

# AMATEUR BULLETIN No. 934

GENERAL RADIO COMPANY, DEPT. H • CAMBRIDGE, MASSACHUSETTS

SINCE 1915 General Radio has manufactured laboratory equipment, frequency-measuring equipment, and components for the Navy, Army, Coast Guard and other Government services and for commercial and broadcast companies, educational institutions, laboratories, and other manufacturers. "General Radio" quality is known and recognized throughout the radio field.

The parts described in this bulletin are items used in the laboratory and measurement equipment we manufacture. Correctly designed, carefully manufactured and rigidly inspected, these units are particularly suited to use by the amateur who appreciates the value of well-built equipment—who is proud of the appearance as well as the performance of his station. General Radio apparatus may cost a little more, but it works a lot better, looks a lot better, and lasts a lot longer.



TYPE 502-503 DIALS

The indicator rides on the edge of the dial, eliminating false reading due to parallax. The vernier, or slow-motion, types have a simple and effective positive drive which does not slip or bind, runs smoothly, mounts in a single hole, and has the "feel" readily adjustable. Dials are complete with necessary hardware and drilling template. These dials are available in two diameters, with and without slow-motion drive, and for 1/4-inch and 3/8-inch shafts.

## GENERAL-PURPOSE DIALS

(Plain and Slow-Motion Drive)  
Types 310-317-502-503

These dials are used on many of our laboratory instruments and by many amateurs on receivers, transmitters, and frequency meters. Moderately priced, they are ideal for quality amateur equipment. Markings are etched in permanent black on a dull polished 1/2-inch nickel-silver plate. The indi-

Type	Dial		Divisions	Shaft Diameter	Slow Motion Ratio	Price
	Diameter	Arc				
502-A	2 3/4 in	180°	100	1/4 in	1 : 3.3	\$1.50
310-A	2 3/4 in	180°	100	3/8 in	Direct Drive	0.80
502-F	2 3/4 in	180°	100	3/8 in	1 : 3.3	1.50
310-F	2 3/4 in	180°	100	3/8 in	Direct Drive	0.80
502-G	2 3/4 in	270°	100	3/8 in	1 : 3.3	0.80
310-G	2 3/4 in	270°	100	3/8 in	Direct Drive	1.50
503-A	4 in	180°	100	1/4 in	1 : 5	2.00
317-A	4 in	180°	100	3/4 in	Direct Drive	1.50
503-F	4 in	180°	100	3/8 in	1 : 5	2.00
317-F	4 in	180°	100	3/8 in	Direct Drive	1.50
503-G	4 in	270°	200	3/8 in	1 : 5	2.00
317-G	4 in	270°	200	3/8 in	Direct Drive	1.50
317-B	4 in	270°	200	1/4 in	Direct Drive	1.50

Slow-motion drive licensed under U. S. Patents 1,713,146 and 1,744,675

## TYPE 674 (JUMBO SIZE) PLUGS AND JACKS



674-D 674-J 674-P 674-C

### TYPE 674 JUMBO PLUGS AND JACKS

These are for use where heavy currents are encountered. They are particularly useful in the construction of plug-in transmitter coils (see Type 627 Jack-top Insulator). Type 674-C has a hexagonal shank, thoroughly tinned inside and partially filled with solder so that copper tubing up to 3/8 inch in diameter may be "sweated" in. These plugs and jacks will carry 50 amperes and are suitable for the highest power amateur transmitter.

Type	Price
674-P Single Plug (Threaded solid shank) . . . . .	\$0.35
674-C Single Plug (hollow tinned shank) . . . . .	0.20
674-D Single Insulated Plug with Jack Shank . . . . .	0.50
674-J Single Jack . . . . .	0.25

## PRECISION DIALS

Types 704-706

Where high precision is essential, in frequency-measuring devices particularly, the accuracy of the instrument with which it is used is directly related to the precision of the engraving of the tuning dial. These dials are machine-engraved on a special engine divider resulting in exceptionally high uniformity of markings. The slow motion is of the friction-drive type and operates so the scale turns in the same direction as the control knob. These dials are very simple to mount, requiring the drilling of only one extra hole in the panel. The friction drive is adjustable without removing the dial from the shaft. Each dial is supplied with indicator which rides on edge of dial, drilling template, and an adaptor for either 1/4-inch or 3/8-inch shaft.



TYPE 706-A PRECISION DIAL

Type	Dial		Divisions	Diameter of Knob	Slow Motion Ratio	Price
	Diameter	Arc				
704-A	4 in	180°	200	1 1/2 in	1 : 6	\$7.50
704-B	4 in	270°	300	1 1/2 in	1 : 6	7.50
706-A	6 in	180°	300	2 in	1 : 8	8.00
706-B	6 in	270°	450	2 in	1 : 8	8.00

See Page 6 for description of Dial Lens

## TYPE 274 PLUGS AND JACKS (Standard Size)



274-P 274-E 274-D 274-J 274-M

### TYPE 274 PLUGS AND JACKS

For many years these have been used extensively by amateurs as plug-in terminals on all types of equipment. The double plug, Type 274-M, has a spacing of 3/4 inch between terminals. This spacing is standard on all General Radio equipment. This unit has two jacks moulded in the top so that these multiple plugs may be "stacked" for parallel connections.

