

3300

CATALOG T2

THE HAMALOG



RADIO SUPPLIES
for
TRANSMITTING

1925



E. F. JOHNSON

Fast Becoming THE Amateurs' Supply House

WASECA, MINN.

World Radio History

Forword

The second issue of the HAMALOG is made necessary because our first edition is exhausted, due to the unexpected number of requests that have been received for it. As it costs no more to print additional copies for distribution to all who received the first HAMALOG than it would cost to print an extra supplement as we had intended, this edition is going to everyone on our mailing list.

A big edition will be out in the Fall. Be sure to get it.



GENERAL INSTRUCTIONS

In Ordering, please use great care. Describe goods accurately, giving catalog number and price. Be sure to sign your name plainly, with full address—never just your call letters. If no method of shipment is specified, we will use the best and cheapest way.

Our Terms are invariably cash with order or C. O. D., except to educational and similar institutions which cannot purchase in this way. By sending cash with your order, C. O. D. and money order fees to a considerable amount may be saved. Please note that postage and insurance must be included with your remittance. To avoid delay, send a sufficient amount, and we will promptly credit or refund any excess. The amount of postage may be figured from the weights given in the Hamalog and the abbreviated table given on the next page. If in doubt, ask your postmaster what zone you are in. Note that the postage on each package is 2c higher than before April 15th, 1925. Due to increase in rates we have discontinued using Government insurance and now use private insurance at an average cost to you of less than half the present Government rates.

Inspect all Goods immediately on receipt and if they are in any way damaged report it at once to the carrier and file a claim against them. Everything we ship is in perfect condition when it leaves so the responsibility for the damage rests with the carrier. Damage to parcel post shipments should be reported to us at once, so that we may send blanks for filing of claim.

Returned Goods. Do not return any goods without first writing us. We may be able to suggest a better disposition. This is important.

We make every effort to ship promptly. Most orders go out the same day they are received. Occasionally our stocks are depleted or for other reasons there is a delay. If it is liable to be considerable we aim to let you know promptly.

**Changes in prices of General Radio products
were received too late to get them
in the Hamalog.**

PLEASE MAKE THE FOLLOWING CORRECTIONS

Page 3—310	2 3/4 inch General Radio dial.....	\$.60
	302 2 3/4 inch dial with vernier.....	1.75
Page 4	247-K .00025 mfd., without geared vernier.....	\$3.35
	247-M .00025 mfd., with gear.....	4.30
	247-F .0005 mfd., without gear.....	3.80

PARCEL POST SCALE

Zone	1	2	3	4	5	6	7	8
First pound	7	8	9	10	11	13	14	
Each additional pound or fraction	1	2	4	6	8	10	12	

Packages weighing 8 oz. or less, 1½¢ for each 2 oz. to any zone.
 Our Insurance Rates—3¢ up to \$10, 5¢ up to \$25, 8¢ up to \$37.50, 10¢ up to \$50, 13¢ up to \$75, 15¢ up to \$100.

Special Handling for Parcel Post. New regulations provide for a faster service on parcels on the payment of a 25¢ "Special Handling Fee." This means that parcels will be given the same speed in shipment and delivery as first class mail, and will save a day or two on long shipments. It does not give special delivery—merely the same service as ordinary first class mail. If you want goods quickly, include the 25¢ "Special Handling Fee" with your remittance.

APPROXIMATE PARCEL POST ZONE TABLE

1st and 2nd Zone	4th Zone	6th Zone
Minneapolis	Chicago	Tacoma, Wash.
Sioux Falls, S. D.	Kansas City	El Paso, Tex.
Ft. Dodge, Iowa	Pierre, S. D.	Jacksonville, Fla.
La Crosse, Wis.		New York City
	5th Zone	All of
3rd Zone	Schenectady, N. Y.	Nevada,
Madison, Wis.	Austin, Tex.	Connecticut,
Des Moines, Iowa	Denver, Colo.	Maine
Duluth, Minn.	Butte, Mont.	
Aberdeen, S. D.	All of	7th Zone
Ohama, Neb.	Pennsylvania	Miami, Fla.
	Mississippi	San Francisco, Calif.
		Olympia, Wash.
8th Zone, all points outside of the United States, including Alaska, Canal Zone, Canada, and possessions of the U. S.		

COILS

The UL-1655 Radio Frequency Choke Coil is designed for use wherever a radio frequency choke is necessary in a transmitting set. It is wound on a porcelain form for minimum distributed capacity, has an inductance of 2.8 millihenries, and will carry .6 amperes current.

UL-1655 Radio Frequency Choke.....\$3.45

Shipping wt. 4 lbs.

Short Wave Tuning Coils.

Probably the best of the many types of "low loss" tuners offered for amateur use is the Bremer-Tully type SW. This tuner is space wound on a skeleton framework, giving what is generally regarded as the most efficient practical type of winding. This distributed capacity is extremely low, giving a wide range of wave length with a small condenser. Dielectric losses are also reduced to an inconsiderable amount. The adjustable fixed primary gives any degree of coupling desired, and regeneration is accomplished with a tickler coil mounted to give 180 degree rotation. The range is 50 to 150 meters with a .00025 mfd. B-T condenser (11 plate), and it will tune over 200 meters with a .0005 condenser.

Bremer-Tully short wave tuner.....\$1.50

Shipping wt. 2 lbs.

ANTENNA MATERIAL

Wire

The modern efficient amateur antenna uses only enameled solid copper wire. Nothing else will give as low resistance, especially at the present low wave lengths, and nothing else will retain this quality as will a good grade of enameled wire.

