

SEARS 1940
RADIO AMATEUR
TEST EQUIPMENT
SOUND SYSTEMS
CATALOG
SEARS, ROEBUCK AND CO.

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Because you can save on shipping charges. Although the merchandise in this catalog is shipped from Chicago, you pay the shipping charges only from our nearest Mail Order House. There are ten of these Houses scattered throughout the United States, and one near enough to make your shipping charges unusually reasonable. This additional saving often amounts to several dollars on average-weight or heavy items.

Sears Easy Payment Plan

Millions of Sears customers have found that Sears Easy Payment Plan is an easy, practical way to buy the things they need. It makes it possible to get the equipment you need without disturbing your savings, and to buy goods of better quality than might be possible if limited to the amount of cash available. Your order need total only \$10 or more. Answer the simple questions on the order blank and refer to the table of terms at right for the deposit to send in with your order and the amount payable monthly.

Parcel Post Rates

Packages weighing up to 70 pounds can be carried by Parcel Post in all zones. If you are not sure which Parcel Post Zone you are in, ask your carrier or postmaster.

2 ounces or less 1½¢
 3 or 4 ounces 3¢
 5 or 6 ounces 4½¢
 7 or 8 ounces 6¢

Shpg. Wt.	Local Zone	Zones 1 & 2	Zone 3	Zone 4
1 lb.	7c	8c	9c	10c
2 lbs.	8c	10c	11c	14c
3 lbs.	8c	11c	13c	17c
4 lbs.	9c	12c	15c	21c
5 lbs.	9c	13c	17c	24c
6 lbs.	10c	14c	19c	28c
7 lbs.	10c	15c	21c	31c
8 lbs.	11c	16c	23c	35c
9 lbs.	11c	17c	25c	38c
10 lbs.	12c	18c	27c	42c
11 lbs.	12c	19c	29c	45c
12 lbs.	13c	21c	31c	49c
13 lbs.	13c	22c	33c	52c
14 lbs.	14c	23c	35c	56c
15 lbs.	14c	24c	37c	59c
16 lbs.	15c	25c	39c	63c
17 lbs.	15c	26c	41c	66c
18 lbs.	16c	27c	43c	70c
19 lbs.	16c	28c	45c	73c
20 lbs.	17c	29c	47c	77c
30 lbs.	22c	40c	67c	\$1.12
40 lbs.	27c	51c	87c	1.47
50 lbs.	32c	62c	\$1.07	1.82
60 lbs.	37c	73c	1.27	2.17
70 lbs.	42c	84c	1.47	2.52

How to Order

Select the articles you want from this catalog and write them down on one of our order blanks or any piece of paper. Put down the catalog number, quantity desired, the name of each article and the price.

Send EASY PAYMENT ORDERS to

Sears, Roebuck and Co.
 Chicago, Philadelphia, Boston, Minneapolis, Kansas City, Atlanta, Memphis, Dallas, Seattle, or Los Angeles—whichever is nearest you.

Send CASH ORDERS direct to Chicago.

Merchandise will be shipped from Chicago, but you pay transportation charges only from your nearest Sears Mail Order House.

Be sure to include additional money in your remittance to pay postage as charges for parcel post shipments must be paid in advance. We always return every penny you send over actual postage required to cover shipping charges from your nearest Sears Mail Order House.

For ordering merchandise on Easy Payments, see instructions above under Sears Easy Payment Plan.

Sears prices are so low that should the Federal Government or any State increase by taxes, or otherwise, the cost or selling price of any merchandise listed in this catalog, we reserve the right to add any such increased cost to prices in this book.

Table of Terms

If Cash Price of Order Amounts to	We Will Add as Carrying Charge	All You Need to Send With Order is	Amount Payable Monthly		
\$10.00 to \$11.00	\$1.00	\$2.00	\$2.00		
11.01 to 12.00	1.00				
12.01 to 13.00	1.05				
13.01 to 14.00	1.15				
14.01 to 15.00	1.25				
15.01 to 16.00	1.35				
16.01 to 17.00	1.45				
17.01 to 18.00	1.50			\$2.50	\$3.00
18.01 to 19.00	1.60				
19.01 to 20.00	1.70				
20.01 to 21.00	1.80				
21.01 to 22.00	1.90				
22.01 to 24.00	2.00	\$3.00	\$4.00		
24.01 to 26.00	2.20				
26.01 to 28.00	2.40				
28.01 to 30.00	2.60				
30.01 to 32.00	2.70	\$4.00	\$5.00		
32.01 to 34.00	2.90				
34.01 to 36.00	3.10				
36.01 to 38.00	3.30				
38.01 to 40.00	3.50				
40.01 to 42.50	3.65			\$5.00	\$5.00
42.51 to 45.00	3.90				
45.01 to 47.50	4.15				
47.51 to 50.00	4.40				
50.01 to 52.50	4.65				
52.51 to 55.00	4.90				
55.01 to 57.50	5.15				
57.51 to 60.00	5.30				
60.01 to 65.00	5.65				
65.01 to 70.00	6.15				
70.01 to 75.00	6.55	\$7.00	\$7.00		
75.01 to 80.00	7.05				
80.01 to 85.00	7.55				
85.01 to 90.00	7.95				
90.01 to 95.00	8.45	\$8.00	\$8.00		
95.01 to 100.00	8.95				
100.01 to 110.00	9.50				
110.01 to 120.00	10.50				
120.01 to 130.00	11.50	\$12.50	\$10.00		
130.01 to 140.00	12.25				
140.01 to 150.00	13.25				
150.01 to 160.00	14.25				
160.01 to 170.00	15.00				
170.01 to 180.00	16.00	\$15.00	\$11.00		
180.01 to 190.00	16.70				
190.01 to 200.00	17.70				
200.01 to 212.50	18.40	\$22.50	\$13.00		
212.51 to 225.00	19.65				
225.01 to 237.50	20.65	\$25.00	\$14.00		
237.51 to 250.00	21.90				
250.01 to 262.50	22.90	\$27.50	\$15.00		
262.51 to 275.00	24.15				
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THE HALLICRAFTERS "23"



The New 11-Tube Receiver That Most Hams Are Talking About

\$115⁵⁰
Cash

Receiver Only

Terms: \$10 Down
See Page 2

The SX-23 is a truly fine example of outstanding engineering design, offering for the first time compensated frequency stability, eliminating drift. The main feature of the new bandspread system is its reset accuracy. There is no bandset dial to fuss with. The same station always comes in at the same place on the dial.

The band indicator is direct reading and harmonizes with the S-DB meter, Tubes 3-6SK7, 1-6SA7, 2-6SJ7, 1-6SQ7, 1-6B8, 1-6H6, 1-6F6G, 1-80. Controls, RF gain, Pitch control, Tone control, Selectivity switch, A.N.L. switch, Band switch, Send-receive switch, Audio gain, Crystal phasing control, Main tuning control and phone jack. Cabinet size—19 in. long, 9 $\frac{3}{4}$ in. high, 12 $\frac{1}{2}$ in. deep. For operation from 110 volt, 50-60 cycle AC. For 110-volt AC operation from 6 volt DC, use Vibrapack VP554 power pack. See Page 4.

