Co., 1583 E. 31st St., Cleveland 14, Ohio
- Multi-Products Tool Co., 123 Sussex Ave., Newark 4, N. J.
- Munsell & Co., Eugene, 200 Varick Street, New York, N. Y.
- Murdock Mfg. Co., Wm. J., Chelsea, Mass.
- Music Master Radio Corp., 750 Main Street, Hartford, Conn.
- Musitron Co., 223 W. Erie St., Chicago 10, Ill.
- Mu Switch Corp., Canton 31, Mass.
- Muter Co., 1255 S. Michigan Ave., Chicago, Ill.
- Mycalex Corp. of America, 60 Clifton Blvd., Clifton, N. J.
- Myers & Son, E. A., Radioear Bldg., Mt. Lebanon, Pittsburgh, Pa.
- Mykroy Inc., 1917 N. Springfield Ave., Chicago 47, Ill.
- National Carbon Co., Inc., 30 E. 42nd Street, New York, N. Y.
- National Ceramic Co., 400 Southard Street, Trenton 2, N. J.
- National Co., 61 Sherman St., Malden 48, Mass.
- National Electric Controller Co., 5307 Ravenswood Ave., Chicago, Ill.
- National Electronic Corp., 22-78 Steinway Street, Long Island City, N. Y.
- National Gasket & Washer Mfg. Co., 122 E. 25th Street, New York 10, N. Y.
- National Instrument Co., 246 Walnut St., Newtonville 60, Mass.
- National Intercommunicating Systems, 1531 Devon Avenue, Chicago 26, Ill.
- National Lead Co., 111 Broadway, New York 6, N. Y.
- National Lock Washer Co., 40 Hermon Street, Newark 5, N. J.
- National Molding Co., 2141 W. Washington Blvd., Los Angeles 7, Calif.
- National Moldite Co., 23 Montgomery St., Hillside 5, N. J.
- National Porcelain Co., 400 Southard Street, Trenton, N. J.
- National Research Corp., Vacuum Engrg. Div. 100 Brookline Ave., Boston 15, Mass.
- National Screw & Mfg. Co., The, Cleveland 4, Ohio
- National-Simplex-Bludworth, Inc., Marine Division, 100 Gold Street, New York 7, N. Y.
- National Technical Lab., 820 Mission St., South Pasadena, Calif.
- National Transformer Corp., 56 State Street, Paterson, N. J.
- National Union Radio Corp., 15 Washington St., Newark 2, N. J.
- National Varnished Prod. Corp., 211 Randolph Ave., Woodbridge, N. J.
- National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del.
- Naxon Utilities Corp., 2101-11 W. Walnut St., Chicago 12, Ill.
- Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn, New York
- Nelson Vacuum Pump Co., Geo. F., 2133 Fourth St., Berkeley 2, Cal.
- New England Electrical Wks. Inc., 365 Main St., Lisbon, N. H.
- New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
- New England Mica Co., Waltham, Mass.
- New England Radiocrafters, 1156 Commonwealth Ave., Boston 34, Mass.
- New England Screw Co., Keene, New Hampshire
- New Jersey Wood Finishing Co. Inc., Electrical Insulation Dept., Woodbridge, N. J.
- Newark Transformer Co., 17 Frelinghuysen Avenue, Newark 5, N. J.
- Newcomb Audio Products Co., 2815 S. Hill Street, Los Angeles 7, Calif.
- Newport Rolling Mill Co., Ninth & Lowell Sts., Newport, Ky.
- New York Solder Co., 15 Crosby St., New York, N. Y.
- New York Transformer Co., 26 Waverly Place, New York 3, N. Y.
- New York Transformer Co., 62 William St., New York, N. Y.
- Ney Co., J. M., Hartford, Conn.
- Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.
- Nixon Nitration Works, Nixon, N. J.
- Noblitt Sparks Industries, Columbus, Ind.
- Noma Electric Corp., 55 W. 13th St., New York 11, N. Y.
- Nonotuck Mfg. Co., Holyoke, Mass.
- Nord Mfg. Co., 205 Spruce Street, Bridgeport, Conn.
- North American Philips Co. Inc., 100 East 42nd Street, New York 17, N. Y.
- Northeastern Engineering Inc., Manchester, N. H.
- North Electric Mfg. Co., 501 S. Market St., Gallon, Ohio
- Northern Communications Mfg. Co., 210 E. 40th St., New York, N. Y.
- Northern Industrial Chemical Co., 7-11 Elkins Street, South Boston 27, Mass.
- Northern Labs. Ltd., 3-01 27th Ave., Long Island City, N. Y.
- Northern Radio Co., 2208 4th Avenue, Seattle, Wash.
- Norton Co., 1 New Bond Street, Worcester 6, Mass.
- Norton Electrical Instrument Co., 59 Hilliard Street, Manchester, Conn.
- Nothelfer Winding Labs., 111 Albemarle Ave., Trenton, N. J.
- Nukem Products Corp., 111 Colgate Avenue, Buffalo 20, N. Y.
- Ocrum Corp., Auburn Road, Seneca Falls, N. Y.
- O'Donnell and Sons, J. P., 316 Stuart Street, Boston 16, Mass.
- Offner Electronics, Inc., 4320 N. Kedzie Ave., Chicago 25, Ill.
- Ohio Carbon Co., 12508 Berea Rd., Cleveland, Ohio
- Ohio Crankshaft Co., Tocco Div., 3800 Harvard Avenue, Cleveland 1, Ohio
- Ohio Elect. Mfg. Co., 5908 Maurice Ave., Cleveland 4, Ohio
- Ohio Tool Co., 3160 W. 106th Street, Cleveland 11, Ohio
- Ohmite Mfg. Co., 4335 W. Flournoy St., Chicago 44, Ill.
- Okonite Co., Canal St., Passaic, N. J.
- Olek & Son, Inc., A. 4757-59 Melrose Street, Philadelphia 37, Pa.
- Olesen Co., Otto K., 1560 Vine Street, Hollywood 28, Calif.
- Olympic Radio & Television Div. Hamilton Radio Corp., 510 Sixth Ave., New York, N. Y.
- Onan & Sons, D. W., 3264 Royalston Ave., Minneapolis 5, Minn.
- O'Neil-Irwin Mfg. Co., 316 Eighth Ave., S. Minneapolis 15, Minn.
- Operadio Mfg. Co., 135th & Indiana Sts., St. Charles, Ill.
- Oppenheimer Inc., Alan D., 582-586 Exchange St., Buffalo, N. Y.
- Oris Mfg. Co. Inc., Thomaston, Conn.
- Osborne Transformer Corp., 948 E. Lafayette Avenue, Detroit 7, Mich.
- John Oster Mfg. Co., Racine, Wisconsin
- Owens-Corning Fiberglass Corp., 1860 Nicholas Bldg., Toledo 1, Ohio
- Owens-Illinois Glass Co., Plastics Div., Toledo, Ohio
- Oxford-Tartak Corp., 3911 S. Michigan Avenue, Chicago 15, Ill.
- O. Z. Electrical Mfg. Co., 262 Bond Street, Brooklyn, N. Y.
- Ozalid Products Div., Gen. Aniline & Film Corp., 770 Anso Rd. Johnson City, N. Y.
- Pacific Plastic & Mfg. Co., 4865 Exquistion Blvd., Los Angeles, Calif.
- Packard-Bell Co., 3443 Wilshire Blvd., Los Angeles 5, Calif.
- Paisley Products Inc., 1770 Canalport Ave., Chicago 16, Ill.
- Palnut Co. Inc., 77 Cordier St., Irvington 11, N. J.
- Pan American Electric Co., Inc., 132 Front Street, New York, N. Y.
- Panco Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles, Calif.
- Pan Electronics Labs. Inc., 500 Spring Street, N. W. Atlanta, Ga.
- Panoramic Radio Corp., 242 W. 55th St., New York 19, N. Y.
- Paper Manufacturers Co., Philadelphia 18, Pa.
- Paragon Electric Co., 37 W. Van Buren St., Chicago 5, Ill.
- Paragon-Revolute Corp., 97 South Ave., Rochester 4, N. Y.
- Paramount Paper Tube Co., 801 Glasgow Ave., Ft. Wayne, Ind.
- Paraphone Hearing Aid Inc., 2056 E. 4th St., Cleveland 15, Ohio
- Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.
- Parker Engineering Products Co., 16 W. 22nd St., New York 10, N. Y.
- Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
- Park Metalware Co., 28 Bank St., Orchard Park, N. Y.
- Par-Metal Prods. Corp., 32-62 49th Street, Long Island City 3, N. Y.
- Patrick's Industries, 397 W. Marshall Avenue, Ferndale 20, Mich.
- Patterson Screen Division, E. I. duPont de Nemours & Co., Towanda, Pa.
- Patton-MacGyver Co., 17 Virginia Avenue, Providence 5, R. I.
- Paul & Beekman Div., Portable Products Corp., 1801 Cortland Street, Phila. 40, Pa.
- Paulsen-Webber Cordage Corp., 176 John Street, New York 7, N. Y.
- Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, Ill.
- Peck & Harvey 5736-38 N. Western Ave., Chicago 45, Ill.
- Peerless Electrical Prod. Co., 6920 McKinley Ave., Los Angeles 1, Calif.
- Peerless Labs., 461-467 10th Ave., New York 18, N. Y.
- Peerless Roll Leaf Co. Inc., 4511 New York Ave., Union City, N. J.
- Pelrice Wire Recorder Corp., 1328 Sherman Avenue, Evanston, Ill.
- Penn Engineering & Mfg. Corp., Box 311, Doylestown, Pa.
- Penn Fibre & Specialty Co., 2030 E. Moreland St., Phila. 44, Pa.
- Pennsylvania Coal Products Co., Petrolia, Pa.
- Penn-Union Electric Corp., 315 State Street, Erie, Pa.
- Perfection Electric Co., 829 S. State Street, Chicago, Ill.
- Perkin Elmer Corp., Glenbrook, Conn.
- Perno Inc., 6415 Ravenswood Ave., Chicago, Ill.
- Permoflux Corp., 4900 W. Grand Ave., Chicago, Ill.
- Peters Chemical Mfg. Co., 3623 Lake St., Melrose Park, Ill.
- Petersen Radio Co., 2800 W. Broadway, Council Bluffs, Iowa
- Pfanstiehl Chemical Co., 104 Lake View Ave., Waukegan, Ill.
- Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
- Philadelphia Insulated Wire Co., 200 N. 3rd St., Phila., Pa.
- Philadelphia Steel & Wire Corp., Penn St. & Belfield Ave., Phila., Pa.
- Philco Corp., Toga & C Sts., Phila. 34, Pa.
- Philharmonic Radio Corp., 528 E. 72nd St., New York 21, N. Y.
- Phillip Slewing, Inc., 199 Lafayette St., New York, N. Y.
- Phillips Control Corp., 612 N. Michigan Avenue, Chicago 11, Ill.
- Philson Mfg. Co. Inc., 156 Chambers St., New York, N. Y.
- Phonograph Needle Mfg. Co., 42 Dudley St., Providence 5, R. I.
- Photo Reproducing Equip Co., Chatham, N. J.