Our low price for this wire is due to the large quantity we buy, coupled with low selling costs. We guarantee it to be the finest quality obtainable, true to size and full measure.

Packing is done with care, using corrugated boxes made for us for this purpose, so that delivery in good condition may be assured. Any length of wire may be ordered in one piece.

No. 12 solid copper enameled wire, per 1000 ft.....	\$6.90
Less than 1000 ft., per 100 ft.....	.75
Shipping weight, 100 ft. 3 lbs; 1000 ft. 22 lbs.	
No. 14 solid copper enameled wire, per 1000 ft.....	\$5.00
Less than 1000 ft., per 100 ft.....	.55
Shipping weight, 100 ft. 2 lbs; 1000 ft. 15 lbs.	
No. 14 bare solid copper wire, not enameled, in 100 ft. and 150 ft. coils, per 100 ft.....	.50

Insulators



Sure Fire insulators provide the maximum efficiency at surprisingly low cost. 20 inches in

length, of highest quality white glazed porcelain, it effectually prevents leakage and capacity losses. Tensile strength 1500 pounds, wt. 21 oz.

Sure Fire 20 inch antenna insulators, each.....	\$1.15
Four or more, each.....	1.00
Shipping wt. 2½ lbs. each.	

G. P. 5¼ in. porcelain insulators serve admirably for guy wires and also antenna and counterpoise insulation where the Sure Fire insulator is not needed. They are very well made of brown glazed porcelain, 1½ inches in diameter, 5¼ inches long, and should stand over a ton in tension.



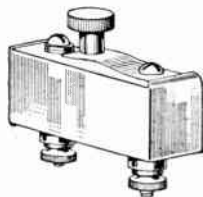
G. P. 5¼ in. insulators, each.....	.30
Twenty or more, each.....	.25
Shipping wt. 1 lb. each.	



The General Radio No. 260 insulator may be used inside or outside for supporting wiring, and two of them with a rod connecting them make an excellent lead-in combination. It is very popular for use in supporting parts of transmitting equipment, such as the inductances.

Type 260 insulator, each.....	.25
Dimensions 2 1/8" diam., 2" high. Shipping wt. 8 oz.	

BUZZERS



The General Radio 178-B buzzer has been designed for laboratory and radio use. Its construction is very simple and durable, easy to adjust and with a remarkably constant pure tone of about 800 cycles. Requires very little current to operate, and will operate on one dry cell without sparking at contacts, a necessity where pure tone is required.

178-B General Radio buzzer.....\$2.00
Shipping wt. 8 oz.

BATTERY CLIPS

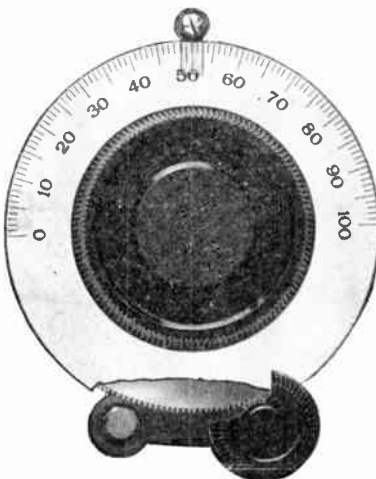
- No. 27 Copper covered, 10 amps capacity .20
- No. 48-A Lead covered storage B battery clip..... .10
- No. 24-A Lead covered clip, 15 amperes..... .20
- No. 21-A Lead covered clip, 35 amperes.... .25



DIALS

General Radio dials are preferred by many amateurs. They are accurately made of brass with silver etched finish and pleasing bakelite knob. The fine graduations and the separate indicator make close readings possible. May be had with geared vernier as illustrated, or without vernier, to match dials on General Radio instruments.

- 310 2 3/4 inch General Radio dial \$.50
 - 137-H 4 inch dial.....1.50
 - 302 2 3/4 inch dial with vernier.... 1.50
 - 303 4 inch dial with vernier.....2.50
- Shipping wt., No. 310, 8 oz., others 1 lb.



In molded bakelite dials, we carry the well known and highly satisfactory Na-ald line.

- 2 inch Na-ald dial, for rheostats.....\$.35
- 3 inch Na-ald dial..... .35
- 3 7/8 inch Na-ald dial..... .50
- 4 inch Na-ald Deluxe dial..... .75

Shipping wt., 6 to 8 oz.

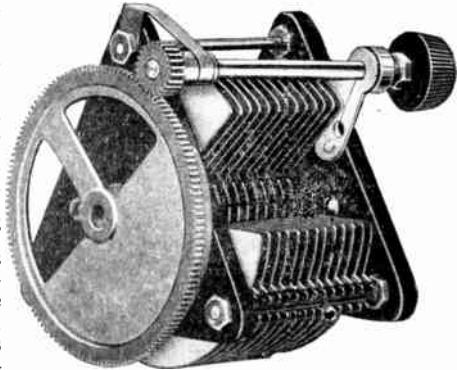
Shaft bushings, to adapt 1/4 in. holes to 3/16 in. shafts..... .05

CONDENSERS

General Radio Variable Condensers

We stock and highly recommend General Radio condensers. They still remain the most popular with amateurs seeking the best, in spite of the flood of so called "low loss" types, many of which are decidedly inferior to ordinary bakelite end plate condensers.

The great superiority of General Radio condensers is due, in addition to excellent insulating material (high grade hard rubber) to their careful design, heavy brass plates soldered together, perfect bearing contacts, and permanently rigid construction.