Entirely new bandswitch arrangement—8 positions. Bands 1-2-3-4 cover 545 kc to 44 mc continuously. Bands 5-6-7-8 are pre-set bandspread for the amateur 10, 20, 40 and 80 meter bands. A six-step wide range variable selectivity circuit gives easy control from needle sharp CW crystal to broad high-fidelity, with automatic switching of the AVC to suit the selectivity. An improved noise limiting circuit that really knocks out STATIC. Frequency stability never before achieved in a commercial receiver both from temperature-humidity effects and from line voltage variations. "Venetian Blind" dial, Band indicator and S-DB meter. Completely shielded crystal circuit and phasing control—permeability tuned coil—with a separate shield compartment for the crystal. Steel Cabinet, gray crackle finish. Signal key not included.

67 PT 08816—The SKYRIDER 23 (Model SX23). Complete with tubes and crystal. Shpg. wt., 56 lbs.....\$115.50

67 PTM 8817—The SKYRIDER 23 (Model SX23). Complete with tubes, crystal and 10-in. PM 23 speaker. Shpg.wt.,73 lbs. 127.50

An Added Convenience to Our Customers

How do *you* like to buy . . . for cash, or on easy payments? By mail, or over the counter? Whatever your buying habits, Sears have a plan completely suited to your needs and convenience.

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If there is no Sears Store in your vicinity, mail us your order as directed under How to Order on Page 2. If you require suggestions as to just the proper items which will best meet your needs, write Sears Personal Service Department. We will gladly go into your problems with you and give you our recommendations, together with our reasons for making such suggestions.

Important Notice About Prices

The resale prices of all nationally advertised products in this book except Silvertone P.A. Equipment are controlled by the manufacturers. We reserve the right, therefore, to raise or lower the selling prices of all such products if and when said manufacturers revise their list prices.





The New SUPER DEFIANT

The latest Hallicrafters receiver. More pre-selection and more and better audio than the Defiant (SX-24). Covers 540 KC to 42 MC in 4 bands. Separate calibrated band spread dial for 10, 20, 40, and 80 meter amateur bands affording frequency meter tuning. Tubes: 4-6SK7, 1-6K8, 2-6SQ7, 1-6H6, 2-6A6G, 1-6T5GT, and 1-80. Front panel controls: R. F. Gain, Selectivity Switch, Crystal Phasing, Audio Gain, Pitch Control, Main Tuning Control, Band Spread Tuning Control, Noise Limiter Switch, Hi-Lo Tone, Send-Receive Switch, and BFO switch. Two RF Pre-Selector Stages. Push-pull output of 8 watts. Compensation in Oscillator circuit for frequency stability. DC operation socket for battery or Vibrapack listed under Sky Champion. Automatic noise limiter. Six step variable selectivity covering wider range from extreme CW crystal to high fidelity. "S" meter calibrated in "S" and DB units. External connections for Break-in Relay and Headphones. Outputs 5000 and 500 ohms. Single wire and Doublet Antenna connections. Size of Receiver cabinet, 19½ in. long, 9¼ in. high, 11¼ in. deep. Gray finish. For 110 volt, 50-60-cycle A.C.

\$99⁵⁰ Cash

Terms \$8 Down
See Page 2

57 PTM 8290—Receiver (SX-25) complete with tubes, crystal and PM-23 (10 inch) Speaker. Shipping weight, 74 lbs. Not mailable. Cash Price..... **\$99.50**



New HALLICRAFTERS Sky Champion

The Sky Champion is a 9-Tube, A.C. Communications Receiver with Pre-Selection and Built-In Speaker, complete in every respect, offering the amateur a quality of performance never before available at this low price. Its sensitivity and selectivity are only to be compared with communications receivers selling at double its price. Provides full coverage from 44 MC to 545 KC, everything from the 10 meter amateur band to the top of the broadcast band. Band No. 1 (545 KC to 1800 KC). Band No. 2 (1.7 MC to 5.8 MC). Band No. 3 (5.8 MC to 18.8 MC). Band No. 4 (17 to 44 MC). The Sky Champion offers all the essential controls for good amateur reception as follows: R.F. Gain Control, Tone Control, Phone Jack, AVC Switch, Beat Oscillator Switch, Send-Receive Switch, A.F. Gain Control, Band Switch, BFO Switch and Pitch Control. Sensitivity on all bands is extremely good; which is of especial importance on the popular 10 meter band. The separate band spread is better on all amateur bands than A.R.R.L. Handbook recommendations for band spread against scale calibration. Speaker is an integral part of the receiver—nothing else to buy. For operation on 110-120 Volt, 50-60 cycle, AC only. Easily adapted for battery operation with the addition of Vibrapack listed below. Dimensions of Cabinet—18½ in. wide, 9¾ in. deep, 8¼ in. high.

\$49⁵⁰ Cash

Terms \$5 Down
See Page 2

57 PT 08802—The Sky Champion (S20-R) including speaker and tubes. Shipping weight, 31 lbs. Cash Price..... **\$49.50**

57 PT 08803—Model SM20—"S" Meter in matching separate meter housing. Shpg. wt., 6 lbs..... **10.00**

57 PT 08288—6-volt Vibrapack VP554, powerpack for above receiver. Shpg. wt., 12 lbs..... **11.74**



HALLICRAFTERS Sky Buddy

The Sky Buddy is a 6-tube amateur's receiver in every respect, covering everything on the air from 46 MC to 540 KC including the 10, 20, 40, 80 and 160 meter amateur bands. Band No. 1 (540 KC to 1725 KC). Band No. 2 (17 MC to 5.5 MC). Band No. 3 (5.2 MC to 17.8 MC). Band No. 4 (15.5 MC to 46 MC). Has socket for Vibrapack.

\$29⁵⁰ Cash

Terms \$3 Down
See Page 2

The Sky Buddy is an AC set, with conventional Power Transformer Construction. All its components are of the finest quality and it has sensitivity and selectivity usually found only on communications receivers selling at many times its modest price.

The following controls are incorporated in the Sky Buddy: AF Gain Control; Band Switch, Combined AVC and Beat Oscillator Switch with AVC on AVC off, and Beat Oscillator on with AVC off positions; Phone Jack, Send-Receive Switch; Pitch Control. The Speaker is an integral part of the receiver, nothing else to buy. Band Spread is better than A.R.R.L. Handbook recommendations for band spread against scale calibration. Equipped for either Doublet or Marconi Antenna.

For 110-120 Volt, 50-60 cycle, AC only. Can be adapted for 6-volt Battery operation with the addition of Model VP554 Vibrapack (listed above). Dimensions of Cabinet: 17½ in. long, 8¾ in. deep and 8½ in. high. Shipping weight, 24 pounds.