- Photoswitch, 77 Broadway, Cambridge 42, Mass.
- Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
- Photox Silk Screen Supply Co., 30 Irving Place, New York 3, N. Y.
- Pho Tron Instrument Co., 5713 Euclid Ave., Cleveland, Ohio
- Physicists Research Co., 343 S. Main St., Ann Arbor, Mich.
- Pickering and Co., Audio Laboratories, Oceanside, N. Y.
- Picker X Ray Corp., 300 Fourth Ave., New York 10, N. Y.
- Pierce Paper Products Co., Rockford, Ill.
- Pierce Renewable Fuses Inc., 211 Hertel Ave., Buffalo 7, N. Y.
- Pierston Electronic Corp., 533 E. Fifth Street, Los Angeles 13, Calif.
- Pilot Electric Co., 29 S. Broadway, Long Branch, N. J.
- Pilot Radio Corp., 37-06 36th Street, 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.
- Pittsburgh Carbon Brush Co., 811 Fulton St., Pittsburgh 12, Pa.
- Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-14 Sylvan Ave., Toledo 6, Ohio
- Plastex Corp., 402 Mt. Vernon Avenue, Columbus 3, Ohio
- Plastic Accessories, Inc., 460 Broome Street, New York 13, N. Y.
- Plastic Fabricators Co., 440 Sansome St., San Francisco 11, Calif.
- Plastic Insulator Co., Inc., 369 Lexington Avenue, New York 17, N. Y.
- Plastic Manufacturers Inc., Stamford, Conn.
- Plastic Metals Division, The National Radiator Co., 169 Bridge Street, Johnstown, Pa.
- Plastic Wire & Cable Corp., Norwich, Conn.
- Plastoid Corp., 19 W. 44th Street, New York 18, N. Y.
- Plax Corp., 133 Walnut St., Hartford 5, Conn.
- Plume & Atwood Mfg. Co., 470 Bank St., Waterbury, Conn.
- Point Mfg. Co., 5775 N. Ridge Avenue, Chicago 26, Ill.
- Poinsetta, Inc., 95 Cedar Ave., Pitman, N. J.
- Polan Industries, Huntington 19, W. Va.
- Polarad Electronics Co., 135 Liberty St., New York 6, N. Y.
- Polk Electronics, 119 Bleecker Street, New York 12, N. Y.
- Pollak Mfg. Co., Arlington, N. J.
- Polymet Condenser Co., 699 E. 135th St., New York, N. Y.
- Polytron Corp., 401 Broadway, New York 13, N. Y.
- Porcelain Products, Inc., Parkersburg, W. Va.
- Porter Metal Products, 121 Ingraham St., Brooklyn 6, N. Y.
- Ports Mfg. Co., 3265 E. Belmont Avenue, Fresno 3, Calif.
- Positive Lock Washer Co., 181 Miller St., Newark, N. J.
- Post Co., Frederick, 3650 Avondale Ave., Chicago 90, Ill.
- Potter Co., 1850 Sheridan Rd., No. Chicago, Ill.
- Potter & Brumfield Mfg. Co., 617 N. Gibson St., Princeton, Ind.
- Potter Instrument Co., 136-56 Roosevelt Ave., Flushing, N. Y.
- Powder Metallurgy Corp., 30-48 Greenpoint Ave., Long Island City, N. Y.
- Powhatan Mining Co., Baltimore 7, Md.
- Precise Electronics, 614 W. 49th Street, New York, N. Y.
- Precision Apparatus Co., 92-97 Horace Harding Blvd., Elmhurst, N. Y.
- Precision Fabricators, Inc., 120 N. Fitzhugh St., Rochester, N. Y.
- Precision Labs., Inc., Irvington, N. J.
- Precision Machine Works, Inc., 14 So. Ninth Street, Minneapolis, Minn.
- Precision Paper Tube Co., 2033 W. Charleston St., Chicago 47, Ill.
- Precision Plezo Service, 427 Mayflower St., Baton Rouge, La.
- Precision Products Co., 26 Bedford St., Waltham, Mass.
- Precision Scientific Co., 1750 N. Springfield Ave., Chicago 47, Ill.
- Precision Specialties, 210-16 N. Western Ave., Los Angeles, Calif.
- Precision Transformer Co., 733 W. Ohio St., Chicago 10, Ill.
- Precision Tube Co., 3828 Terrace St., Philadelphia 28, Pa.
- Preis Engraving Machine Co., 155 Summit St., Newark 4, N. J.
- Premax Products Div., Chisholm Ryder Co., College & Highland Ave., Niagara Falls 2, N. Y.
- Premier Crystal Labs, Inc., 63 Park Row, New York, N. Y.
- Premier Metal Etching Co., 21-03 44th Ave., Long Island City, N. Y.
- Press Wireless Mfg. Corp., 1475 Broadway, New York City 18, N. Y.
- Presto Electric Co., Union City, N. J.
- Prestole Division, Detroit Harvester Co., 4500 Detroit Avenue, Toledo 12, Ohio
- Prest-O-Lite Battery Co. Inc., 4500 W. 16th St., Box 1655, Indianapolis, Ind.
- Presto Recording Corp., 242 W. 55th St., New York, N. Y.
- Price Electric Corp., East Church and 2nd Sts., Frederick, Md.
- Printloid Inc., 95 Mercer St., New York, N. Y.
- Priscilla & Braid Co., 1309 Broad Street, Central Falls, R. I.
- Process & Instruments, 60 Greenpoint Avenue, Brooklyn 22, N. Y.
- Production Engrg. Corp., 66 Van Houten Ave., Clifton, N. J.
- Production Equipment Co., 182 South St., Oyster Bay, L. I., N. Y.
- Progressive Mfg. Co., 52 Norwood St., Torrington, Conn.
- Public Metal Prod. Inc., 100 6th Ave., New York 13, N. Y.
- Pure Carbon Co., St. Marys, Pa.
- Purves Mfg. Corp., Cambridge City, Ind.
- Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.
- Pyramid Electric Co., 415-421 Tonnele Avenue, Jersey City 6, N. J.
- Pyramid Products Co., 2224 S. State Street, Chicago, Ill.
- Pyroferic Corp., 175 Varick St., New York, N. Y.
- Quad Mfg. Co., 462 N. Parkside Ave., Chicago 44, Ill.
- Quadrige Mfg. Co., 213 W. Grand Ave., Chicago 11, Ill.
- Quaker City Gear Works, 1910-32 N. Front St., Philadelphia, Pa.
- Quality Industries, Electronic Dept., 25 E. Jackson Blvd., Chicago 4, Ill.
- Quam Nichols Co., 526 E. 33rd Pl., Chicago 16, Ill.
- R-9 Crystal Co., Inc., 907 Penn Ave., Pittsburgh, Pa.
- Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
- Radar Engineers, 4004 Arcade Bldg., Seattle 1, Wash.