Note:—These condensers may also be had with shaped plates to give a practically uniform wave length calibration, and to read directly in meters with the type 277 inductance coils and 313 dial. Further information on request.

247-K .00025 mfd., without geared vernier.....	\$2.85
247-M .00025 mfd., with gear.....	1.50
347-F .0005 mfd. without gear.....	3.10
247-H .0005 mfd. with gear.....	4.75
247 vernier attachment, specify size of condenser.....	1.75
Shipping wt. 3 lbs.	

Micadon Fixed Condensers.

.00025 mfd.....	.35	.002 mfd.....	.40
.001 mfd.....	.40	.006 mfd.....	.75
.00025 mfd., with grid leak clips.....			.45

Any other size also supplied.

Transmitting Condensers.

Note:—No more of the UC-1806 .002 mfd. 6000 volt condensers are available at the bargain price they recently sold for. The UC-1014 condenser listed below takes its place.



Cardwell variable transmitting condenser, double spaced plates, shipping wt. 3 lbs.....	\$15.00
UC-490 1 mfd. 1750 volt filter condensers, shipping wt. 2 lbs.....	2.50
21-AA 1 mfd. 1000 volt filter condensers, shipping wt. 1 lb.....	1.90
G. I. 2 mfd. 3000 volt filter condensers, shipping wt. 3 lbs.....	5.50
UC-1014 .002 mfd. 3000 volt grid and plate blocking condenser, shipping wt. 8 oz.....	2.50
UC-1866 filament by-pass condenser, two .1 mfd. condensers in one case, shipping wt. 6 oz.....	1.35
See bargain pages for others.	

FAHNESTOCK CLIPS

No. 5 Fahnestock clip, single.....	\$.03
No. 9 Fahnestock clip, double.....	.04

GRID LEAKS

UP-1719 transmitting grid leak, for 5 watt tubes.....	\$1.10
UP-1718 transmitting grid leak, for 50 watt tubes.....	1.65
Electrad fixed receiving grid leaks, sizes, 1/2, 1, 1 1/2, 2, 3, and 5 megohms resistance.....	.30
Durham variable receiving grid leak, plunger type, variable from 1/10 to 5 or 2 to 10 megohms.....	.70
Bradleyleak, the finest variable grid leak, new type, small in size, variable from 1/4 to 10 megohms.....	1.85
Grid condenser for mounting on Bradleyleak, .00025 mfd.....	.35

HEADSETS



We feature the widely advertised Tower's Scientific phones. They are a revelation in quality, at a remarkable price—exceedingly sensitive—better than well known makes costing up to twice as much or more. A navy type headset, weighing only 8 1/2 ounces, and the most comfortable phone for long wear we know of.

Sold with an absolute guarantee that if you don't like them when received, we will refund your money. Guaranteed by the manufacturers for one year.

Scientific phones.....	\$2.95
Shipping wt. 2 lbs.	

KEYS



The Signal R-48 key is very satisfactory for CW work, being very well made, of the usual brass frame type, with 1/16 in. contacts.

The illustration shows the regular telegraph key, the R-48 being the same except without the short circuiting lever.

R-48 Signal key.....	\$2.25
Shipping wt. 1 lb.	

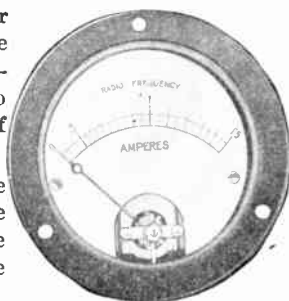
Note:—While they last we will supply genuine Mesco No. 81 keys on orders for the above if desired, at the same price. They are very similar, but have 1/8 in. removable silver contacts.

METERS

Jewell Meters.

Jewell meters are by far the most popular among amateurs. Combining a good degree of accuracy with low price, attractive appearance, and a complete line of instruments to match, they fulfill all the requirements of amateurs.

Sizes listed are carried in stock in flush type instruments. Other sizes and types may be had with a few days' delay. The complete Jewell catalog of these instruments will be sent free on request.

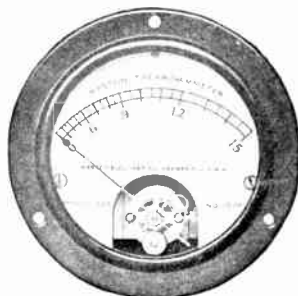


Pattern 64 Thermo-ammeter, 1, 1.5, 3, 5, 8 and 10 amps.....	\$11.40
Pattern 74 AC Filament Voltmeter, 0-10 or 0-15 volts.....	7.15
Pattern 54 DC Plate Milliammeter, 100, 300 and 500 MA.....	7.15
Shipping wt., any of above, 2 lbs.	
Pattern 54 DC Plate Voltmeter, 0-500 volts.....	14.75
Pattern 54 DC Plate Voltmeter, 0-1000 volts.....	21.35
Pattern 54 DC Plate Voltmeter, 0-1500 volts.....	27.10
Shipping wt. 4 lbs.	

Weston Meters.

Weston meters are in almost universal use where great accuracy and dependability are required. For the amateur who wants these qualities in the highest degree we can supply Weston instruments in all sizes, in addition to those listed below. Prompt factory shipments are made of all these sizes, and we carry in stock the 0-300 and 0-500 milliammeters, which are the most popular sizes.