57 PT 08806—The Sky Buddy (Model S-19R) including Speaker and Tubes. Cash Price..... **\$29.50**



HALLICRAFTERS Skyrider 5-10

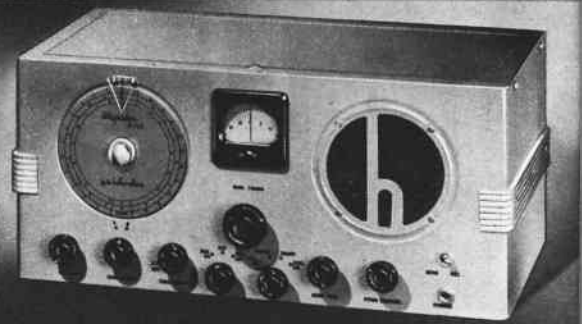
• Noise Limiter • Improved Band Spread • Built-In Speaker • Socket for SM21 Carrier Level Meter • Send-Receive Switch • 8 Tubes. This receiver is designed for the amateur who needs and wants the exacting performance required for superior ultra high frequency reception. The Skyrider 5-10 covers the radio spectrum from 68 MC to 27 MC (4.4 to 11.1) in two bands, with a degree of sensitivity and selectivity that offers unparalleled reception of the ultra high frequencies. The recently developed RK 1852 tube, with a gain increase of 6 to 1, is used as an R.F. amplifier through which an ultra high frequency sensitivity of better than 1 microvolt is obtained for this receiver. The separate Band-Spread Dial provides easier and more accurate logging, and equipped as it is with an inertia tuning control, makes tuning practically effortless. 1 stage of 1600 KC I.F. amplification is used, providing a band width of 30 KC at 10 times down. With this selectivity, even frequency modulated 5 meter signals are clearly understandable with the Skyrider 5-10. Mounted in sturdy steel cabinet finished in gray. For the specialist in ultra high frequency reception there is no finer receiver than the Skyrider 5-10. For operation on 110-120 Volt, 50-60 cycle A.C. current. Has socket for Vibrapack.

\$69⁵⁰ Cash

Terms \$6 Down
See Page 2

57 PT 08804—Skyrider 5-10 (Model S-21), complete with tubes and speaker. Shpg. wt., 30 lbs..... **\$69.50**

57 PT 08806—SM21 Carrier Level Meter. Shipping weight, 6 pounds..... **10.00**



RECEIVERS . .



With
Frequency
Meter
Tuning

HALLCRAFTERS "SX-24"

\$69⁵⁰ Cash
Less Speaker
Terms \$6 Down
See Page 2

The new 9-tube Sky rider Defiant (SX-24) has many new features which will strongly recommend it to the thrifty Amateur. *Frequency Meter Tuning* is accomplished by an accurately calibrated band spread dial which, when once set, accurately indicates all frequencies throughout the band. *Built-in Noise Limiter*, for quieter high frequency work. *Variable Selectivity* in six positions—three with AVC off and three with AVC on. *Exceptional frequency stability*. Removable plug on rear of chassis provides for 6-volt DC operation with suitable vibrator. *Break in relay connections* for standby. *Bliley Crystal Filter* in double balanced bridge circuit. General Coverage 43.5 MC to 540 KC in four bands. *S Meter* is calibrated in S units and DB. Controls: R.F. gain, Band Switch, Selectivity, Crystal phase, Audio gain, pitch, tuning, Band Spread, Tone, Noise Limiter, Send-Receive, BFO on-off. Cabinet size, 19 1/4 x 9 1/2 x 10 1/8 inches. For 110-volt 60-cycle AC operation. 6-volt operation may be accomplished by addition of Vibrapack VP554 power pack (see Page 4).

57 PT 08812—Receiver, Tubes, and Crystal. Shipping weight, 41 pounds. Cash Price... **\$69.50**
57 PT 08813—PM23. 10-in. PM Speaker in cabinet as shown above. Shpg. wt., 17 lbs. . . **12.00**



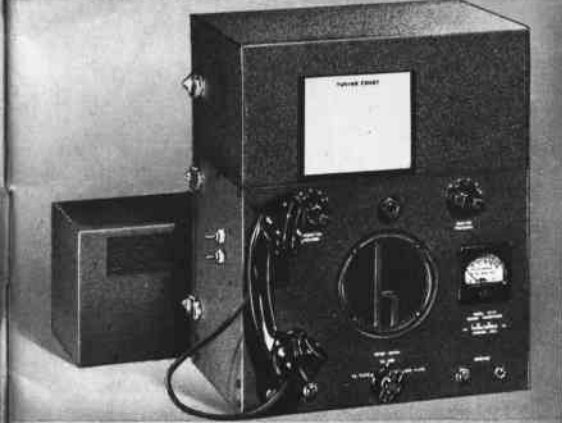
\$64⁵⁰ Cash
Terms \$6 Down
See Page 2

The SKYRIDER, 8-Tube Marine Receiver

An 8-tube receiver designed especially for the commercial frequencies that can be readily adapted for marine work. In its design, special emphasis has been placed on 600 meter and 700 meter operation. Tunes from 16.2 to 2150 meters (18.5 MC to 140 KC) on 4 Bands, as follows: Band No. 1-2150 to 645 meters (140 KC to 465 KC). Band No. 2-645 to 199 meters (465 KC to 1510 KC). Band No. 3-177 to 53 meters (1.7 MC to 5.8 MC). Band No. 4-54.5 to 16.2 meters (5.3 MC to 18.5 MC). Sensitivity and selectivity are excellent. Improved image rejection at the higher frequencies is achieved through the use of 1600 KC-IF transformers. The directly calibrated 338° Main Tuning Dial eliminates the use of complicated charts and tables, and an efficient mechanical band spread with separate dial provides easy and simplified tuning.

Other important features are: Best frequency Oscillator. Built-in speaker. Automatic volume control. Individual coils for each band. Sensitivity gain and tone control. *Tube Complement:* 6K7-r.f. amplifier, 6L7-first detector, 6J5-high frequency oscillator, 6K7-I.F. amplifier, 607-second detector, AVC and first radio, 25L6-power output tube, 25Z5-rectifier and 6J5-B.F.O. Mounted in sturdy metal cabinet in black crystal finish. Cabinet, 18 1/4 in. long x 9 1/4 in. wide x 8 1/4 in. high. For operation on 110-volt A.C. or D.C. current only. Allow 10 days for shipment.

57 PT 8815F—Model S22—Skyrider Marine. Shipping weight, 31 lbs. Cash Price..... **\$64.50**



\$270⁰⁰ Cash
For Terms
See Page 2

HT-8 25-WATT Radiotelephone

The HT-8 radiotelephone transmitter-receiver is the ideal unit for any type of craft, commercial or pleasure. 25 watts phone carrier, separate power supply, quartz crystal controlled transmitter. Simple to operate, precision built, 7-tube receiver, effective squelch circuit. Handset or speaker output, no tuning required. Dimensions, 20 in. x 15 in. x 9 in. high.

Up to 5 frequencies available. The very effective squelch circuit prevents static and noise from appearing in the loud speaker output when no carrier is present. Hence, the receiver may be left tuned to any station frequency without annoying bursts of static drumming on the ears. A pleasure and a convenience in fair weather, the HT-8 is a life saver in time of emergencies.

57 PTM 8818F—Model HT-8—Desk mounting type for 12, 32 or 100 volts D.C. as specified and 110 volts A.C. operation. State voltage. Shpg. wt., 85 lbs. Cash Price..... **\$270.00**

Crystals for HT-8

57 PT 8296F—Set of Transmitter and Receiver Crystals for ocean ship to shore, coast guard or ship to ship channels. (.04% tolerance.) Shipping weight, 1 pound.

State Frequency. Per Set..... **\$25.00**

As above, except for inland waters use. (Tolerance .02%.) State Frequency.