- Radell Corp., 215 West Michigan Street, Indianapolis 2, Ind.
- Radex Corp. of Amer., 1322 Elston Ave., Chicago, Ill.
- Radiart Service, 720 W. Schubert Ave., Chicago 14, Ill.
- Radiart Corp., 3571 W. 62nd St., Cleveland, Ohio
- Radio City Products Co., 127 W. 26th St., New York, N. Y.
- Radio Colls Inc., 48 Merritt Avenue, White Plains, N. Y.
- Radio Condenser Co., Camden, N. J.
- Radio Corp. of America RCA Victor Div., Camden, N. J.
- Radio Corp. of America, Tube Div., Harrison, N. J.
- Radio Craftsman, 1341 S. Michigan Ave., Chicago 5, Ill.
- Radio Design Co., 1353 Sterling Pl., Brooklyn, N. Y.
- Radio Development Labs., 362 Atlantic Ave., Brooklyn 2, N. Y.
- Radio Development & Research Co., 26 Cornellson Avenue, Jersey City, N. J.
- Radio Engineering Labs., Inc., 35-54 36th St., Long Island City, N. Y.
- Radio Frequency Labs., Inc., Boonton, N. J.
- Radio Inventions, Inc., Faxmille, Inc., 155 Perry St., New York 14, N. Y.
- Radio Labs., Inc., 2701 Calif. Ave., Seattle 6, Wash.
- Radio Mfg. Engineers, Inc., 304 First Ave., Peoria, Ill.
- Radiomarine Corp. of America, 75 Varick Street, New York 13, N. Y.
- Radio Merchandise Sales, 550 Westchester Avenue, New York 55, N. Y.
- Radio Navigational Instrument Corp., 500 Fifth Avenue, New York, N. Y.
- Radionic Controls, Inc., 3758 Belmont Ave., Chicago 18, Ill.
- Radionic Transformer Co., 411 S. Sangamon Street, Chicago 7, Ill.
- Radio Process Co., 7618 Melrose Ave., Los Angeles, Calif.
- Radio Receptor Co., 251 W. 19th St., New York, N. Y.
- Radio Specialty Mfg. Co., 2023 S. E. 6th Street, Portland 14, Oregon
- Radio Speakers, Inc., 221 E. Cullerton St., Chicago, Ill.
- Radio-Television Institute, Inc., 480 Lexington Ave., New York 17, N. Y.
- Rahm Instruments, Inc., 12 W. Broadway, New York, N. Y.
- Rajah Co., Locust Ave., Bloomfield, N. J.
- Rapid Specialties Co., 325 W. Huron Street, Chicago, Ill.
- Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
- 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., Electronic Equip. Div., Waltham 54, Mass.
- Raytheon Mfg. Co., Power Tube Div., Waltham 54, Mass.
- Raytheon Mfg. Co., Receiving Tube Div., Newton 58, Mass.
- Raytheon Mfg. Co., Waltham 54, Mass.
- Raytheon Mfg. Co., Broadcast Equipment Div., 7517 N. Clark Street, Chicago, Ill.
- Raythron, Incorporated, 407 N. Jackson Street, Jackson, Mich.
- R. B. M. Division, Essex Wire Corp., Logansport, Ind.
- Rea Magnet Wire Co., E. Pontiac Street, Extended Fort Wayne, Ind.
- Ready Power Co., 3826 Grand River Avenue, Detroit, Mich.
- Readrite Meter Works, College Ave., Buffon, Ohio
- R. E. C. Mfg. Corp., 1250 Highland Street, Holliston, Mass.
- Recordisc Corp., 395 Broadway, New York City
- Record-O-Vox, Inc., 230 1/2 S. Spring St., Los Angeles, Calif.
- Recotone Corp., 212 Fifth Ave., New York, N. Y.
- Rectifier Engineering Co., 1809 E. 7th Street, Los Angeles 21, Calif.
- Recto Molded Products Appleton St. & B.&O.R.R., Cincinnati, Ohio
- Red Arrow Electric Corp., 100 Coit St., Irvington, N. J.
- Redmond Co. Inc., Monroe St., Owosso, Mich.
- Reed & Prince Mfg. Co., Duncan Ave., Worcester, Mass.
- Reeves Soundcraft Corp., 10 East 52nd St., New York 22, N. Y.
- Reichold Chemicals, Inc., 601 Woodward Heights Blvd., Ferndale Sta., Detroit 20, Mich.
- Reilly Tar & Chemical Corp., Merchants Bank Bldg., Indianapolis, Ind.
- Reimers Electric Appliance Co., 506-56th St., West New York, N. J.
- Reiner Electronics Co., 152 W. 25th St., New York, N. Y.
- Rek-O-Kut Co., 143 Grand St., New York 13, N. Y.
- Reliable Spring & Wire Forms Co., 3167 Fulton Rd., Cleveland 9, Ohio
- Reliance Automatic Lighting Co., 1927 Mead Street, Racine, Wis.
- Reliance Instrument Co., 715 N. Kedzie Ave., Chicago, Ill.
- Remington Rand, Electronic Division, Middletown, Conn.
- Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif.
- Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio
- Resinous Products & Chemical Co., 222 W. Washington Square, Phila., Pa.
- Resistance Products Co., 140 S. Second Street, Harrisburg, Pa.
- Respro, Inc., Wellington Ave., Cranston, R. I.
- Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
- Rexon, Inc. Thorens, 295 Fifth Ave., New York 16, N. Y.
- Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.
- Reynolds Metal Co., Foil Division, Federal Reserve Bldg., Richmond, Va.
- Rhode Island Insulated Wire Co., 50 Burnham Ave., Providence, R. I.
- Rhodes Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.
- Rhodes Mfg. Co., 1753 N. Honore Street, Chicago, Ill.
- Rice's Sons, Inc., Bernard, 325 Fifth Ave., New York 16, N. Y.
- Richards, Arklay S. Co., Inc., 78 Winchester Street, Newton Highlands 61, Mass.
- Richardson Allen Corp., 15 W. 20th St., New York 11, N. Y.
- Richardson Co., Melrose Park, Ill.
- Richmont, Inc., 215 W. Seventh St., Los Angeles 14, Calif.
- Riggs & Jeffreys, Inc., 73 Winthrop St., Newark 4, N. J.
- Ripley Co., Torrington, Conn.
- Rittenhouse C. A. E., Honeoye Falls, N. Y.
- Riverside Metal Co., Riverside, N. J.
- Robbins & Myers, 1345 Lagonda Ave., Springfield, Ohio
- Robinetto Co., W. C., 802 Fair Oaks Avenue, South Pasadena, Calif.
- Robinson Avn. Inc., 730 Fifth Ave., New York 19, N. Y.
- Robinson Recording Labs., 35 S. 9th St., Philadelphia, Pa.