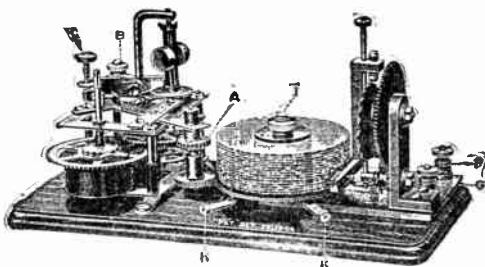
Weston Circular J listing these instruments sent on request.



Model 425 Thermo-ammeters, 1.5, 3, and 5 amperes.....	\$17.00
10 and 20 amperes.....	18.00
Model 301 DC Milliammeters, 100, 300, 500, 800 milliamperes.....	8.00
Model 301 DC Voltmeters, 0-500 volts.....	17.75
0-1000 volts.....	24.75
0-1500 volts.....	30.75
0-2000 volts.....	36.75
Model 429 AC Filament Voltmeters, 0-10 or 0-15 volts.....	20.00
Shipping weights same as Jewell meters.	

OMNIGRAPHS

For those who are learning the code, it is almost impossible to do so readily unless some means of continuous sending is available. The Omnigraph provides such a means, in the best possible way. The speed can be adjusted from five to fifty words per minute at will, with perfect sending, which cannot be done by hand sending. You learn the code as it should be, not some operator's particular style. This is valuable in taking a code examination for a license, as an Omnigraph is used for this purpose, and if you are accustomed to its perfect sending, a greater speed can be attained.



The No. 2, No. 2 Jr., and No. 5 Omnigraphs differ only in the number of dials, having 15, 5, and 1 respectively. Three dials are supplied with the No. 5, but they are used singly. The other machines are capable of sending thousands of different message combinations with but one set of dials, so that it may be used indefinitely without being able to anticipate the message. Regularly supplied with Continental code dials. Morse code supplied specially, also extra sets of dials.

No. 2 Omnigraph, with 15 dials.....	\$32.00
No. 2 Jr. Omnigraph, with 5 dials.....	25.00
No. 5 Omnigraph, with 3 dials.....	16.00
Shipping wt., No. 2, 9 lbs.; No. 2 Jr., 7 lbs.; No. 5, 6 lbs.	

Rental Machines.

Many amateurs own Omnigraphs, others cannot afford to but wish to have one for the time necessary to learn the code or to brush up for an examination. We have a number of machines for rental at rates which make it very inexpensive compared to the cost of owning them. A deposit is required of the full price of the instrument wanted, either cash with order or C. O. D. Use the instrument as long as necessary, return it to us, and your deposit will be refunded less rental charges as follows. The time is figured only for the period it is in your possession.

	One month	Per week thereafter	Deposit
Rental rate, No. 2 Omnigraph.....	\$3.50	60c	see
No. 2 Jr. Omnigraph.....	3.00	50c	prices
No. 5 Omnigraph.....	2.50	40c	above

SWITCHES

Porcelain Base Baby Knife Switches.

Single pole, single throw.....	\$.20
Single pole, double throw.....	.35
Double pole, single throw.....	.35
Double pole, double throw.....	.50
Shipping wt., 8 oz. to 1 lb.	

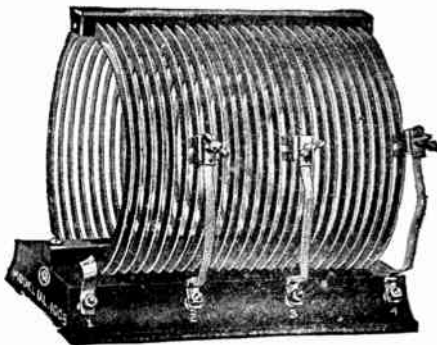
MICROPHONES

The Western Electric 284-W microphone is recommended for amateur phone transmission. This is also the type recommended by the Radio Corporation in their transmitting circuits. It may be had with a desk stand, or the microphone only.

284-W Microphone only.....	\$3.75
284-W Microphone, with desk stand.....	7.80
Shipping weights, 2 and 5 lbs.	

OSCILLATION TRANSFORMERS

We stock a transmitting inductance very similar to the UL-1008 as illustrated. It is the same size and is built in the same way except that the copper is not nickled and no binding posts provided as these features create undesirable losses. Three clips of our own make are included. For a coupled inductance two of these inductances may be used end to end, or one of them cut in two, or another coil may be made up of the edgewise copper strip listed below.



Transmitting inductance with three clips.....	\$7.50
Shipping wt. 8 lbs.	

Edgewise Wound Copper Strip.

For use in making up transmitting inductances, nothing is better than edgewise wound copper strip. We make it up in two sizes, 4 inches and 6 inches inside diameter, out of strip 1/16x3/8 in. in size. The straight strip may also be had, for winding pancake type inductances, wiring transmitters, etc.

6 in. diameter edgewise wound copper strip, per turn.....	\$.12
4 in. diameter, per turn.....	.10
Straight copper strip, 1/16x3/8, per foot.....	.05
Shipping wt., straight strip 8 ft. per lb.; 4 in. wound strip, 8 turns per lb.; 6 in. 6 turns per lb.	

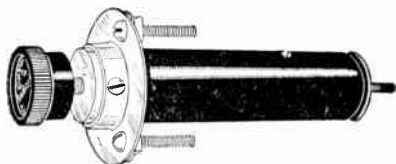
Inductance Clips.

The clips used on the above inductance may be purchased separately. They are well made of heavy spring phosphor bronze, with an adjustable tension screw and heavy lug for attaching a flexible wire or cable. Very firm, large contact area when used with flat copper strip.