57 PT 8297F—2000 to 3000 K.C. Per Set.... **\$30.65** 57 PT 8298F—3100 to 6600 K.C. Per Set. **\$47.50**

57 PT 8299F—Receiver Crystal for 2662 or 2572 K.C. Marine Weather Channel. Shipping weight, 1 pound. State Frequency..... **\$12.50**

RCA AR-77 Communication Receiver

\$139⁵⁰ Cash
For Terms
See Page 2

In the design of this new general purpose receiver, emphasis has been placed on those features which provide a truly high degree of owner satisfaction: High signal-getting ability of the electrical circuits and accessory aids to acquire the desired signal; Stability of tuning adjustments to hold the signal and for accurate re-setability; Convenient controls; and economy of ownership. Polystyrene insulation. Dual IF alignment. Low Noise Level. Negative feed back. Accurate signal reset. Calibrated Bandsread. Variable Selectivity. Improved Image Rejection. Efficient noise limiter circuit for minimizing local interference. Overall sensitivity about 2 microvolts for 2 to 1 signal to noise ratio. Air dielectric trimmers. Six stop selectivity. Carrier level meter. Tube complement: 3-6SK7, 1-6K8, 1-6H6, 1-6SQ7, 1-6F6, 1-6SJ7, 1-524, 1-VR150. Controls: Crystal selectivity, Crystal phase, Standby, Sensitivity, Main Tuning, Band Switch, R.F. Trimmer, Bandsread, Negative Feedback, AVC, BFO, Audio Gain, Power Switch, Pitch, Noise Limiter, R Meter Zero. Terminals: doublet or single wire antenna, Xmitter relay, headphone jack. AVC for diversity action. Audio output 2-3 ohms. Frequency coverage: 540 KC to 31 MC in six bands with individual coils. Cabinet size, 20 1/4 x 10 1/4 x 11 1/4 inches deep. For 105-125 volts, 50-60 cycle A.C.

57 PT 07543—Receiver, Tubes, Crystal and Power Supply. Shpg. wt., 49 lbs. Cash Price..... **\$139.50**

57 PT 07544—8-inch PM Dynamic Speaker in cabinet to match. Shpg. wt., 8 lbs. Cash Price..... **8.00**





NATIONAL

THE WORLD'S FINEST
AMATEUR EQUIPMENT

NATIONAL HRO Receiver

\$179⁷⁰
Cash

Less Speaker
and Power Supply

\$15 Down

See Page 2

The two pre-selector stages give remarkable image frequency suppression, weak signal response and high Signal-to-Noise Ratio. The two high gain I.F. stages employ Litz-wound coils and are tuned with air-condensers. The usable sensitivity and selectivity are exceptional. Other circuit details are automatic and manual volume control, a vacuum tube voltmeter calibrated in "S" units for carrier intensities, a phone jack, a Send-Receive switch and a Lamb Single-Signal crystal filter. This filter makes selectivity adjustable over a wide range and the circuits are so precisely balanced that heterodyning signals may be completely phased out.

When Standard HRO coils are used for general coverage, each of the 4 coils includes two amateur bands and spectrum between. A simple switching device is provided which makes these same coils bandspread their respective amateur bands (except 160) over a span of 400 divisions on the dial. Black Wrinkle finished Steel cabinet.

The circuit and mechanical details of the HRO Jr. are the same as in the HRO except the HRO Jr. does not have the Lamb Single-Signal crystal filter, the "S" meter, or coils for continuous band spread only. See Page 2 for Easy Payment Terms.

57 PT 09019—STANDARD HRO Receiver, table model, complete with tubes and four sets of coils covering range 1.7 MC to 30 MC, but no speaker or power supply. Order speaker and power supply from listing below. Shpg. wt., 62 lbs. Cash price.....**\$179.70**

Additional Coils for HRO Receiver

57 PT 9322 —50-100 KC..... \$22.50	57 PT 9325 —500-1000 KC..... \$12.00
57 PT 9323 —100-200 KC..... 18.00	57 PT 9326 —900-2000 KC..... 12.00
57 PT 9324 —175-400 KC..... 16.50	Shipping weight, each, 8 pounds.

57 PT 09020—HRO JUNIOR RECEIVER table model, complete with tubes and one set of coils, 10 to 20 meters (2 amateur bands) but no speaker or power supply—which are required (see 57 PT 09021). Shpg. wt., 42 lbs.....**\$108.00**

57 PT 9327—Additional HRO Junior Coils (2 amateur bands per coil). Shipping weight, 8 pounds. Specify 20-40, 40-80, or 80-160 meter bands.....**\$9.90**

57 PT 9328—MCS Table-model Metal Speaker Cabinet and 8-inch Dynamic Speaker for HRO Junior (P.M. type requires no power supply) with impedance matching transformer for a single Class A Pentode (7000 ohms). Shipping weight, 12 pounds.....**\$9.90**

57 PT 09021—5897 AB Power Supply required for above receivers. Type 80 tube included. For 110-volt 60 cycle A.C. Shipping weight, 15 pounds.....**\$15.90**

NATIONAL NC-80X and NC-81X Receivers

\$99⁰⁰
Cash

\$8 Down

See Page 2

Ⓐ This inexpensive receiver has exceptional operating characteristics. Ten-tube, high gain superheterodyne circuit. The IF amplifier operates at 1560 KC. High image suppression; better, in fact, than that obtainable in many receivers having elaborate pre-selectors.

The crystal filter (2nd IF stage) has continuously variable selectivity from 400 cycles to 5 KC. The range of the phasing circuit (heterodyne elimination) has been similarly extended. Crystal filter in circuit at all times. Undistorted output of 2 watts when using either AC or DC, 115-volt supply.

The tuning system employs a multiple-scale dial of the full-vision type, accurately calibrated in megacycles. Several unusual features are incorporated, such as the mirror for over-coming parallax, and the adjustable frequency markers, by means of which any particular stations, or frequencies such as band limits, may be "logged" on the dial itself. Air tuned IF and RF circuits.

Automatic plug-in coils are used, controlled by a knob on the front panel, as in the NC-100. The frequency coverage is continuous, except for a small gap at 1560 KC., from 550 KC to 30 MC, in four ranges. The NC-81X is a special amateur model covering the following bands only: 1.7-2.05 MC., 2.5-4.0 MC., 7.0-7.3 MC., 14.0-14.4 MC. and 28-30 MC. The dial is calibrated in megacycles. Black Wrinkle finished Steel cabinet.

57 PTM 9320—NC-80X—complete with tubes, crystal filter, 8-inch PM speaker in cabinet. For 115-volt AC or DC. Shpg. wt., 69 lbs. Cash Price.....**\$99.00**

57 PTM 9321—NC-81X—Amateur Model, complete with tubes, crystal filter, 8-inch PM speaker in cabinet. For 115 volts 60 Cy. AC or DC. Shpg. wt., 70 lbs. Cash Price...**\$99.00**

Special Order Models

Either of above receivers can be supplied modified for Battery Operation 6-volt heater, 135-volt B-Supply on special order. Allow 14 days for shipment.

57 PTM 9344—NC80X-B—for battery operation. Shpg. wt., 69 lbs.....**\$99.00**

57 PTM 9345—NC81X-B—for battery operation. Shpg. wt., 70 lbs.....**99.00**

The NC-80X with either a special high frequency (30-45 MC) range or a low frequency range (200-550 KC) in place of one of the standard ranges. When ordering specify which standard range is to be omitted for the special range and allow 14 days for shipment.

57 PTM 9346—Shipping weight, 69 pounds.....**\$105.00**



NATIONAL NHU Receivers

A superheterodyne covering 27 to 62 MC in three ranges. Direct reading dial. Circuit uses three acorn tubes (956 RF, 954 First Detector, and 955 Oscillator) followed by three IF stages using 6K7's. A 6C8G Twin Triode is used as an infinite-impedance diode detector, and as a noise limiter. An additional 6C8G acts as first audio and as a carrier-off noise suppressor. Two 6SJ7's are used for CW oscillator and the AVC, which is amplified and delayed. The output employs a 6V6G.