Type	Price
274-P Single Plug, No. 6—32 Shank . . . . .	\$0.06
274-E Single Plug with Jack Shank . . . . .	0.20
274-D Single Insulated Plug with Jack Shank . . . . .	0.25
274-M Insulated Double Plug with Jack Shanks . . . . .	0.40
274-J Single Jack . . . . .	0.05

See Page 7 for Order Blank

## Rheostats and Potentiometers

A LARGE number of wire-wound rheostats and potentiometers for general use are manufactured by General Radio. The units described below are selected as being most suited to amateur requirements. These models are ruggedly constructed, readily used either for panel or breadboard mounting. The wire is wound on thin bakelite cards mounted on heavy moulded bakelite forms. Phosphor-bronze contact arms are used. The bearings are exceptionally long and spring washers are used to insure smooth running. All units except the low resistance Type 301 models can be used either as rheostats or potentiometers. Each unit is supplied with drilling template, mounting screws, terminal nuts and a knob.



TYPE 301-A

### TYPE 301-A

Small ( $1\frac{1}{16}$  inch over-all radius) depth,  $1\frac{1}{8}$  inches, power rating of 6 watts, two-hole panel or baseboard mounting, supplied with Type 137-J Knob,  $\frac{1}{4}$  inch shaft—200-ohm unit is a potentiometer which can be used as a rheostat for tube filaments, bias resistor, etc. When ordering, be sure to specify resistance desired.

Type	Resistance	Maximum Current	Price
301-A	6 ohms	1 a	\$1.00
301-A	12 ohms	0.7 a	1.00
301-A	25 ohms	0.5 a	1.00
*301-A	200 ohms	175 ma	1.00
*301-A	†10,000 ohms	17 ma	1.25

\*Potentiometer

† Has bakelite protecting strip like Type 471-A. Power rating, 3 watts.



TYPE 410-A

### TYPE 410-A

These units are identical with the Type 301-A, except that they are arranged for single hole mounting, a  $\frac{3}{8}$  inch, outside diameter, bushing being moulded in the frame. These are supplied with a black bakelite knob and pointer moulded in one piece.

Type	Resistance	Maximum Current	Price
410-A	6 ohms	1 a	\$1.00
410-A	12 ohms	0.7 a	1.00
410-A	25 ohms	0.5 a	1.00
*410-A	200 ohms	175 ma	1.00

\*Potentiometer.



TYPE 371-A

### TYPE 371-A

These potentiometers are used as volume or gain controls, regeneration controls, biasing resistors, etc. They have an over-all radius of  $1\frac{1}{16}$  inches, depth,  $2\frac{3}{8}$  inches,  $\frac{1}{4}$ -inch shaft, are for three-hole panel or baseboard mounting and are supplied with mounting screws, terminal nuts, drilling template, and Type 537-C Knobs. Shaft diameter,  $\frac{1}{8}$  inch. The resistance wire is specially treated to prevent loosening. They are very ruggedly constructed and operate exceptionally smoothly. They are all rated at 25 watts except the tapered Type 371-T which will dissipate 15

watts. This unit has a tapered winding form which gives an approximate square-law variation of resistance with angle of setting. This unit is especially suited to regeneration and volume-control use. When ordering, specify resistance desired.

Type	Resistance	Maximum Current	Price
371-A	1 ohm	5 a	\$4.00
371-A	5 ohms	2.2 a	4.00
371-A	1,000 ohms	150 ma	4.00
371-A	2,500 ohms	100 ma	4.00
371-A	5,000 ohms	70 ma	4.00
371-A	10,000 ohms	50 ma	4.00
371-A	18,000 ohms	37 ma	4.00
371-A	50,000 ohms	22 ma	4.00
*371-T	10,000 ohms	40 ma	5.00

\*Tapered winding



TYPE 314-A

### TYPE 314-A

These units are similar to the Type 471-A Potentiometer, but have narrower winding forms and lower current carrying capacities. They are equipped with the four-finger contact and bakelite shaft as used in the Type 471-A units. They are rated at 6 watts, are supplied with Type 537-K Knob, machine screws, nuts and drilling template. Dimensions:—overall radius  $1\frac{3}{8}$  inches; depth behind panel,  $1\frac{1}{2}$  inches; shaft diameter,  $\frac{3}{8}$  inch.

Type	Resistance	Maximum Current	Price
314-A	200 ohms	165 ma	\$4.00
314-A	600 ohms	95 ma	4.00
314-A	2,000 ohms	52 ma	4.00
314-A	6,000 ohms	30 ma	4.00
314-A	20,000 ohms	16 ma	4.00



TYPE 471-A

### TYPE 471-A

These units have a wide, quadruple contact, wiping the inside surface of the wire. To protect the resistance wire, a bakelite strip surrounds the resistance card. These units are rated at 12 watts, are supplied for three-hole panel and baseboard mounting, have insulated shafts to prevent hum pickup from the operator's hand, and are supplied complete with Type 537-K Knob, machine screws, nuts, and drilling template. The overall radius of each unit is  $1\frac{1}{16}$  inches; depth behind panel  $2\frac{3}{8}$  inches; shaft  $\frac{3}{8}$  inch diameter.