Inductance clips, each.....	.20
Braided cable, for variable connections, very flexible, 1/4 inch wide, per foot.....	.04

RHEOSTATS

Transmitting Rheostats.



The Allen Bradley Radiostat is a rheostat designed for the primary side of the filament transformer, and will handle any transformer in a smooth stepless manner, up to 500 watts capacity, It may be used to reduce the plate voltage over a wide range.

E-2111 Radiostat.....\$6.50

Shipping wt. 4 lbs.

The E-210 Bradleystat is designed for filament transformers for 5 and 10 watt sets, and is used in the primary side the same as the Radiostat.

E-210 Bradleystat.....\$4.00

Shipping wt. 2 lbs.

The PT-537 power rheostat will handle 2 UV-203 or 4 UV-203-A of 1 UV-204 Radiotron, or several UV-202 tubes, in the secondary side of the transformer, or when DC is used for the filaments.

PT-537 Power Rheostat.....\$9.00

Shipping wt. 3 lbs.

PR-535 Power Rheostat, for 1 UV-202.....\$1.60

121-A Fada Power Rheostat.....1.20

Shipping wt. 1 lb.

Receiving Rheostats.

The celebrated Bradleystat has now been improved in design and greatly reduced in size. Accomodates any type tube without change. Resistance range $\frac{1}{4}$ to 100 ohms. Projects only 11/16 in. from the panel, and has a single hole mounting.

Bradleystat, new type.....1.85

Shipping wt. 8 oz.

Bradleyohm Resistor.

The Bradleyohm is a continuously variable resistance made in the same form as the Bradleystat, and is ideal for use in circuits requiring resistances either fixed or variable.

No. 10 Bradleyohm, 10,000 to 100,000 ohms.....\$2.00

No. 25 Bradleyohm, 25,000 to 250,000 ohms.....2.00

No. 50 Bradleyohm, 50,000 to 500,000 ohms.....2.00

Shipping wt. 8 oz.

BOOKS

Ballantine's "Radio Telephony for Amateurs" is the most valuable book any amateur could buy. Contains a world of practical information and data regarding the construction and operation of CW and phone transmitters. Latest edition only in stock.

Radio Telephony for Amateurs.....\$2.00

Shipping wt. 2 lbs.

Citizens Radio Call Book, latest issue containing all amateur calls including Canadian, English, Australian, New Zealand and French stations as well as commercials and broadcast stations. Published twice a year. Latest edition only in stock.

Citizens Radio Call Book......75

Shipping wt. 2 lbs.

REACTORS—CHOKES COILS

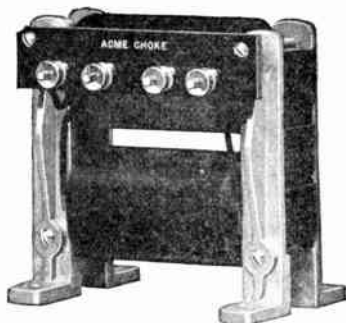
Plate Reactors.

The UP-415 plate reactor is designed to be used with the Heising modulation system for phone transmission. It has an inductance of approximately 1 henry and a current carrying capacity of 300 milliamperes.

UP-415 Plate reactor.....\$5.20
Shipping wt. 3 lbs.

Filter Reactors.

Acme apparatus for transmitting has long been considered among the best of its kind. For producing a smooth DC plate supply there are several types of reactors, or chokes, which will be found to give excellent results. The 30 henry size is recommended for rectified AC and also for best results on generator DC, although the smaller types are popular for the latter. All types are made with an air gap in the core, preventing magnetic saturation and keeping the inductance very constant. Complete Acme catalog on request.



1½ Henry 150 Milliamperes.....	\$ 3.60
Same as above, but double instead of single coil.....	5.40
1½ Henry 500 Milliamperes.....	5.40
Same as above, but double instead of single coil.....	7.20
6 Henry 300 Milliamperes.....	12.60
30 Henry 150 Milliamperes.....	16.20
30 Henry 300 Milliamperes.....	22.50
30 Henry 600 Milliamperes.....	29.70

Shipping weights, 3 to 20 pounds.

PANELS

Black Bakelite, Formica or Celoron.

7x12x3/16 inch.....	\$1.80	7x24x3/16 inch.....	\$3.60
7x14x3/16 inch.....	2.10	7x28x3/16 inch.....	4.20
7x18x3/16 inch.....	2.70	7x30x3/16 inch.....	4.50
7x21x3/16 inch.....	3.15	12x18x3/16 inch.....	4.25
Special sizes, per sq. in.....	2¼c	For ¼ inch thick, add 1/3.	

Hard rubber panels are considered very desirable on account of their low dielectric losses, which, however, is true only of high grade material. We supply genuine Goodrich hard rubber, of very excellent quality and beautiful finish.

7x9x3/16 inch.....	\$.85	7x22x3/16 inch.....	\$2.05
7x12x3/16 inch.....	1.10	7x24x3/16 inch.....	2.30
7x14x3/16 inch.....	1.35	7x26x3/16 inch.....	2.50
7x18x3/16 inch.....	1.65	7x30x3/16 inch.....	2.70

Specialty cut panels, per square inch......01¼
For pieces less than 50 sq. in., add per piece..... .10
Shipping wt. on panels, about 2 lbs. per square foot.

SOCKETS

The new Fleron socket is recommended for all standard base tubes, including 5 watt transmitting tubes. It is made entirely of low loss black porcelain, with firm contacts which bear on both tip and side of prong.