Robson-Burgess Co., 5002 N. 30th Street, Omaha 11, Nebr.

Rockbestos Products Corp., 308 Nicoll St., New Haven 4, Conn.

Rodale Mfg. Co., 6th & Minor Sts., Emaus, Pa.

Roebing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.

Rogan Bros., 2001 S. Michigan Ave., Chicago, Ill.

Rogers Corporation, Manchester, Conn.

Rohm & Haas, 222 W. Washington Square, Phila. Pa.

Rola Co. Inc., 2530 Superior Ave., Cleveland 14, Ohio

Roller-Smith, Bethlehem, Pa.

Rome Cable Corp., 330 Ridge St., Rome, N. Y.

Ross Mfg. Co., 2241 S. Indiana Ave., Chicago 27, Ill.

Rowe Industries, 3120 Monroe Street, Toledo 6, Ohio

Rowe Radio Research Labs., 2422 N. Pulaski Road, Chicago 39, Ill.

Ruberoid Co., 500 Fifth Ave., New York, N. Y.

Rubicon Co., 3751 Ridge Ave., Phila., Pa.

Ruby Chemical Co., 68 McDowell St., Columbus, Ohio

Runzel Cord & Wire Co., 4731 W. Montrose Ave., Chicago, Ill.

Rupp's Assembling & Mfg. Works, 2341 N. Seminary Ave., Chicago 14, Ill.

Rusgreen Mfg. Co., 14262 Birwood Ave., Detroit, Mich.

Russell, Burdsall & Ward Bolt & Nut Co., Midland Ave., Port Chester, N. Y.

Russell Electric Co., 340 West Huron Street, Chicago 10, Ill.

Russell & Stoll Co., Inc., 125 Barclay St., New York 7, N. Y.

Rustless Iron and Steel Division, American Rolling Mill Co., 3400 E. Chase Street, Baltimore 13, Md.

"S" Corrugated Quenched Gap Co., Scientific Electric Div., 107 Monroe St., Garfield, N. J.

S-W Inductor Co., 1056 N. Wood St., Chicago, Ill.