Type	Resistance	Maximum Current	Price
471-A	100 ohms	.35 a	\$6.00
471-A	1,000 ohms	110 ma	6.00
471-A	10,000 ohms	35 ma	6.00
471-A	50,000 ohms	14.7 ma	6.00
471-A	100,000 ohms	10.4 ma	6.00
471-A	200,000 ohms	7.3 ma	6.00



TYPE 214-A

### TYPE 214-A

This unit is similar in construction to the Type 371-A, except that the winding form is narrower and the maximum power dissipation is smaller. The power rating is 12 watts, over-all radius,  $1\frac{3}{8}$  inches, and depth,  $1\frac{1}{2}$  inches. The knob supplied is the Type 137-D. Furnished complete with machine screws, nuts, and drilling template.

Type	Resistance	Maximum Current	Price
214-A	0.75 ohm	4 a	\$1.50
214-A	2 ohms	2.5 a	1.50
214-A	7 ohms	1.3 a	1.50
214-A	20 ohms	0.75 a	1.50
214-A	50 ohms	0.50 a	1.50
214-A	100 ohms	0.35 a	1.50
214-A	200 ohms	0.25 a	1.50
214-A	400 ohms	175 ma	1.50
214-A	1,000 ohms	110 ma	1.50
214-A	2,500 ohms	70 ma	1.50

### TYPE 333-533

These units are used where heavy-duty rheostats or potentiometers are required. They are especially useful as filament rheostats in transmitting tube circuits or as filament or plate transformer primary resistors. Both units can be mounted either behind the panel or on the table top, and each is fitted with three binding-post terminals for rheostat or potentiometer connections. The resistance wire is wound on an asbestos-covered aluminum form for maximum heat radiation. Contact arms are designed for exceptionally low contact resistance, eliminating overheating at the contact between arm and wire.



TYPE 333

The Type 333-A units have a power rating of 100 watts, overall radius of  $1\frac{1}{16}$  inches, depth of  $2\frac{3}{8}$  inches, and are supplied with terminal binding posts, drilling template, mounting screws, and a Type 537-C Knob.

The Type 533-A units are rated at 250 watts, are  $5\frac{1}{8}$  inches in diameter,  $3\frac{1}{2}$  inches high, have a  $\frac{3}{8}$  inch steel shaft and are supplied with terminal binding posts, drilling template, mounting screws and a Type 537-L Knob  $2\frac{3}{8}$  inches in diameter.



TYPE 533

Type	Resistance	Maximum Current	Price
333-A	1 ohm	10.0 a	\$4.00
333-A	3 ohms	5.8 a	4.00
333-A	10 ohms	3.2 a	4.00
333-A	30 ohms	1.9 a	4.00
333-A	100 ohms	1.0 a	4.00
333-A	300 ohms	0.6 a	4.00
333-A	600 ohms	0.4 a	4.00
533-A	1 ohm	15.8 a	6.00
533-A	3 ohms	9.1 a	6.00
533-A	10 ohms	5.0 a	6.00
533-A	30 ohms	2.9 a	6.00
533-A	100 ohms	1.6 a	6.00
533-A	300 ohms	0.9 a	6.00
533-A	600 ohms	0.6 a	6.00

**DIAL PLATES**

To avoid the necessity of engraving the panel where the position of rheostat or potentiometer pointer should be known for re-set purposes, these dial plates are used. These are handsomely photo-etched with raised nickel-silver markings on a flat black background. The machine screws which hold the rheostat or potentiometer on the panel, hold the dial plates in position.



523-A

318-A  
DIAL PLATES

522-A

Type	For Use with Rheostat Type No.	Price
523-A	371, 314, 471	\$0.35
318-A	214-A	0.35
522-A	410-A, 301-A	0.35

**TYPE 537 KNOBS**

These knobs are used on all of our laboratory instruments as well as components. They comprise a uniform series whereby the amateur may fit them to his apparatus to preserve the "commercial" appearance of his station. They are handsomely moulded from black bakelite with metal inserts to carry 1/4 inch or 3/8 inch shafts. The pointer is of dull finished insulating material so that the entire knob is electrically dead. If not required, the pointers may be removed readily.



D-L

C-K

B-J

A

TYPE 537 KNOBS

Type	Diameter	Shaft	Price
537-A	1 1/8 in	3/4 in	\$0.20
537-B	1 1/2 in	3/4 in	0.30
537-J	1 1/2 in	3/8 in	0.30
537-C	2 in	3/4 in	0.40
537-K	2 in	3/8 in	0.40
537-D	2 5/8 in	3/4 in	0.50
537-L	2 5/8 in	3/8 in	0.50

**SWITCH STOPS**

This switch stop is made of nickel-plated brass, is 1/8 inch in diameter, 3/8 inch long, can be used on any panel to 5/16 inch thick and has a 6-32 thread. Nut is supplied.