201 Fleron socket.....\$.65
Shipping wt. 8 oz.

The Garod Pyrex socket is for those who want the utmost in socket construction. The insulating material is Pyrex glass, one of the very finest materials it is possible to use, and which is practically free from the difficulties often encountered in sockets using other insulating materials.

Garod Pyrex socket.....\$ 1.50
Shipping wt. 1 lb.

UT-541 50 watt tube socket.....\$ 2.25
Shipping wt. 2 lbs.

S Tube socket, porcelain, morgul base.....\$.90
Shipping wt. 2 lbs.

SOLDER

Kester rosin core solder, small can, about 1/4 lb.....\$.25

Kester rosin core solder, 1 lb. spool......95

Plain wire solder, per pound......60

SOLDERING IRONS

Hotpoint soldering iron, small point, guaranteed.....\$ 2.95
Shipping wt. 2 lbs.

TUBES

We test all tubes before shipping them, to be sure they are in operating condition. They should be tested immediately on receipt, and if in any way damaged, the carrier should be notified and a claim filed. It is extremely desirable to first operate transmitting tubes at half voltage for ten or fifteen hours. This gradually "hardens" them, so that they will be less liable to injury in use.

UV-199 Radiotron.....\$3.00	UV-202 5 watt Radiotron.....\$8.00
WD-11 Radiotron..... 3.00	UV-203 50 watt Radiotron..... 30.00
WD-12 Radiotron..... 3.00	UV-203-A 50 watt Radiotron 38.00
UV-200 Radiotron..... 3.00	UV-216 Kenotron rectifier..... 7.50
UV-201 A Radiotron..... 3.00	UV-217 Kenotron rectifier.....26.50

Shipping wt., 1 to 5 pounds.

Amrad S tubes.

S tubes provide the best possible means of rectifying AC plate supply. For a long time, the demand made it impossible for the factory to supply them in sufficient quantities. However we now have them in stock and can supply them promptly.

Type 4000-1 S tube.....\$10.00
Shipping wt. 4 lbs.

TRANSFORMERS

Amplifying Transformers.

For amateur code work, a high ratio transformer may be used as it will give greater amplification and the slight distortion is an advantage rather than a disadvantage, as in a broadcast set.

All-American 10 to 1 ratio audio frequency transformer.....\$1.30

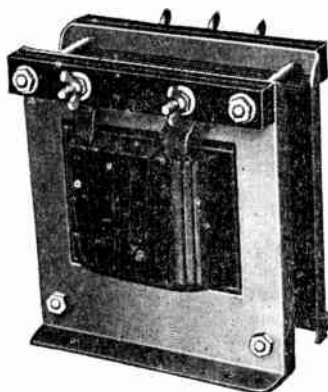
Shipping wt. 2 lbs.

The Stromberg Carlson audio frequency transformer will give extremely good results, both for broadcast and amateur use, as it is among the most efficient on the market.

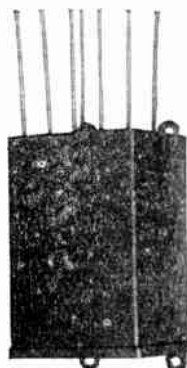
Stromberg Carlson 4 to 1 ratio audio frequency transformer.....\$4.05

Shipping wt. 2 lbs.

CW Power Transformers.



Thordarson transformers combine a high quality of construction with low price. All transformers listed are for use on 110 volt 60 cycle current. All Acme transformers can also be supplied promptly. Catalog on request.



Filament Transformer

80 watt, 8½ volt filament transformer.....\$ 6.30
 150 watt, 12 volt filament transformer..... 9.00
 300 watt, 12 volt filament transformer..... 13.50

Shipping wt. 7, 10 and 15 pounds.

100 watt plate transformers, 350-500 volts each side of center.....\$11.70

450 watt plate transformer, 1000-1500 volts..... 16.20

900 watt plate transformer, 1000-1500 volts..... 27.00

Shipping wt. 15, 20 and 30 lbs.

Special power transformer for one 5 watt tube, filament winding,
 10 volts with center tap, plate 650 volts, no center tap.
 Unmounted.....\$ 6.75

Shipping wt. 6 lbs.

Plate Transformer

Microphone Transformers.

The RCA UP-414 microphone transformer is excellent to couple the transmitter to a phone set. It can be supplied only as long as present stocks last, as no more of them are to be made.

UP-414 microphone transformer.....\$6.50

Shipping wt. 3 lbs.

231-M General Radio Microphone transformer.....\$5.00

Shipping wt. 2 lbs.

TRANSFORMER IRON

Genuine electrical sheet for those who wish to wind their own transformers and chokes. We will cut it to order in any size, straight pieces only. The price is per pound, plus a cutting charge based on the number of pieces, as it costs as much to cut small pieces as large ones. The usual complete cost is from 20 to 25 cents per pound. In figuring your requirements, 3.6 cu. inch weighs one pound, and 52 pieces make a stack one inch thick.