St. John X-Ray Service, Inc., 30-20 Thomson Avenue, L. I. City 1, N. Y.

St. Louis Screw & Bolt Co., 6900 Broadway, St. Louis 15, Mo.

St. Mary's Carbon Co., St. Marys, Pa.

Sanborn Co., 39 Osborne St., Cambridge 39, Mass.

Sangamo Electric Co., Springfield, Ill.

Sanders Bros. Mfg. Co., 409 W. Main St., Ottawa, Ill.

Santay Corp., 351 N. Crawford, Chicago 24, Ill.

Sarco Co. Inc., 475 Fifth Avenue, New York 17, N. Y.

Sargent Co., E. M., 212 Ninth St., Oakland, Calif.

Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.

Savilion Laboratories, Inc., 1025 Broad Street, Newark 2, N. J.

Saxl Instrument Co., 6 Linnaean St., Cambridge 38, Mass.

Saxonburg Potteries, Saxonburg, Pa.

Schaar & Co., 754 W. Lexington St., Chicago 7, Ill.

Schaefer Bros. Co., 1059 W. 11th St., Chicago, Ill.

Scherr, Geo. D., 200 Lafayette St., New York, N. Y.

Schoonmaker Insulation Co., Inc., A. O., 635 Greenwich St., New York 14, N. Y.

Schott Co., Walter L., 9306 Santa Monica Blvd., Beverly Hills, Calif.

Schottland, Frederic D., 82-62 Grenfell Ave., Kew Gardens, N. Y.

Schriber & Gustafson, Rm. 1008-1600 Broadway, New York 19, N. Y.

Schulmerich Electronics Inc., Sellersville, Pa.

Schuttig & Co., 9th & Kearney Sts., N. E. Washington 17, D. C.

Schweltzer Paper Co., 142 Miller St., Newark, N. J.

Sciaky Bros., 4915 W. 67th Street, Chicago 38, Ill.

Scientific Elec. Div. of S. Corrugated Quenched Gap Co., 111 Monroe St., Garfield, N. J.

Scientific Radio Products Co., 733 W. Broadway, Council Bluffs, Ia.

Scientific Radio Service, 4301 Sheridan St., University Park, Md.

Scientific Service Lab. Subsidiary of Electronics, Inc., 915 Meridian Ave., So. Pasadena, Calif.

Scott Radio Labs. Inc., 4450 N. Ravenswood Ave., Chicago 40, Ill.

Scovill Mfg. Co., Waterville Screw Prods. Div., Waterville, Conn.

Scully Machine Co., 62 Walter St., Bridgeport, Conn.

Seager Carbon Co., 63 Barclay St., New York 7, N. Y.

Sealor Corp., 45 Willard Ave., Providence 5, R. I.

Searle Aero Industries, Inc., Orange, Calif.

Seeburg Corp., J. P., 1500 N. Dayton Ave., Chicago 22, Ill.

Seifert Inc., E. R., 202 South Beech St., Syracuse, N. Y.

Selectar Mfg. Co., 21-10 49th Ave., Long Island City, N. Y.

Selectograph Mfg. Co., 502 W. Colo. Avenue Colorado Springs, Colo.

Selenium Corp. of America 1719 W. Pico Blvd., Los Angeles 15, Calif.

Self Winding Clock Co., 205 Willoughby Ave., Brooklyn 5, N. Y.

Senn Corp., New Augusta, Ind.

Sensitive Research Instrument Co., 9 Elm Ave., Mt. Vernon, N. Y.

Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.

Sentry Crystal Co., 206 S. W. Washington St., Portland 4, Ore.

Setchell Carlson, 2233 University Ave., St. Paul, Minn.

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., Collingdale, Pa.

Shannon Luminous Materials Co., 7346 Santa Monica Blvd., Hollywood 46, Calif.

Shaw Blue Print Machine Co., Inc., 12 E. Park St., Newark 2, N. J.

Shaw Insulator Co., 160 Coit St., Irvington 11, N. J.

Shawinigan Products Corp., 350 Fifth Avenue, New York 1, N. Y.

Sheboygan X-Ray Co., 817 Center St., Sheboygan, Wis.

Sheridan Electro Corp., 2850 S. Michigan Ave., Chicago, Ill.

Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.

Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

Shur-Antenna-Mount Inc., Seacliffe, L. I., N. Y.

Shure Bros., 225 W. Huron St., Chicago, Ill.

Sickles Co., F. W., 165 Front St., Chicopee, Mass.

Sidward Products Co., 261 Broadway, New York, N. Y.

Sigma Instruments, Inc., 70 Ceylon St., Boston 21, Mass.

Signal Engineering & Mfg. Co., 154 W. 14th St., New York, N. Y.

Signal Electronic & Mfg. Co., 114 E. 16th St., New York 3, N. Y.

Signal Indicator Corp., 894 Broadway, New York 3, N. Y.

Sillocks-Miller Co., 10 Parker Ave., W. So. Orange, N. J.

Simmonds Aerocessories, Inc., 30 Rockefeller Plaza, New York 20, N. Y.

Simmonds Saw Steel Co., Lockport, N. Y.

Simmons Fastener Corp., North Broadway, Albany 1, N. Y.

Simonds Machine Co., Inc., 246-48 Worcester St., Southbridge, Mass.

Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.

Simpson Elect. Co., 5218 W. Kinzie St., Chicago 44, Ill.

Simpson Mfg. Co., Inc., 188 W. 4th St., New York 14, N. Y.

Sipps-Eastwood Corp., Keen & Summer Sts., Paterson, N. J.

Sittler Mfg. Corp., 18 N. Ada Street, Chicago 7, Ill.

Sitton Transformer Corp., 763 Tifton St., N. W. Atlanta, Ga.

Skoning Corp., 319-325 Taunton Ave., E. Providence 14, R. I.

Skydyne Inc., River Rd., Port Jervis, N. Y.

Small Motors, Inc., 1322 Elston Ave., Chicago 22, Ill.

Smith Mfg. Co., F. A., P. O. Box 509, Rochester 2, N. Y.

Smith Mfg. Co., Nathan R., 105 Pasadena Avenue, So. Pasadena, Calif.

Smith-Meeker Engrg. Co., 125 Barclay Street, New York 7, N. Y.

Snyder Mfg. Co., 22nd & Ontario Sts., Philadelphia 40, Pa.

Sola Electric Co., 2525 Clybourn Ave., Chicago 14, Ill.

Solar Corp., 1000 W. Bruce St., Milwaukee 4, Wis.

Solar Mfg. Corp., 285 Madison Ave., New York 17, N. Y.

Somerset Labs., 306 Valleybrook Ave., Lyndhurst, N. J.

Sonart Record Corp., 251 W. 42nd St., New York 18, N. Y.