138-Q  
STOP

Type	Price
138-Q	\$0.04

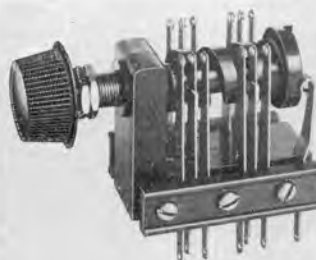
**PANEL TERMINAL INSULATORS**

For insulating binding posts from metal panels, these terminals are very useful. They mount two Type 138-VD Binding Posts with the standard 3/4-inch spacing, and are very easy to assemble. Two holes 1/2 inch in diameter on 3/4 inch centers are drilled through the panel and one panel insulator is placed on each side. The binding posts clamp the insulators securely. They are made in both regular black and low-loss yellow bakelite.



Type	Price
274-Y	\$0.16 per pair
274-Z	0.24 per pair

274-Y INSULATORS  
138-VD POSTS



**TYPE 339 SWITCH**

This switch is useful in many high-frequency circuits in which the capacitance must be kept low. It consists of a moulded bakelite bracket which carries the bushing for the switch shaft. The switch arms are moved by a quarter turn of the worm. The fixed arms of the switch may be bent to close one set of contacts continuously so that a wide variety of circuit combinations may be secured. Mounting is single hole. Panel thickness to 3/8 inch may be used. These switches are insulated for 250 volts and contacts will safely break 2 amperes.

TYPE 339-A SWITCH

Type	Description	Price
339-A	4-pole, Double Throw	\$2.50
339-B	2-pole, Double Throw	2.00



**TYPE 202 SWITCH**

This switch has four phosphor-bronze blades which make a wiping contact with the bushing as well as with the switch contacts. Types 138-B or 138-C Switch Contacts are recommended for use with this switch. The knob is of moulded bakelite. The radius is 1 3/8 inches.

Type	Panel Thickness	Price
202-A	1/8 to 1/4 inch	\$0.75
202-B	1/4 to 3/8 inch	0.75

TYPE 202 SWITCH



**TYPE 202 SWITCH KNOB**

This is the knob used on the Types 202-A and 202-B Switch. It has a nickel plated brass pointer with a 1 1/4 inch radius, and is available for either 1/4 or 3/8 inch shafts. A large setscrew holds the knob securely in place on the shaft. This knob is supplied as a companion unit to the Type 202 Switch so that amateurs may have uniform appearance in their equipment.

Type	Shaft	Price
202-Y	3/8 in	\$0.40
202-Z	1/4 in	0.40

**SWITCH CONTACTS**

These contacts are of heavily nickel-plated bronze, suitable for use with our Type 202 Switches. The shanks are fluted so that the contacts may be forced in to the insulating material and will not loosen. Complete with nuts.



138-C 138-B 138-D

SWITCH CONTACTS

Type	Diameter	Height	Thread	Price
138-B	1/4 in	0.190 in	6-32	\$0.04
138-C	5/16 in	0.190 in	6-32	0.04
138-D	3/8 in	0.195 in	All fluted shank	0.03

**TYPE 738-A INSERT TERMINAL**

A very useful new terminal for use where limited space is available. The body is fluted, the tip being tinned for soldering. The top is threaded for a 6 x 32 machine screw under which any type of soldering lug may be attached. The insert is mounted by drilling a 0.187 inch (No. 10 drill) hole into the insulation, and driving the unit in. Will not work loose. Can be used on all panels up to 3/8 inch thick. Over-all height, less screw, is 1/8 inch.



738-A  
TERMINAL

Type 738-A.....\$0.04



**BINDING POSTS**

These are used on all of our laboratory equipment. They are of solid brass heavily nickel-plated. The Types 138-X, 138-V and 138-VD posts have jack tops to take any of the Type 274 Plugs, the tops being removable as well. When mounted with 3/4-inch spacing, these three posts can be used with our Type 274-M double plug for battery, antenna, feeder, telephone cord, and many other interchangeable connections.



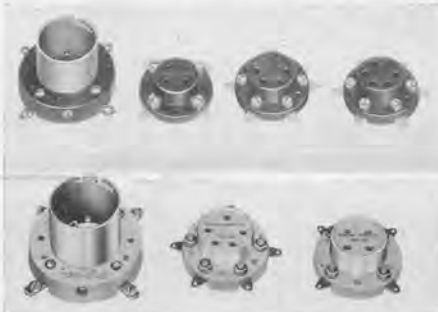
138-X      138-V      138-Y      138-Z

**BINDING POSTS**

Type	Diameter	Length	Max. Panel Thickness	Thread	Price
138-V	3/8 in	1 1/16 in	3/8 in	10-32	\$0.20
138-VD*	3/8 in	1 1/16 in	3/4 in	10-32	0.20
138-X	3/8 in	1 1/16 in	3/8 in	10-32	0.20
138-Y	3/8 in	3/4 in	3/4 in	10-32	0.14
138-Z	3/8 in	3/8 in	3/4 in	6-32	0.07

\*Used with Type 274 Panel Terminal Insulators (see page 3)

**VACUUM-TUBE SOCKETS**



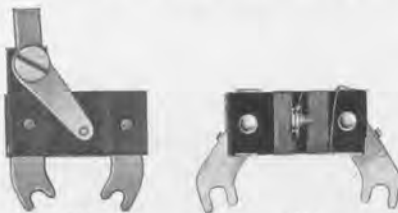
156      656      349      438      444  
658

**TUBE SOCKETS**

These sockets are designed for long and hard usage. Contact springs are tempered, make firm connection with tube prongs and will last indefinitely. Connection to the sockets are made either by screw terminals or large size soldering lugs. Sockets are stocked with bakelite and glazed isolantite bases. The bakelite bases are used for most work, but where high-frequency losses must be kept low and the highest surface resistivity is required, isolantite bases are recommended.