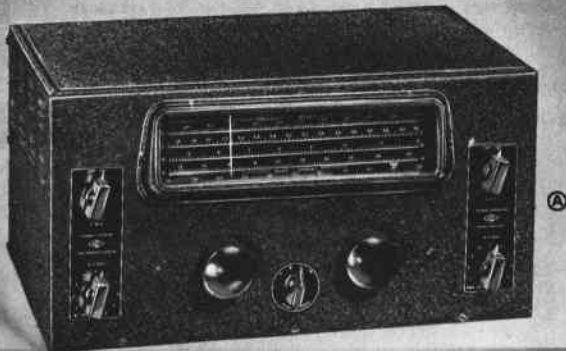
Knob slides in or out to engage either tuning condenser or the range-changing system. Coils mounted radially in a cast aluminum turret. Three-gang straight-line-frequency tuning condenser. The RF circuit and tubes are in frame of the condenser. Black Wrinkle finish Steel cabinet.

57 PT 09335—NHU Receiver, table model, with tubes, 8-in. speaker in cabinet and coils to cover 27 to 62 M.C. Less power supply. Shpg. wt., 62 lbs.....**\$165.00**

57 PT 09334—Power Supply, Type 5856, with rectifier, for AC model. Shpg. wt., 17 lbs.....**\$17.70**

RECEIVERS

NOW SOLD ON SEARS
EASY PAYMENT PLAN



NATIONAL One-Ten Receiver

Designed for maximum efficiency on the Ultra high frequencies, the One-Ten Receiver fulfills the need of the experimenter for an adequate receiver to cover the field between one and ten meters.

A four tube circuit is used, composed of one tuned R.F. stage, a self-quenching super-regenerative detector, transformer coupled to the first stage of audio which is resistance coupled to the power output stage. Tubes required; 954-R.F., 955-Detector; 6C5-1st Audio, 6F6-2nd Audio.

Coil forms and insulation moldings are made of low-loss Victron. They contribute much to the stability, dependability and high performance of the One-Ten. Black Wrinkle finished steel cabinet.

57 PT 09333—Type One-Ten Receiver and 6 sets of coils, without tubes, speaker or power supply which are required (See 57 PT 09338). See Page 62 for Speakers. Shipping weight, 16 lbs. **\$51.00**

57 PT 09338—5886 Power Supply and Tube. For 110-volt 60-cycle A.C. Shipping weight, 17 lbs. . . **\$17.70**



NATIONAL NC-100 and 101 Series Receivers

Now equipped with **NOISE SILENCER** at no extra cost

These 11-tube superheterodyne receivers are self-contained (except for the speaker) in a table model cabinet that is readily adapted to relay rack mounting. One stage of RF and two stages of IF are used. Low loss insulation and high "Q" coils give ample sensitivity and selectivity. Separate RF and Audio Gain Controls and a signal strength meter are mounted on the panel. Other controls are Tone, CW Oscillator, AVC with amplified and delayed action, a B-switch, and a phone jack. Self contained power supply. The range-changing system is unique in that it combines the mechanical convenience of a coil switch with the electrical efficiency of plug-in coils.

The NC-100A covers the range from 540 KC to 30 MC. Dial calibrated directly in megacycles. NC-100XA is similar, but equipped with a crystal filter. Black Wrinkle cabinet.

The NC-101X covers only the following ranges: 1.7-2.05 MC, 3.5-4.0 MC, 7.0-7.3 MC, 14.0-14.4 MC, and 28.0-30.0 MC. The NC-101X is equipped with a crystal filter, S-meter, and the PW type dial. (See illustration of HRO on preceding page.) The battery models use 9 tubes. Power output of AC model is 10 watts, battery model 2 watts. Not Mailable.

57 PTM 9022—NC-100A—complete with tubes and 10-inch speaker in cabinet. For 110 volt 60 cycle AC. Shipping weight, 70 pounds. Cash Price. **\$120.00**

57 PTM 9023—NC-100XA—complete with tubes and crystal filter and 10-inch speaker in cabinet. For 110-volt 60-cycle A.C. Shpg. wt., 71 lbs. **\$142.50**

57 PTM 9024—NC-100SA—complete with tubes and 12-inch Rola G-12 speaker chassis. For 110-volt, 60-Cycle A.C. Shipping weight, 76 pounds. **\$133.50**

57 PTM 9025—NC-100XSA—complete with tubes and crystal filter and 12-inch Rola G-12 Speaker chassis. For 110-volt 60-cycle A.C. Shpg. wt., 76 lbs. **\$156.00**

57 PTM 9026—NC-101X—complete with tubes and 10-inch speaker in cabinet. For 110-volt, 60-cycle A.C. Shipping weight, 71 pounds. **\$129.00**

57 PT 09329—DCS-10 metal cabinet for 10-inch speaker, same finish as receiver. Shipping weight, 8 pounds. **\$3.60**

57 PT 9330—DCS-8-Metal cabinet for 8-inch speaker, same finish as receiver. Shipping weight, 7 pounds. **\$3.00**

57 PT 9332—RRA Relay rack adapters designed for mounting any of the above receivers in a standard relay rack. Shpg. wt., 12 lbs. Per Pr. **\$1.50**

National cabinets for 12-inch Speakers not available. See Page 31.

Battery Models

Not carried in stock. Allow 14 days for shipment.

57 PTM 9341—NC-100A—complete with tubes. Battery model. 8-inch speaker in cabinet. Shipping weight, 70 pounds. Not mailable. **\$110.50**

57 PTM 9342—NC-100XA—complete with tubes and crystal filter. Battery model. 8-inch speaker in cabinet. Shpg. wt., 71 lbs. Not mailable. **\$133.00**

57 PTM 9343—NC101X—complete with tubes. Battery model. 8-inch speaker in cabinet. Shipping weight, 71 pounds. Not mailable. **\$120.00**

NATIONAL NC-44 Receiver

Ⓐ The new NC-44 employs seven tubes in a superheterodyne circuit.

The 6K8 first detector and oscillator has exceptional stability and conversion gain. Other circuit features are: Two 456 KC I.F. stages, second detector and AVC tube, CS oscillator and 25L6G beam power tube with 2 watts output. There are separate controls for RF and AF gain, and on and off switches for the AVC and CWO circuits. The self-contained power supply operates on 105-130 volts AC or DC. 6-volt battery model is also available.

Separate band spread condenser. This combination, plus the full vision dial calibrated in frequency for each range covered and a separate linear scale for the band spread condenser, makes accurate tuning easy. Inertia-type drive. A coil switch with silver-plated contacts selects the four ranges from 550 KC to 30 MC. Provision is made for either headphones or speaker operation.

Like all receivers which have no pre-selector stage, the NC-44 is not free from images. However, where price is an important consideration, the NC-44 will be found a satisfactory receiver. Black Wrinkle finished steel cabinet.