- No. 26 gauge transformer iron, per pound, uncut.....\$.11
- Cutting charge, per hundred pieces..... .25

TUBING

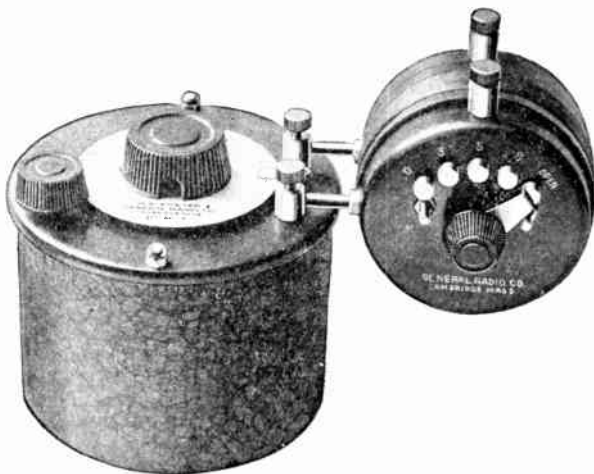
Formica and Hard Rubber tubing, cut any length to order. Add to the prices listed 10 cents for each piece ordered for cutting cost.

Formica tubing			Hard rubber tubing		
Diam.	thickness of wall	Per inch	Diam.	thickness of wall	per inch
2½ in.	1/16 in.	\$.09	2½ in.	1/16 in.	\$.06
3 in.	1/16 in.	.10	3 in.	3/32 in.	.07
3½ in.	1/16 in.	.11	3½ in.	3/32 in.	.08
4 in.	1/16 in.	.12	4 in.	1/8 in.	.11

Spaghetti tubing, genuine varnished cambric, black, in 2 ft. lengths, per ft.....5c

WAVEMETERS

One of the most necessary pieces of equipment for the amateur station is an accurate wavemeter. The best instrument for this use is the 247-W General wavemeter. It is accurate to better than 2%, convenient for checking either the receiving set or the transmitter, may be had in ranges to cover from 37.5 to 1000 meters, and best of all is priced very low.



- 247-W General Radio wavemeter, range 150 to 500 meters.....\$9.50
- Shipping wt. 5 lbs.
- 247-W-2 Extension coil, 300 to 1000 meters..... 2.85
- 247-W-½ Extension coil, 75 to 250 meters..... 2.85
- 247-W-¼ Extension coil, 37.5 to 125 meters..... 2.85
- Shipping wt. 1 lb.

WIRE

Antenna Wire, see page 2.

Magnet Wire.

Size	Ft. per pound	¼ lb.	½ lb.	1 lb.	5 lbs.
10 DCC	31			.50	2.20
12 DCC	49			.55	2.40
14 DCC	77			.60	2.60
16 DCC	110		.35	.65	
18 DCC	192		.37	.70	
20 DCC	297		.42	.80	
22 DCC	462	.28	.50		
24 DCC	716	.32			
26 SCC	1200	.28			
28 SCC	1880	.34			
30 SCC	2940	.42			
No. 16 stranded A battery wire, heavy live rubber coating, not attacked by acid, per ft. 1½c					
60 strand double maroon cotton covered wire, used for loop aerials and for short wave transmitting inductances, as described by Goldberg, 9APW, in QST. Per 100 ft. spool.....\$1.00					
No. 14 square tinned bus wire, 2 ft. lengths, per ft. 1½c					

MISCELLANEOUS MATERIALS

Sheet brass, 28 gauge, per square foot.....	\$.10
Phosphor bronze, 28 gauge, for springs, 3x6 in. piece.....	.20
May be had any length 6 inches wide at same rate.	
¼ inch round brass rod, per foot.....	.20
Flexible braided flat copper cable, bare, ¼ inch wide, per ft.....	.04
Flat copper strip, 1/16 x 3/8 in., for winding pancake type inductances, wiring transmitters, etc., per ft.....	.05
Edgewise wound to 6 in. inside diameter, per turn.....	.12
Edgewise wound to 4 in. inside diameter, per turn.....	.10
Spaghetti tubing, best varnished cambric, 2 ft. lengths, per ft.....	.05
Varnished cambric cloth, for insulating iron cores, etc., in 36 in. widths .01 in. thick, per sq. ft. 12c, sq. yard.....	.90
Oval head wood screws, nickle plated, brass, ¾ in. no. 4 or ¾ in. no. 6, per dozen.....	.10
1 in. no. 6, per dozen.....	.12
Machine Screws and Nuts	per doz. Brass Nickled
Round head No. 8, 32 threads per in., 1 in. long.....	.10 .15
Round head No. 6-32, 1 in.....	.10 .15
Flat head No. 8-32, 1 in.....	.10
Flat head No. 6-32, 1 in.....	.10
Oval head No. 8-32, 1 in.....	.15
Oval head No. 6-32, 1 in.....	.15
No. 8-32 hexagon nuts.....	.06 .10
No. 6-32 hexagon nuts.....	.06 .10
Brass washers, ¼ in. inside diam., per dozen.....	.06
Brass washers, 5/32 in. diam., for No. 8 screw, per dozen.....	.05
Brass washers, 9/64 in. diam., for No. 6 screw, per dozen.....	.05
Soldering lugs, per dozen.....	.06

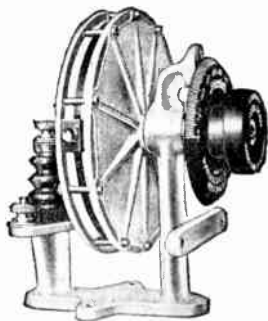
SPECIAL BARGAIN SECTION

UC-1831 Variable Transmitting Condenser.

Here's a big bargain you cannot miss. This condenser, of which we have sold hundreds, formerly sold for \$9.00, and we have at various times bought them at bargain prices, but never before have we been able to sell them at the present price. It is also safe to say that they will be gone in a short time, so that it will not be possible to get them at any price, as is the case with other popular items of RCA transmitting material which are no longer obtainable.