Type	Base Material	Type of Tube	Diameter	Price
156	Bakelite	UV, UX, West. Elec. E tube	2 7/16 in	\$0.75
349	Bakelite	UX—Small 4-prong	1 7/8 in	0.35
438	Bakelite	UY—Small 5-prong	1 7/8 in	0.35
444	Bakelite	Small 6-prong	1 7/8 in	0.50
656	Isolantite	UV-UX West. Elec. E tube	2 7/16 in	1.50
657	Isolantite	UX—4-prong	1 7/8 in	1.50
658	Isolantite	UY—5-prong	1 7/8 in	1.50

**TYPES 437 AND 439 CENTER-TAP RESISTORS**



437      439  
CENTER-TAP RESISTORS

In transmitters and a.c. operated receivers these units are designed to offer a convenient means of connecting to the mid-potential point of the filament circuit. The center-tap of the Type 437 Unit is adjustable, allowing the electrical center to be found easily.

Type	Center-Tap	Total Resistance	Maximum Current	Price
437	Adjustable	60 ohms	200 ma	\$0.50
439	Fixed	60 ohms	200 ma	0.35

**Variable Air Condensers**

GENERAL Radio manufactures a number of variable air condensers for laboratory, commercial, experimental and amateur use. The following units are used in large quantities by many amateurs and experimenters. (Manufactured under U.S. Patents, 1542995, 125-8423, and 1525778.)

**TYPE 568 HIGH FREQUENCY CONDENSER**



TYPE 568

This condenser is popularly used by amateurs in receivers, transmitters, and frequency meters. It is small, of rugged construction, and is designed for ganging, a hollow shaft permitting the use of a single bakelite or metal shaft 3/8-inch diameter for driving several units. Isolantite end-plates, heavy soldered brass rotor and stator plates and low-resistance rotor contactors contribute to the low losses of this condenser. Available in two capacitance ranges, 175µf, and 50 µf, maximum. Type 568-D, straight-line capacitance, 180° rotation; Type 568-K, straight-line frequency, 270° rotation. Condensers mounted by three tapped inserts attached to one end-plate. Dimensions: Panel space, 2 3/4 x 2 5/8 inches. Depth behind panel, 2 3/8 inches. Drilling template, mounting screws and bakelite shaft supplied with each condenser.

Type	Capacitance		Price
	Maximum	Minimum	
568-D	175µf	12µf	\$4.00
568-K	50µf	12µf	4.00

**TYPE 368 CONDENSER**



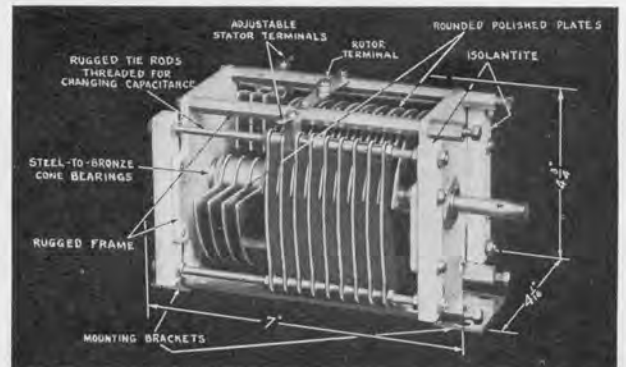
TYPE 368

Used as a neutralizing, vernier or tuning capacitance in receivers and low power transmitters. It has a single hard-rubber end-plate, single bearing, and can be used for either baseboard bracket or panel single-hole mounting. Plate shapes are straight-line capacitance. A knob is supplied with each condenser. Losses are very low due to very small amount of solid dielectric in field. Available in 15 µf, 50 µf, and 100 µf maximum capacitances. Dimensions: panel space, 2 inches diameter; depth, 2 1/4 inches.

Type	Capacitance		Price
	Maximum	Minimum	
368-A	15 µf	4 µf	\$0.75
368-B	50 µf	4 µf	1.00
368-C	100 µf	4 µf	1.75

**TYPE 639-A DOUBLE-SECTION HIGH-VOLTAGE CONDENSER**

This condenser is of very rigid construction, 3/16-inch aluminum end-plates, large hexagonal tie-rods and self-aligning conical bearings being used. Plates are of 1/16-inch aluminum, all edges being rounded to reduce corona losses. Isolantite insulation used. Capacitances per section are readily adjustable from 25 to 305 µf, or the condenser may be used as a single-section model with a maximum capacitance of 330 µf. Plate spacing is 0.098 inch, voltage rating being conservatively given as 3500 d.c. Dimensions: panel space, 4 1/16 x 4 3/8 inches; depth, 7 inches. A low-loss precision condenser for high-power transmitters. Complete with 4 panel mounting screws and 2 baseboard brackets.