57 PT 09331—NC-44 Receiver, complete with tubes, coils covering from 550 KC to 30 MC, and speaker in cabinet, for 105-130 volts AC or DC operation—black finish. Shipping weight, 45 pounds. Cash Price. **\$49.50**

57 PT 09340—NC-44A. Same as above except for 110-volt 60-cycle A.C. operation. Shpg. wt., 45 lbs. Cash Price. **\$49.50**

57 PT 9332—RRA Relay Rack adapters designed for mounting these receivers in a standard relay rack. Shipping wt., 12 lbs. Per Pair **\$1.50**

\$120⁰⁰ Cash

57 PTM 9022
\$10 Down
See Page 2

\$49⁵⁰ Cash

\$5 Down
See Page 2

TELEVISION AND SHORT WAVE RECEIVING APPARATUS

MEISSNER 14 Tube "Traffic-Master" Receiver Kit

\$80²⁶ Terms: **\$7 Down**
Cash See Page 2
Chassis Kit

- 530 KC to 32.4 MC
- 1 M.V. Sensitivity
- 5-Band Tuning Unit
- Electrical Bandsread
- Flywheel Tuning
- Mono-Unit Crystal-Filter
- Noise Silencer Circuit
- Beat-Frequency Oscillator
- "R" Indication Meter



The Traffic-Master has been designed particularly for Amateur use. Every Amateur band (except 160 meters) has been "spotted" to insure better than 1-microvolt sensitivity by overlapping frequency ranges as much as 50 per cent. Ample bandsread on all bands is assured by careful design. Exceptional sensitivity is provided by a "hot" R.F. stage on all bands, using the new 1853 "television" tube.

The Traffic Master comes to you in complete kit form—everything is included down to the last nut, including solder—everything except tubes and speaker. All the "headaches" have been removed—there are no "bugs" to take out. When you have finished assembling and wiring the kit, it is ready to operate!

The entire "front end" is furnished already assembled, wired and aligned, and needs only to be mounted in place on the chassis. For 110 Volt 60 Cycle A.C.

- Complete Kit of parts less Cabinet and Panel, Speaker and Tubes.** Shpg. wt., 40 lbs.
57 PT 08402—Cash Price \$80.26
Front Panel—Black crackle-finished steel—punched and drilled. Shpg. wt., 5 lbs.
57 PT 8403 \$2.35
Cabinet—Black crackle-finished steel. Shipping weight, 10 pounds.
57 PT 8404 \$5.00
Kit of tubes—1-1853, 1-6k8, 1-6J7G, 1-6k7, 1-6J7, 2-6H6, 1-6L7, 1-6C8G, 2-6V6G, 1-5V4G, 1-6C5, 1-VR150. Shpg. wt., 4 lbs.
57 PT 8406 \$9.25
 See Page 62 for PM speakers.

MEISSNER TELEVISION KIT

The Meissner Television Kit is scientifically correct—the last word in modern television engineering. With the complete Kit provided, even a novice can easily and quickly assemble a Television Set which will deliver both Audio and Video reception. Designed to receive the standard R.M.A. signal (441 lines) in both the 44-50 and the 50-56 megacycle channels. Space is provided for the addition of two more coils, to expand the set for 4-station reception. Black and white reproduction: 3x4-inch picture. Latest RCA Videotron with Push-Pull Electrostatic Deflection. Wide band picture IF Channel with permeability tuned coils. A 1 1/4 Megacycle Trap prevents interference from the sound channel of the adjacent Television Band. Video Amplifier using shunt peaking gives maximum gain with flat frequency response up to 2.8 megacycles. Iron-core tuned IF coils in high gain super-het sound channel. Sweep Circuits are easily synchronized and establish control at very low signal levels. For 110 volt 60 cycle A.C. Size of cabinet overall 10 3/4 inches wide, 14 1/4 inches high, 22 inches deep. See Page 33 for television antenna. Allow 10 days for shipment.

\$136⁷¹ Cash

Cabinet Extra
 Terms: **\$12.50 Down**
 See Page 2

- 57 PT 8400F—Complete Meissner Television Receiver Kit,** including 17 tubes and instructions for assembling. Cabinet extra. Shipping weight, 55 pounds. Cash Price. \$136.71
57 PT 8401F—Walnut Veneer Cabinet for 57 PT 8400F. Shipping weight, 15 pounds. \$19.60

SILVERTONE 9-Tube Communications Receiver

\$39⁹⁵ Terms: **\$4 Down**
Cash See Page 2
Less Speaker, Crystal



These receivers originally sold for \$59.95. We have drastically reduced the price to clear them out quickly. Less than fifty left. First come, first served.

We guarantee that this receiver will hold its own in competition with others now selling for about one-third more. It has everything: 40 M.C. to 550 K.C. in 5 bands . . . Good quality vane type "R" meter . . . Direct Tuning . . . Electrical band spread . . . Variable beat frequency oscillator on all bands . . . An R.F. stage on all bands . . . Edge lighted twin dials . . . Headphone jack cuts out speaker when phones are plugged in . . . Connections for doublet or single wire antenna . . . Improved High "C" coil assembly . . . Iron Core I.F. transformers . . . Variable Selectivity . . . Copper plated chassis steel cabinet, gray crackled finish.

This receiver will deliver everything that most amateurs demand. The R.F. end is so designed that all leads between coils and tuning condensers are entirely eliminated. 465 K.C. I.F. frequency is used for high sensitivity.

Band spread in dial divisions is as follows: 28 to 30 M.C., 88; 14 to 14.4 M.C., 45; 7 to 7.3 M.C., 270; 3.5 to 4 M.C., 370; 1.7 to 2 M.C., 290. There are 12 controls as follows: BFO Injection, Power Switch and R.F. Gain, Main Tuning, Band Selector, Band Spread Tuning, Audio Gain, Tone Crystal Phase, BFO On-off, Send-recv, AVC On-off, and Crystal In-out. Sensitivity comparable with that of the Precision Series Three. Selectivity 12, 19, or 38 K.C. at 1000 times down. Size, 17 1/2 x 11 1/2 x 11 in. For 105-130 volt, 50-60 cycle A.C. only. Shipping weight, 39 pounds.
57 PT 08419—Complete with tubes, less Speaker and Crystal. Cash Price \$39.95
57 PT 08420—As above, with factory-installed crystal. Cash Price \$42.95
57 PT 8421—10-inch P.M. Speaker in cabinet to Match. Shipping wt., 9 lbs. \$3.95
 For Easy Payments, See Page 2.

MEISSNER Signal Shifter

\$39¹⁵ Cash

Terms: **\$4 Down**
See Page 2

Permits instant change of Frequency on any band. Ideal for remote control operation. Uniform output over entire range. Single control full band spread on each band. Selective automatic operation. Unbelievable frequency stability.

A variable frequency electron coupled exciter unit which enables the operator to instantly change his frequency by simply adjusting a single dial. Frequency stability superior to that of most crystals. Eliminates one or two doubler stages in the transmitter as the power output is more than sufficient to drive medium power R.F. amplifier or final stage. Covers entire phone band on each of the amateur bands except the 160 without re-tuning the main transmitter. Unique system of fully automatic standby permits tubes to remain at operating temperature. Built-in power supply. Set of 3 coils for one amateur band furnished with each unit. Specify band desired. Extra coils listed below. 110 volt, 60 cycle A.C. Shpg. wt., 20 lbs.
57 PT 08408—Cash Price \$39.15

(Only \$4 Down, see Page 2 for details)

- 57 PT 8407—Coils for 10, 20, 40, 80 or 160 meter band.** State band desired. Shpg. wt., 2 lbs. Per Set of 3 \$2.45