Sonora Radio & Television Corp., 325 N. Hoynes Ave., Chicago, Ill.

Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.

Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.

Sorgel Electric Co., 838 W. National Avenue, Milwaukee 4, Wis.

SOS Cinema Supply Co., 449 W. 42nd St., New York 18, N. Y.

Sound Apparatus Co., 233 Broadway, New York 7, N. Y.

Sound Devices Co., 160 E. 116th St., New York 20, N. Y.

Sound Equipment Co., 3903 San Fernando Rd., Glendale 4, Calif.

Sound Scriber Corp., 82 Audubon St., New Haven 11, Conn.

Southern Carbon Brush Co., Inc., P. O. Box 2021, Birmingham, Ala.

Southington Hardware Mfg. Co., Southington, Conn.

Sparkes Mfg. Co., 318 Jefferson St., Newark, N. J.

Sparks Withington Co., 2400 E. Ganson St., Jackson, Mich.

Spaulding Fibre Co., Inc., 310 Wheeler Street, Tonawanda, N. Y.

Speak-O-Phone Recording & Equip. Co., 23 W. 60th St., New York, N. Y.

Special Chemicals Co., 30 Irving Pl., New York, N. Y.

Special Electric Lab., 7657 S. Central Avenue, Los Angeles 1, Calif.

Special Machine Tool Engrg. Works, 132 Lafayette St., New York 13, N. Y.

Special Products Co., 9115 Brookville Road, Silver Spring, Md.

Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill.

Speer Carbon Co., Lincoln Ave., St. Marys, Pa.

Speer Resistor Corp., St. Marys, Pa.

Spencer Lens Co., Buffalo 11, N. Y.

Spencer Thermostat Co., 34 Forest St., Attleboro, Mass.

Spencer Wire Co., West Brookfield, Mass.

Sperman Metal Specialties 2199 E. 21st Street, Brooklyn 29, N. Y.

Sperry Gyroscope Co., Manhattan Bridge Plaza, Brooklyn, N. Y.

Sperry Products, Inc., 15th & Willow Avenue, Hoboken, N. J.

Sperti, Inc., Norwood Station Cincinnati 12, Ohio

Spirling Products Co., Inc., 64 Grand Street, New York 13, N. Y.

Sprague Elec. Co., 189 Beaver St., North Adams, Mass.

Square D Co., 6060 Rivard St., Detroit 11, Mich.

Stackpole Carbon Co., St. Marys, Pa.

Stamford Electric Products Co., Inc., Sunnyside Ave., Stamford, Conn.

Stamford Metal Specialty Co., 428 Broadway, New York 13, N. Y.

Standard Arcturus Corp., 99 Sussex Avenue, Newark, N. J.

Standard Coil Prods. Co., 2329 N. Pulaski Rd., Chicago 18, Ill.

Standard Elect. Time Co., 89 Logan St., Springfield, Mass.

Standard Elec. Products Co., 400 Linden Ave., Dayton 3, Ohio

Standard Engineering Laboratories 40 S. Oak Knoll Ave., Pasadena 1, Calif.

Standard Instrument Corp., 568 Prospect Ave., New York 55, N. Y.

Standard Locknut & Lockwasher Inc., 33-35 W. St. Clair St., Indianapolis, Ind.

Standard Molding Corp., Dayton, Ohio

Standard Piezo Co., Woolworth Bldg., Carlisle, Pa.

Standard Pressed Steel Co., Jenkintown, Pa.

Standard Prods. Co., 505 Boulevard Bldg., Detroit 2, Mich.

Standard Technical Devices, Inc., 129 Livingston St., Brooklyn 2, N. Y.

Standard Transformer Corp., 1500 N. Halsted St., Chicago, Ill.

Standard Varnish Works, 2600 Richmond Terr. Staten Island, N. Y.

Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.

Standard X-Ray Co., 1932 N. Burling St., Chicago 14, Ill.

Stanley Works, New Britain, Conn.

Stanwyck Winding Co., 102 S. Lander St., Newburgh, N. Y.

Star Elect. Motor Co., 200 Bloomfield Ave., Bloomfield, N. J.

Star Expansion Products Co., 147-149 Cedar St., New York 6, N. Y.

Stark Sound Engrg. Corp., P. O. 493, Ft. Wayne 1, Ind.

Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.

States Co., 19 New Park Ave., Hartford 6, Conn.

Statham Laboratories, 8222 Beverly Blvd., Los Angeles 36, Cal.

Sta-Warm Electric Co., Ravenna, Ohio

Stedman, Robert L., E. Main Street, Oyster Bay, New York

Steel, Herman D., Co., Lafayette Bldg., Philadelphia 6, Pa.

Steger Furniture Mfg. Co., Steger, Ill.

Stellar Mfg. Co., 1312 McGee St., Kansas City 6, Mo.

Stephens Mfg. Co., 10416 National Blvd., Los Angeles 34, Calif.

Sterling Bolt Co., 209 W. Jackson Blvd., Chicago 6, Ill.

Sterling Mfg. Co., 9205 Detroit Ave., Cleveland, Ohio

Stevens Arnold Co., 22 Elkins Street So. Boston, Mass.

Stevenson Bro. & Co., 110 Race Street, Phila. 6, Pa.

Stevens Paper Mills, Inc., Windsor, Conn.

Stevens-Walden Inc., 468 Shrewsbury St., Worcester, Mass.

Steward Mfg. Co., D. M. E., 36th St., Chattanooga, Tenn.

Stewart Mfg. Corp., F. W., 4311 Ravenswood Ave., Chicago 13, Ill.

Stewart Warner Corp., 1826 Diversey Parkway, Chicago, Ill.

Sticht Co., Inc., Herman H., 27 Park Pl., New York 7, N. Y.

Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.

Stockwell Transformer Co., 295 N. State St., Concord, N. H.

Stoddart Aircraft Radio Co., 6644 Santa Monica Blvd., Hollywood 38, Calif.

Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Phila. 20, Pa.

Stover Lock Nut & Machinery Corp., 101 Park Avenue, New York 17, N. Y.

Stromberg-Carlson Co., Rochester, N. Y.

Struthers-Dunn, Inc., 1321 Arch St., Phila. 7, Pa.

Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.

Sturges Battery Co., Inc., 260 W. Broadway, New York, N. Y.

Submarine Signal Co., 160 State, Boston, Mass.

Summerill Tubing Co., Montgomery Co., Bridgeport, Pa.

Sundt Engineering Co., 4757 Ravenswood Ave., Chicago, Ill.

Sun Mfg. Co., 6323 Avondale Ave., Chicago 31, Illinois

Super Electric Prods. Corp., 1057 Summit Ave., Jersey City, N. J.

Superior Carbon Products Inc., 9112 George Ave., Cleveland, Ohio

Superior Electric Co., 1901 Indiana Avenue, Chicago 16, Ill.