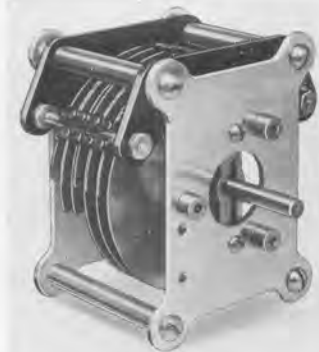


TYPE 639-A HIGH VOLTAGE CONDENSER

Type	Capacitance		Price
	Max. Adjustable	Minimum	
639-A	25 to 305 µf	25 µf	\$15.00

**TYPE 556 BAND-SPREAD CONDENSER**

This condenser is used in amateur receivers, frequency meters and transmitters to provide maximum band spread. It consists of an adjustable minimum capacitance in parallel to a continuously variable one. Three of the five rotor plates are complete circles, the position of one being adjustable along the shaft, to give any desired spread. The other rotor plates are of approximate straight-line frequency shape. Hard rubber insulation and aluminum end-plates are used. The breakdown voltage is 3500, peak. Supplied with mounting screws and drilling template. Dimensions: panel space, 3 3/4 x 3 3/4 inches; depth, 2 1/2 inches.



TYPE 556 BAND SPREAD CONDENSER

Type	Capacitance		Price
	Max.	Min.	
556	81 μμf	53 μμf	\$3.50

**TYPE 756-A DOUBLE-SECTION BAND-SPREAD CONDENSER**

This condenser is for use in Colpitts circuits or in oscillators or receivers requiring two ganged band spread variable capacitances. Its construction is similar to the Type 556 Condenser, except that in effect two condensers are assembled in one frame. In multi-tube high-frequency circuits the circular rotor plates effectively shield the two sections. This condenser is used in the Type 535-A Frequency Meter. Dimensions: panel space, 3 3/4 x 3 3/4 inches; depth, 5 inches.

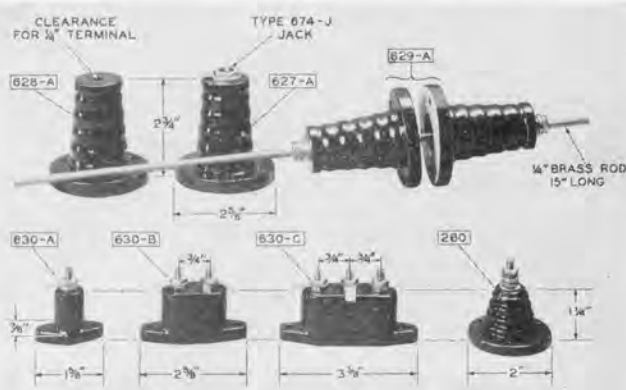


756-A CONDENSER

Type	Capacitance per Section		Price
	Maximum	Minimum	
756-A	225 μμf	140 μμf	\$6.00

**PORCELAIN INSULATORS**

These find a wide variety of uses in the amateur station. Each is made of the best grade of glazed porcelain, selected for great mechanical strength and minimum moisture absorption. The Type 627-A supplied with the Type 674-J (Jumbo) Jack is used to support plug-in copper tube transmitting inductances. The Type 629-A lead-in assembly is suitable for the highest power amateur station. The other insulators fill many needs where high voltage wiring or equipment are to be supported safely and with the minimum loss. Supplied with mounting screws and lead washers.



**PORCELAIN STAND-OFF AND LEAD-IN INSULATORS**

Type	Description	Price
628-A	Stand-off Insulator	\$0.30
627-A	Jack-top Insulator (with Jack)	0.60
629-A	Lead-in Assembly	0.90
630-A	Single-terminal Stand-off Insulator	0.10
630-B	Double-terminal Stand-off Insulator	0.20
630-C	Triple-terminal Stand-off Insulator	0.25
260	Wall Insulator	0.20

**TYPE 334 LOW- AND HIGH-VOLTAGE CONDENSERS**



TYPE 334-F

These are inexpensive condensers finding wide application for experimental and amateur purposes. Brass plates, soldered to make a rugged and low-resistance unit, are used. Losses are kept low by the use of a very small amount of properly placed high grade hard rubber. End-plates are of heavy aluminum. Rotor plates are approximately straight-line wave-length. Bearings are of the spring type with adequate surface. The low-voltage models, having a rating of 500 volts, are used in low-power transmitters as well as receivers. The high-voltage units are rated at 3500 volts, peak. Four removable mounting feet are supplied. Three tapped inserts are used for panel mounting. All condensers occupy a panel space approximately 4 1/2 inches in diameter.