The UC-1831 is mica insulated, therefore highly efficient, suited for low wave work where low loss material is much in demand. It is variable from .0001 to .0012 mfd., and will stand a 4000 volt test. It is used as an antenna series condenser to bring the antenna in tune with the oscillating circuit, to tune the oscillating circuit itself, as a transmitting grid condenser or plate condenser, and in various ways wherever a condenser of this size can be employed.

Get at least two of them at this price. Think of it, only one-fifth of the original retail price.



UC-1831 Variable transmitting condenser.....\$1.80
Shipping wt. 3 lbs.

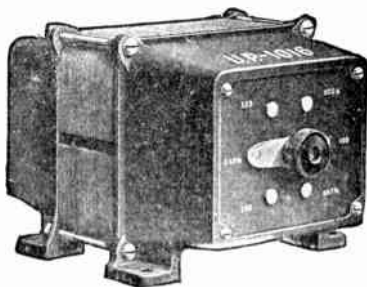


UC-1015 fixed transmitting condenser. Here is a very high grade condenser, standing 7500 volts, and with three capacities, .0003, .0004, .0005 mfd. It is used primarily as an antenna series condenser, or as a fixed oscillator tuning condenser, and is one of the few on the market which will stand high powers. Carries 4 amperes at 200 meters, and more at lower wave lengths. Former price \$5.00. Limited number in stock.

UC-1015 fixed transmitting condenser.....\$2.25
Shipping wt. 8 oz.

UP-1016 Power Transformer.

The UP-1016 transformer is designed to supply plate and filament current to two fifty watt Radiotrons and two fifty watt Kenotron rectifiers. It is provided with a primary tap switch to keep the filament vlotage at 10 volts with a primary variation of from 102½ to 115 volts. It lists at \$38.50, and may now be had through the usual sources at that price only. We bought a number of them recently, so that we can offer them at nearly half price while they last.



UP-1016 Power transformer.....\$21.00
Shipping wt. 35 lbs.

Lightning Switches.

Here's a buy! The Westinghouse type SA switch formerly sold for \$5.00. It is rated at 100 amperes, 600 volts, and has a treated wood base which is much better for high frequency work than the compositions used on other switches of this type. The insurance underwriters require a lightning switch on all transmitting antenna installations. Protect your instruments, your home, and yourself. Don't make it possible for the insurance company to refuse a claim because you didn't have the switch.



- Westinghouse SA Lightning switch.....\$1.50
Shipping wt. 3 lbs.
- PR-539 rheostats, four ranges in one instrument, 8, 15, 19 and 32 ohms, for 1/4 amp and 199 tubes.. Lists at \$2.75..... .90
Shipping wt. 1 lb.

Battery Chargers.

- Westinghouse Rectigon battery chargers, 2 ampere, bulb type, list price \$18.00, closing out small quantity at.....\$13.50
Shipping wt. 13 lbs.

Meters.

A few more RCA UM-581 O-5 Thermo-couple radiation ammeters at a wonderful price for this type. These meters formerly sold for \$20.00, and after our present stock is gone we will not be able to offer them again at this price.

- UM-581 Thermo-couple ammeters.....\$ 7.50
Shipping wt. 3 lbs.
- UM-579 O-1500 DC plate voltmeter, list price \$40.00.....\$17.50
- UM-578 O-500 DC plate voltmeter, list price \$22.00, only..... 9.75
Shipping wt. 5 lbs.

Honeycomb Coil Mounting Plugs.

Genuine Remler coil plugs and panel mountings, just bought at a sacrifice price. This is your chance to get an extremely high grade set of mountings and plugs at a fraction of the regular price. Use three No. 46 plugs for a three coil panel mounting, or two No. 46 and one No. 42.

	Reg. price	Special
No. 46 panel mounting variable coupling plug.....	\$1.00	\$.40
No. 42 panel mounting fixed coupling plug.....	.60	.25
No. 41 coil plug, with 14" waterproof fiber strap.....	.70	.30
No. 40 coil plug, without fiber strap.....	.50	.20
No. 44 extension handles, for No. 46 plug.....	.30	.20
Shipping wt., each piece, 4 oz.		

*The
new*
**CORONA
FOUR**



We also sell the CORONA portable typewriter and the Portable Adding Machine. The CORONA is a remarkable machine, possessing features to be found on no other typewriter, large or small.

The wonderful new Corona Four, illustrated, is the first portable with standard office features throughout, and sells for \$60.00. The Corona Three, with the three bank keyboard instead of four, is but \$50.00.

For the Ham, Corona is the finest possible kind of an investment. It will provide the business like air and neat legibility to his correspondence that will make it stand out. In school, in business, or in the home, Corona is ever useful—the only typewriter that meets all your requirements, whoever you are, whatever you do and wherever you go.

We'll be glad to send you more information if you wish it.

Has your business need of an adding machine? Has the price of the machine you want been too high to consider?

The Portable is an achievement in adding machines, made by the Corona Typewriter Co. Look what it does.

Adds and Lists up to 99,999.00.
Rapid Multiplication and Subtraction.
Equipped with Standard Features;
Total and Sub-Total—Non-Print—
Clear—Repeat and Error Keys.
Full Flexible Keyboard. Big Bold Type.

But above all: True Portability

And the price is but \$65.00. Compare it with all the rest at \$150 and over. May we send you more information?

E. F. JOHNSON

Radio Supplies

WASECA, MINN.



1½c Paid

Permit No. 16

Waseca, Minn.

for

**Postmaster: Return Postage
Guaranteed**