NATIONAL SW-3 Receiver

\$21⁰⁰ Terms: **\$2.50 Down**
Cash See Page 2



Employs one R.F. stage transformer coupled to a regenerative detector and one stage of impedance coupled audio. Precision two-gang condenser operated by single tuning dial. Regeneration control is smooth and noiseless. No back lash or fringe howl. Calibrated volume control. No tubes or coils are furnished.
57 PT 09000—ACSW3 for 110 volt 60 cycle A.C. operation. Less power supply. Shpg. wt., 17 lbs. Cash Price. \$21.00
57 PT 09001—5880 A.B. Power Supply for above receiver. Shipping weight, 18 pounds. 17.70
57 PT 09002—6DCSW3 for 6 volt D.C. Shpg. wt., 17 lbs. 21.00
57 PT 09003—2DCSW3 for 2 volt D.C. Shpg. wt., 17 lbs. 21.00

SW3 COILS: Specify band desired and receiver used. Shpg. wt., 1 lb.
57 PT 9004—General Coverage Coils 9 to 15, 13.5 to 25, 23 to 41, 40 to 70, 65 to 115, or 15 to 200 Meters. Per Pair \$3.00
57 PT 9005—For 200 to 360, or 350 to 550 Meters. Per Pair 3.30
57 PT 9006—Bandsread Coils. For 10, 20, 40, 80 or 160 meters. Per Pair \$3.00

TUBES. Shipping weight, Kit of 3, 1 pound.
57 PT 8416—2-58s and 1-27 for ACSW3. \$1.04
57 PT 8416—2-36 and 1-37 for 6DCSW3. 1.25
57 PT 8417—2-32 and 1-30 for 2DCSW3. 1.58

Hallcrafters FREQUENCY STANDARD

FOR USE IN . . .

- Checking Transmitter Frequency
- Bandsetting Receivers
- Checking Receiver Calibrations
- Locating Signals
- Calibrating Receivers
- Setting ECO Frequency

Used in conjunction with any good communications receiver, the Model HT-7 provides an accurate method for measuring frequencies. It may be used to set or check existing calibrations or to make initial calibrations. By following a simple procedure it is possible to check the frequency of any signal.

Consists of a stable crystal oscillator providing 1000 kc or 100 kc output, together with a 10 kc multi-vibrator and a harmonic amplifier. Harmonics of 1000 kc, 100 kc or 10 kc can be selected. With the output of the Frequency Standard fed into the receiver accurate marker frequencies spaced 10, 100 or 1000 kc apart will appear across the dial in any frequency range up to 30 megacycles. The frequency of the 100 kc crystal is adjustable so that it is possible to set its frequency to zero beat with either WWY or domestic broadcast stations.

A tuned circuit, placed at the output of the harmonic amplifier, increases the level of the higher harmonics.

The HT-7 Frequency Standard performs a very important function in amateur radio operations—and is available at small cost for a precision instrument of its type. Shpg. wt., 12 lbs
57 PT 8814—HT-7 Complete. Cash Price. \$29.50



\$29⁵⁰ Cash

Easy Terms
\$3 Down
 See Page 2

THE NEW HAMMARLUND SHORT WAVE RECEIVERS



HAMMARLUND "HQ-120-X" Receiver

(Licensed under RCA and Hazeltine Patents)

NEVER BEFORE have so many outstanding features been incorporated in a single receiver. This ultra-modern 12-tube receiver covers 31 M.C. to 540 K.C. (9.7-555 meters). Designed to meet the most exacting demands of the amateur and short wave experimenter. With the type construction employed in the HQ-120-X the inclusion of the broadcast band in no way jeopardizes the efficiency of the receiver at higher frequencies. Although this requires special tuning condenser design, it is the only satisfactory solution.

\$138⁰⁰
Cash

Terms:
\$12.50 Down
See Page 2

New Crystal Filter

The new "full-range" crystal filter that opens up a new field in radiophone communication; the special high gain R.F. stage with its antenna compensator; uniform sensitivity; three I.F. stages with silvered mica condensers and permeability tuned transformers; exclusive tuning condenser design; calibrated dial; noise limiter, and many other features all go to make up a receiver that is already taking the field by storm. The stability, sensitivity and selectivity of the new HQ-120-X are exceptional. The voltage regulated power supply provides constant voltage to the high frequency oscillator. This, together with special oscillator circuit, provides a degree of stability high enough to warrant calibrating the band-spread dial in megacycles for each amateur band from 80 to 10 meters inclusive. This dial has an additional 0-200 scale for calibration at other frequencies. The general coverage dial is also calibrated in megacycles. The high gain R.F. stage, with its antenna compensator control, provides maximum image rejection and highest signal-to-noise ratio with all types of antennas. By special circuit arrangement, the gain of the entire receiver is held relatively constant in all amateur bands and provides accurate "S" meter readings. Another feature directly concerning the accuracy of the "S" meter is the uniform output of the crystal filter.

The specially designed 15-gang tuning condenser in the HQ-120-X provides constant band-spread throughout its entire range. There are six sections in the main tuning condenser, and nine sections in the bandspread condenser. The special design of the tuning condenser, combined with an unusual dial arrangement, provides 310 degrees band spread on each amateur band.

Noise Limiter

The noise limiter in the HQ-120-X is designed to effectively remove automobile ignition interference and similar disturbances. It works with or without the A.V.C. system and there are no delicate threshold controls on the panel—merely an "On and Off" switch.

The new crystal filter circuit employed in the HQ-120-X is an outstanding HAMMARLUND development. Because of its "full-range" selectivity, this filter is applicable to both phone and C.W. reception. There are six positions on the selectivity switch and these are controlled from the panel. There are three positions for phone reception and the first of these positions provides a band width wide enough to admit fairly good quality music. Two positions in the selectivity range are for single signal C.W. reception. The sixth position cuts the crystal out of the circuit. Equipped with black etched panel and crackle finished metal cabinet with handles. Measures 17½ in. long x 10 in. high x 12¼ in. deep.

Catalog No.	Code	Description	Cash Price
57 PT 08433	HQ-120-X	Receiver complete with tubes, crystal filter and 10-in. P.M. Dynamic speaker, less speaker cabinet. Shipping weight, 56 pounds.	\$138.00
57 PT 08434	SC-10	Cabinet for 10-in. P.M. speaker finished to match receiver. Size is 12½x12½x7 in. Shipping weight, 8 pounds.	3.90

Above price is for standard model for operation on 105 to 125 volt. 50-60 cycle A.C.



HAMMARLUND "SUPER-PRO"

(Licensed under RCA and Hazeltine Patents)

THE HAMMARLUND "Super-Pro" is a 16-tube superheterodyne developed to meet the strict demands of commercial, air-port, police, marine, news and other equally important services including government and broadcasting services.

\$279⁰⁰
And Up
Cash

For Easy Terms

See Page 2

Two stages of tuned R.F. on all bands, permitting maximum image suppression. Continuously variable selectivity from 3 to 16 Kc. by means of a direct calibrated band-width control. "Super-Pro" sensitivity is so great and fidelity so faithful, that most large broadcasting stations use this receiver exclusively for rebroadcasting and recording purposes. Calibrated variable beat oscillator control. 0 to 2500 cycle beat note on either side of zero beat. 12-gang band-spread condenser which spreads each amateur band over practically the entire dial. High frequency broadcast channels are similarly spread.

20 Coils Employed

In the precision tuning unit are 20 factory-laboratory-adjusted tuning coils on Isolantite bases; the band spread condenser, a four-gang main tuning condenser; and a 12 to 1 ratio direct reading dial calibrated to within an accuracy of ¼%. Eight glass and eight metal tubes. Electrostatically shielded input; 4 air-tuned I.F. transformers; 3 audio stages; visible tuning meter; separate power supply.