Type	Capacitance		Model	Depth	Price
	Maximum	Minimum			
334-F	500 μμf	20 μμf	Low-Voltage	3 1/2 in	\$3.25
334-N	350 μμf	20 μμf	Low-Voltage	3 1/2 in	3.00
334-K	250 μμf	15 μμf	Low-Voltage	2 3/4 in	2.75
334-Z	500 μμf	35 μμf	High-Voltage	10 1/2 in	10.00
334-R	250 μμf	30 μμf	High-Voltage	6 1/2 in	5.50
334-T	100 μμf	15 μμf	High-Voltage	3 1/4 in	2.75
334-V	50 μμf	10 μμf	High-Voltage	2 3/4 in	2.50

**TYPE 535-A FREQUENCY METER-MONITOR**



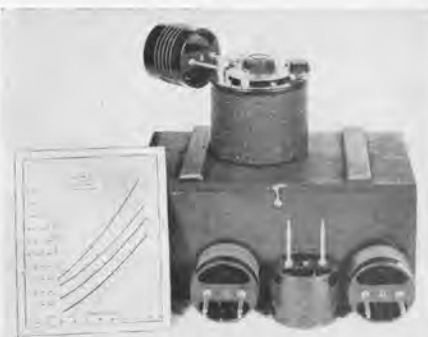
For the accurate determination of frequency in the amateur bands a heterodyne frequency meter is essential. To adjust and operate a transmitter properly a monitor is necessary. The General Radio instrument combines both functions. To insure maximum stability, the oscillator circuit is the Colpitts, electron coupled. A voltage dividing system is incorporated in the instrument to prevent frequency change due to variations in battery supply voltage.

The fundamental frequency is 1700 to 2000 kc. Useful harmonics in all the amateur bands to 56 Mc. are readily available. Our precision Type 706-A 6-inch dial and magnifying lens are used to allow settings to 1 part in 1500 to be made. The mechanical construction is the same as used in our high-priced precision laboratory instruments. The meter is calibrated at 13 points in the 1700-2000 band from our primary standard of frequency. Settings for all the other bands are given on the calibration chart. A dozen calibration curve sheets, allowing a curve 14 inches long, and a dozen extra chart sheets are furnished with each instrument, together with the tube used to calibrate the meter, and complete operating instructions.

Type 535-A Frequency Meter-Monitor.....\$42.50

Licensed by Wired Radio, Inc., under pending patent applications of J. B. Dow

**TYPE 358 WAVEMETER**



TYPE 358 WAVEMETER

To identify harmonics of a heterodyne-frequency meter, measure coil ranges of transmitters, receivers or oscillators, find parasitic high-frequency oscillators and to carry out the many routine frequency measurements in the amateur station or experimental laboratory, a simple absorption type wavemeter saves much time and labor and is constantly useful. The Type 358 Wavemeter is particularly suitable. It is compact, can be held in one hand, coupled to any circuit, rugged, calibration accurate to 1%, and it is inexpensive. It is calibrated continuously from 15 to 220 meters and is supplied complete with carrying case, four coils, mounted calibration chart and flashlight bulb resonance indicator in special socket which short-circuits when bulb is removed.

Type	(Frequency)	Wavelength	Price
358	20,000-1364 kc.	15-220 meters	\$15.00



TRANSMITTER COIL FORM ASSEMBLY . . \$2.00 COMPLETE

**TYPE 677 TRANSMITTER COIL FORM**

This form is used in oscillators and power amplifiers in low and medium power transmitters. It is of impregnated moulded porcelain having low losses, and moulded with six heavy ribs on which the coil is wound. The form is 2½ inches outside diameter, 4¾ inches long and has 21 V-cut threads occupying a winding space of 3 inches. Any size wire up to No. 10 B&S gauge may be used. Spacers and plug-jack bases are available so that the coils may be plugged in to the circuit. The bases are supplied with seven plugs and seven jacks, allowing any combination of standard circuit to be used. Grid and plate or plate and antenna coils may be wound on one form for the higher frequency bands.

Type	Description	Price
677-U	Coil Form	\$0.35
677-P1	Coil Form Spacer (2 Required)	0.30 per pair
678-P	Plug Base with 7 Type 274-P Plugs	0.70
678-J	Jack Base with 7 Type 274-J Jacks	0.65

**TYPE 274-NC SHIELDED CONDUCTOR**



**TYPE 274-NC SHIELDED CORD**

To interconnect units in the high frequency experimental laboratory, good shielding is often required for the leads to prevent audio- or radio-frequency pickup. The Type 274-NC Shielded Conductor consists of a central conductor made up of 41 strands of No. 34 tinned copper wire, twisted. This is covered with cotton and rubber insulation, over which is a tightly woven copper shield and black cotton insulation. Each end is terminated in a Type 274-M Plug. The cord is three feet long, has a capacitance of 100 μμf per foot and an impedance of about 30 ohms.

Type 274-NC . . . . . Price \$1.50

**TYPE 560-A CRYSTAL HOLDER**



TYPE 560-A CRYSTAL HOLDER

This holder is of the pressure type, designed for maximum output from amateur crystals. It has a dust and moisture proof moulded bakelite case, adjustable spring pressure on top plate to insure correct pressure on the crystal, and holds any amateur crystal up to 1½ inches square. The plates are of chromium plated brass, tarnish and corrosion proof. Three blank bakelite retention plates for holding the crystal are provided. The holder can be opened by loosening only two screws. Spacing between terminal plugs is General Radio Standard ¼ inch.