Super Electric Prods. Corp., 1057 Summit Ave., Jersey City, N. J.

Superior Electric Co., 83 Laurel St., Bristol, Conn.

Superior Flake Graphite Co., 33 S. Clark St., Chicago 3, Ill.

Superior Flux Co., 913 Public Square Bldg., Cleveland 13, Ohio

Superior Instruments Co., 227 Fulton St., New York 7, N. Y.

Superior Tube Co., Norristown, Penna.

Supreme Instruments Corp., Greenwood, Miss.

Suprenant Electrical Insulation Co., 84 Purchase St., Boston 10, Mass.

Swain Nelson Co., 2320 Glenview Rd., Glenview, Ill.

Swanson Tool & Machine Prods., 810-14 E. 8th St., Erie, Pa.

Swedish Iron & Steel Corp., 17 Battery Pl., New York, N. Y.

Swiss Jewel Co., Lafayette Bldg., Philadelphia, Pa.

Sylvania Electric Products, Inc., 500 5th Ave., New York 18, N. Y.

Sylvania Industrial Corp., 122 E. 42nd St., New York, N. Y.

Sylvan Plastics Inc., 122 E. 42nd St., New York, N. Y.

Synthane Corp., Oaks, Pa.

Synvar Corp., 415 E. Front St., Wilmington, Delaware

Syracuse Ornamental Co., 581 S. Clinton St., Syracuse, N. Y.

Tac Industries, 16 W. 36th St., New York, N. Y.

Tagliabue Division, C. J., Portable Prod. Corp., 550 Park Ave., Brooklyn 5, N. Y.

Takk Corporation, Newark, Ohio

Talk-A-Phone Mfg. Co., 1512 S. Pulaski Rd., Chicago 23, Ill.

Tar Heel Mica Co., Plumtree, N. C.

Task Electronics Co., 245 W. 54th Street, New York, N. Y.

Taylor Fibre Co., Norristown, Pa.

Taylor Mfg. Co., 3078 W. Meisnecke Ave., Milwaukee 10, Wis.

Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.

Taylor-Wharton Iron & Steel Co., Highbridge, N. J.

Taylor-Winfield Corp., 1052 Mahoning Avenue, N. W. Warren, Ohio

Tech-Art Plastics Co., 41-01 36th Ave., Long Island City, N. Y.

Tech Laboratories, 7 Lincoln Street, Jersey City, N. J.

Tech-Master Products Co., 123 Prince St., New York, N. Y.

Technical Appliance Corp., 41-06 DeLong Street, Flushing, N. Y.

Technical Devices Corp., Beaufort & Eagle Rock Ave., Roseland, N. J.

Technical Plastics Co., 618 Clyde St., Pittsburgh 13, Pa.

Technical Radio Co., 275 Ninth Street San Francisco 3, Calif.

Techno-Craft Products, 200 Hudson St., New York 13, N. Y.

Technographics, Inc., 1457 West Diversity Blvd., Chicago 14, Ill.

Technology Instruments Corp., 1058 Main Street, Waltham, Mass.

Techno-Scientific Co., 901 Nepperhan Ave., Yonkers 3, N. Y.

Teckna Co., 223-01 Northern Blvd., Bay-side, Long Island, N. Y.

Telectron Inc., Homer Ave., Ashland, Mass.

Telecon Condenser Co., 3757 W. Chicago 47, Ill.

Telegraph Apparatus Co., 325 W. Huron St., Chicago, Ill.

Telemotor Corp., 260 Fifth Ave., New York, N. Y.

Telectric Co., 1241 Mound Ave., Racine, Wis.

Telephonics Corp., 350 W. 31st St., New York, N. Y.

Telegrip Radio Co., 1901 S. Washtenaw, Chicago, Ill.

Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

Teletone Radio Co., 609 W. 51st Street, New York 19, N. Y.

Televisto Products Inc., 6533 N. Olmstead Avenue, Chicago, Ill.

Telex Products Co., Telex Park, Minneapolis 1, Minn.

Telicon Corp., 851 Madison Ave., New York 21, N. Y.

Templetone Radio Mfg. Corp., New London, Conn.

Tennessee Eastman Corp., Div. Eastman Kodak Co., Kingsport, Tenn.

Tenney Engineering Inc., 24-28 Avenue B., Newark, N. J.

Terma Electric Co., 20 W 22nd Street, New York, N. Y.

Thermador Electric Mfg. Co., 5119 S. Riverside Drive, Los Angeles 22, Calif.

Thermionic Engineering Corp., 32 W. 12th Street, Bayonne, N. J.

Thomas & Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J.

Thomas & Skinner Steel Prod. Co., 1120 E. 23d St., Indianapolis, Ind.

Thompson Corp., Geo. S., 6240 Huntington Dr., Los Angeles 32, Calif.

Thompson-Bremer & Co., 1640 W. Hubbard St., Chicago, Ill.

Thordarson Elec Mfg. Div., Maguire Industries, Inc., 500 W. Horn St., Chicago 10, Ill.

Thwing-Albert Instrument Co., 5351 Pulaski Avenue, Phila. 44, Pa.

Tibbetts Industries, Camden, Maine

Times Telephoto Equipment Inc., 229 W. 43d St., New York, N. Y.

Timing Instrument Co., Inc., 106 Spring St., New York 12, N. Y.

Tinnerman Products Inc., 2106 Fulton Rd., Cleveland 13, Ohio

Titan Metal Mfg. Co., Bellefonte, Pa.

Titeflex, Inc., 500 Frelinghuysen Avenue, Newark 5, N. J.

Ton-Tex Corp., 245 Pearl St., N. W. Grand Rapids 2, Mich.

Torit Mfg. Co., 292 Walnut Street, St. Paul 2, Minn.

Tork Clock Co., 1 Grove St., Mt. Vernon, N. Y.

Tower and Antenna Div., Wind Turbine Co., West Chester, Pa.

Transelectric Mfg. Co., Oxford, Pa.

Transformer Products Inc., 143 W. 51st Street, New York, N. Y.

Transicoll Corp., 114 Worth Street, New York 13, N. Y.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York, N. Y.

Traveler Karenola Radio & Telev. Corp., 571 W. Jackson Blvd., Chicago 6, Ill.

Trefz Mfg. Co., 38-11 Main St., Flushing, N. Y.

Harold E. Trent Co., Leverington Ave. at Wilde St., Phila. 27, Pa.

Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.

Tricon Mfg. Co., 8318 S. Racine Ave., Chicago, Ill.

Trimm Inc., 1770 W. Berteau Ave., Chicago 13, Ill.

Trimount Instrument Co., 37 W. Van Buren, Chicago 5, Ill.