Type 560-A Crystal Holder . . . . . \$2.25



379  
R. F. CHOKES

**TYPE 379 RADIO-FREQUENCY CHOKES**

These chokes are available in two models, one of low inductance to carry a heavy current, and one of high inductance to carry a lower current. The windings are sectionalized and the effective capacity does not exceed 4μμf.

Type	Inductance	Current		Range	Resistance	Price
		Intermit.	Continuous			
379-T	8 mh	300 ma	140 ma	1500-15,000 kc	35 ohms	\$1.25
379-R	60 mh	90 ma	65 ma	400- 2,000 kc	140 ohms	1.25



738-M MOUNTING BRACKET

**TYPE 738-M BRACKET**

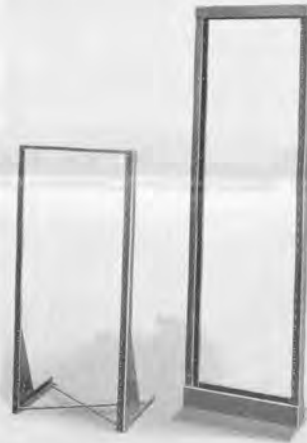
To mount coils, tubes, or other apparatus on the Type 334 low- and high-voltage condensers in order to secure a rigid assembly and short leads, this bracket is used. It fits the end-plate screws at either end of the condenser.

Type 738-M Bracket . . . . . \$0.12

**TYPE 480 RELAY RACK**

Amateurs more and more are recognizing the convenience of relay-rack mounting for transmitters, receivers, power supplies, frequency meters and experimental sets. The convenience of using standard sizes of panels and having all of the equipment mounted vertically rather than spread out over the table is considerable, and has long been standard practice in telephone and radio communication companies. These racks are of steel with welded joints. They are for standard 19-inch panels whose heights are integral multiples of 1¾ inches. Two sizes are available. The Type 480-B is suited to use on the operating or laboratory table and has mounting space for the equivalent of 25, 1¾ inch unit panels. This rack will accommodate a complete low power station. The Type 480-A rack is for floor mounting and has 36, 1¾ inch unit spaces. It provides sufficient space for high power equipment.

For most uses both racks are self-supporting, but provision is made for bolting them to the floor or table. Both racks are complete with standard drilling for 19-inch panels, panel screws, holes tapped for panel screws, protecting washers and bridle rings for cable wiring.



B A  
TYPE 480 RELAY RACKS

Type	Height	Width	Depth	Panel Space	Weight	Price
480-A	69½ in	20 in	3 in	63 in or 36 "Rack Units"	100 lbs	\$40.00
480-B	44 in	20 in	1½ in	43¾ in or 25 "Rack Units"	20 lbs	15.00

SEE ALSO TYPE 660-A UNIVERSAL RACK IN BULLETIN 935

**TYPE 519-A DIAL LENS**

When extreme accuracy in reading the settings of the Types 704 and 706 Dials is desired, this lens should be used. It is mounted in an adjustable holder over the dial indicator. It makes possible the reading of the Types 704 and 706 Dials to within at least 1-5th of a division. The arm can be swung out of the way when not in use.

Type 519-A Dial Lens . . . . . Price \$1.50

**DON'T OVERLOOK BULLETIN 935**

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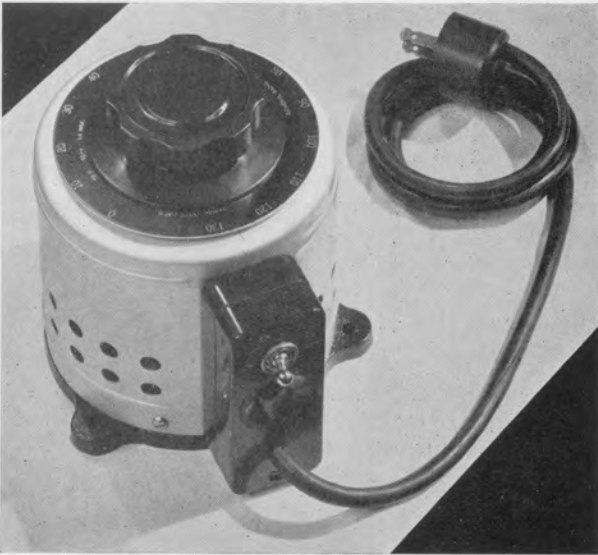
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**TYPE 200-C VARIAC**  
**(The Adjustable Transformer)**

The *Variac* is a power transformer whose voltage is continuously adjustable from 0 to 135 volts. Operates from the 115-volt, 60-cycle mains. Does all that a rheostat does with greater efficiency and better voltage regulation. Besides, it can compensate for low voltages.

Ideal for over- and under-voltage compensation, for controlling voltage of d-c power packs (by adjustment of primary voltage), etc.

Maximum current, 5 amperes.

Type 200-CM (as illustrated)..... \$16.50

Type 200-CU (without case, switch, and outlet receptacle — ready for panel or baseboard mounting)..... \$14.00

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