Trion Electric Corp., 76 Ellicott St., Buffalo 3, N. Y.

Triplett & Barton, Inc., Burbank, Calif.

Triplett Electrical Instrument Co., 286 Harmon Rd., Bluffton, Ohio

Triumph Mfg. Co., 913 W. Van Buren St., Chicago 7, Ill.

Tri-United Plastics Corp., 390 Nye Ave., Irvington, N. J.

Trotter & Co., E. T., 594 Johnson Ave., Brooklyn, N. Y.

Trumbull Elec. Mfg. Co., Plainville, Conn.

Truscon Steel Co., Youngstown, Ohio

Tubing Seal-Cap, Inc., P. O. Box 6450, Metropolitan Station, Los Angeles 55, Calif.

Tubular Rivet & Stud Co., Wollaston 70, Mass.

Tuck Mfg. Co., 74 Ames, Brockton 46, Mass.

Tudor Products Co., 70 Franklin Street, East Orange, N. J.

Tung Sol Lamp Works, Inc., 95 8th Ave., Newark, N. J.

Turner Co., 907-17th St., Cedar Rapids, Iowa.

Tyer Rubber Co., Andover, Mass.

Ucinite Co., The, Div. United-Carr Fastener Corp., 459 Watertown Street, Newtonville, Mass.

Ulanet Co., George, 88 E. Kinney St., Newark 5, N. J.

Uniform Tubes, Shurs Lane & Laruiston Sts., Roxborough, Phila. Pa.

Ungar Electric Tools, Inc., 615 Ducommun St., Los Angeles 54, Calif.

Union Carbide and Carbon Corp., Carbide and Carbon Bldg., 30 East 42nd Street, New York 17, N. Y.

Union Drawn Steel Div., Republic Steel Corp., Harsh Ave., S. E. Massillon, Ohio

Union Electrical Porcelain Works, Van St., Trenton 5, N. J.

United Condenser Corp., 422 E. 138th Street, New York 54, N. Y.

United Electric Controls Co., 71A Street, S. Boston 27, Mass.

United Electronics Co., 42 Spring Street, Newark 2, N. J.

United Radio Electronics Corp., 901 W. Jackson Blvd., Chicago, Ill.

United Radio Mfg. Co., 191 Greenwich Street, New York, N. Y.

United Screw & Bolt Corp., 2513 W. Cullerton Street, Chicago, Ill.

United States Blue Print Paper Co., 207 S. Wabash Ave., Chicago, Ill.

United States Electric Mfg. Corp., 222 W. 14th Street, New York 11, N. Y.

U. S. Electrical Motors, Inc., 200 E. Slauson Avenue, Los Angeles, Calif.

U. S. Expansion Bolt Co., York, Pa.

U. S. Gauge Co., Sellersville, Pa.

United States Graphite Co., 1621 Holland Ave., Saginaw, Mich.

U. S. Instrument, 19 South Harrison Street, East Orange, N. J.

U. S. Mica Mfg. Co., 1521 Circle Ave., Forest Park, Ill.

U. S. Radium Corp., 535 Pearl Street, New York 7, N. Y.

U. S. Rubber Co., 1230-6th Ave., New York, N. Y.

U. S. Screw Co., Keene, New Hampshire

U. S. Steel Corp., 71 Broadway, New York 6, N. Y.

U. S. Stoneware Co., Akron 9, Ohio

United States Television Mfg. Corp., 106-7th Ave., New York, N. Y.

U. S. Trunk Co., Inc., 951 Broadway, Fall River, Mass.

United Transformer Corp., 150 Varick St., New York 13, N. Y.

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Universal Drafting Machine Co., 1426 W. Third St., Cleveland 13, Ohio

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Universal Instrument Co., 306 E. McMillan St., Cincinnati 19, Ohio

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Universal Motor Co., 186 Harrison Street, Oshkosh, Wis.

Universal Winding Co., 1655 Elmwood Ave., Cranston 3, R. I.

Universal X-Ray Products, Inc., 1800 No. Francisco Ave., Chicago 47, Ill.

University Loudspeakers, Inc., 225 Varick Street, New York, N. Y.

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Utica Drop Forge & Tool Corp., 2415 Whitesboro St., Utica 4, N. Y.

Vacolite Co., 3001-3003 N. Henderson, Dallas, Texas

Vaco Products Co., 317 E. Ontario St., Chicago 11, Ill.

Valco Mfg. Co., 4700 W. Walton St., Chicago 51, Ill.

Valite Div., Valentine Sugars, Whitney Bldg., New Orleans 12, La.

Valpey Crystals, Highland St., Holliston, Mass.

Vangtronic Corp., The, 87 Washburn Street, Bridgeport, Conn.

Van Huffel Tube Corp., Warren, Ohio

Varflex Corp., N. Jay St., Rome, N. Y.

Vendo Co., 1907 Grand Ave., Kansas City 8, Mo.

Vibracloc Mfg. Co., 3597 Mission St., San Francisco, Calif.

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Vibrapower Co., James, 1551 Thomas St., Chicago 22, Ill.

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Victory Mfg. Co., 1722 W. Arcade Pl., Chicago 2, Ill.

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- Watertown Mfg. Co., Watertown, Conn.
- Watterson Radio Mfg. Co., P. O. Box 54, Dallas 1, Tex.
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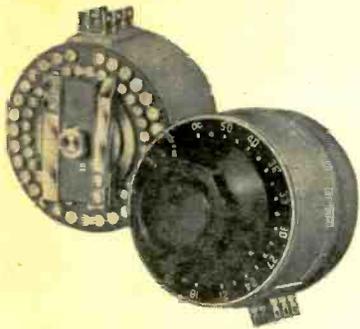
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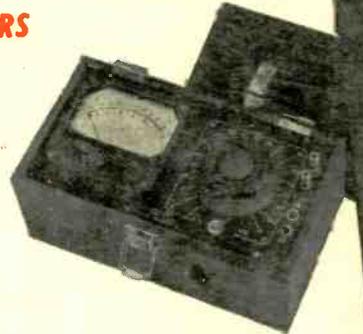
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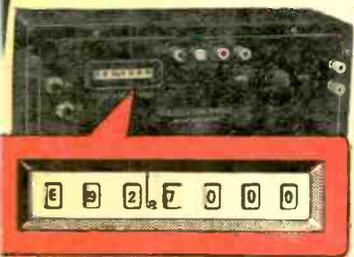
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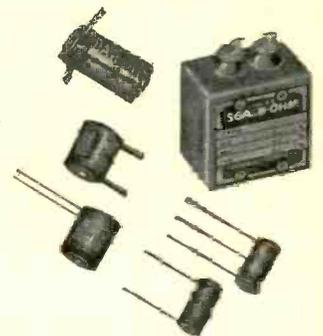
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