Air Tuned I.F.'s.

Among the unusual features of the "Super-Pro" are the variable coupling air-tuned intermediate frequency transformers. These transformers permit the selection of the actual band-width required between 3 and 16 Kc. as stated above. By adjusting the band-width control it is also possible to secure the proper control of tone, since the high or low notes can be cut off at will, dependent, of course, upon the band-width selected. Both the primary and secondary transformer windings are thoroughly impregnated three-pi litz, mounted on Isolantite cores having the exceptionally high "Q" of 130 at 465 Kc. The tuning condensers are the popular HAMMARLUND "APC" type. The band changing switch in the "Super-Pro" is also an exclusive HAMMARLUND development and a radical departure from switches commonly used for this purpose. Specially designed silver plated knives mounted on Bakelite panels are used. Six silver plated contact fingers insure dependable low resistance contact for each circuit. No moving part carries current to cause noise or provide stray coupling. Silver plated short circuiting springs automatically short the unused coils at all times. Receiver, 18½x14¼x10½ in. Power unit, 13x7½x8½ in. 12-inch speakers furnished are High Fidelity type—10-inch sizes are standard dynamic type. Shipping weights, with 10-inch speaker, 110 pounds; with 12-inch speaker, 120 pounds.

Catalog No.	Code	Type	Tuning Range, Meters	Size, Spkr.	Cash Price
57 PTM 8428F	SP-210-X	Crystal	15 to 560	10 In.	\$279.00
57 PTM 8428F	SP-220-X	Crystal	15 to 560	12 In.	294.00
57 PTM 8430F	SP-210-SX	Crystal	7½ to 240	10 In.	279.00
57 PTM 8432F	SP-220-SX	Crystal	7½ to 240	12 In.	294.00

Above prices cover 110-Volt 60-cycle A.C. models, including tubes, with receiver and separate power supply in metal cabinets. Rack and panel model is \$22.50 additional. Shipped from factory in New York, N.Y. Allow several days extra for shipment. See How to Order on Page 2.

HALLICRAFTERS TRANSMITTERS



HT-6 25-WATT Phone and CW Transmitter

\$99⁰⁰
Cash \$8 Down
See Page 2

(A) You have a real thrill awaiting you when you operate the Hallcrafters HT-6 transmitter. It is new in design principles, a real amateur phone and CW transmitter in every respect and a quality unit throughout. Using either an 807 or an RK39 in the final R.F. stage the power output is 25 watts on most bands. Frequency range is 1.7 MC to 60 MC (160 to 5 meter amateur bands inclusive). Coils for any three amateur bands may be plugged in, pretuned, and then the transmitter may be switched to any of these three bands at will by a control on the front panel, which properly connects all circuits, from crystal to antenna. It is then only necessary to retune the final amplifier plate condenser for operation in the band desired. Coils are available for any amateur band, 5 to 160 meters with crystal control; or ECO coils are available for operation on the 160, 80, 40, 20 meter amateur bands.

Sockets are provided on the rear apron of the chassis so that the transmitter may be operated from converters or vibrapacks for emergency service.

A special form of oscillator keying gives a clean chirpless signal, providing for break-in operation on CW.

Any high level, high impedance mike may be used such as Astatic type D-104 or Shure 706 SA. Excellent voice quality with 100% modulation is assured. Output circuit is adjustable to match any type of resistive load of from 10 to 600 ohms.

Tube complement: 1-6L6 Osc.-dblr., 1-RK39 or 807 final R.F. amplifier, 1-6F5 microphone amplifier, 1-6J5 Audio Amplifier, 2-6L6G modulators and 2-5Z3 rectifiers. Power drain about 120 watts CW and 225 watts phone. Size—20 in. long, 9 in. high, 15 in. deep. For operation on 110-volts, 50-60-cycle AC.

See Page 2 for Easy Payment Terms.

57 PTM 9610—Model HT-6 Transmitter with tubes, less coils and crystals. Shipping weight, 67 lbs. Not Mailable. Cash Price.....\$99.00

57 PT 9611—Coils for 160, 80, 40 or 20 meter operation. Shpg. wt., 3 lbs. Each Set.....\$4.95

57 PT 9612—E.C.O. unit for 160, 80, 40 or 20 meter operation for corresponding coils listed above. Shpg. wt., 2 lbs. Each.....\$3.65

57 PT 9613—Set of coils for 5 or 10 meter operation on twice crystal frequency. Shpg. wt., 3 lbs. 8 oz. Each Set.....\$6.95

57 PT 9614—Random Frequency Crystal for 160, 80 and 40 meters. Shpg. wt., 8 oz. Each.....\$4.80

57 PT 9615—Random Frequency Crystal for 20, 10 and 5 meters. Shpg. wt., 8 oz. Each.....\$5.75

The HT-6 is available on special order for 220 volt 50-60 cycle operation at \$7.50 additional. Allow 15 days for shipment.

HT-9 Radio Telephone and Telegraph Transmitter

\$199⁵⁰
Cash \$18 Down
See Page 2

(B) The HT-9 is a five frequency plate modulated phone and CW unit, rated at 75 watts phone carrier and 100 watts CW output. Provides operation on any five frequencies between 1.7 and 30 megacycles. Clean, chirpless keying, excellent voice quality, instantaneous band change, and complete circuit metering. Oversize transformers.

Crystals and tuning units for all circuits up to the grid of the final amplifier are plugged and tuned in for each frequency channel desired. To select a desired frequency, the correct final tank coil is plugged in, the band switch set, and the final tank condenser resonated.

Antenna connections are attached to an adjustable tapped coupling coil. Antenna coil will match any resistive load from 10 to 600 ohms.

Keying is done in the oscillator to provide break-in operation.

High level modulation of the plate and screen of the 814 gives 100% modulation with very low distortion. Frequency response is flat within 3 DB from 100 to 7000 cycles. Carrier hum is at least 40 DB below 100% modulation.

Any medium level high impedance microphone, such as crystal diaphragm type is suitable.

Tubes used: 1-6F6 Oscillator, 1-6L6 Doubler, 1-814 Power Amplifier, 1-6F5 Audio-input amplifier, 4-6L6G P-P parallel Modulators, 2-866 rectifiers, 1-5Z3 Exciter Rectifier and 2-Audio Rectifiers. Controls: audio gain (with on-off switch for audio section), P. A. plate tuning. Switches: Filaments, Plate, Transmit-Standby, Meter Switch, Band Switch, Phone-CW switch. Meters: P. A. Plate, P. A. grid, Modulator Plate-exciter plate, P. A. plate tuning scale. Key, receiver standby and antenna relay connections on rear panel. Dull black front panel. Cabinet size: 28 inches wide, 18½ inches deep, 11½ inches high. For 110 volt 50-60 cycle AC.

57 PTM 8291F—HT-9 complete with tubes, less crystals and coils. Shipping weight, 73 pounds. Not mailable. Cash Price.....\$199.50

57 PT 8292F—Coils for 160, 80, or 40 meter band. (State band wanted.) Shipping weight, 1 lb. 8 oz. Cash Price each band.....\$6.65

57 PT 8293F—Coils for 20 or 10 meter band. (State band wanted.) Shipping weight, 1 pound 8 ounces. Cash Price each band.....\$8.95

57 PT 8294F—Crystal for 160, 80, or 40 meter band. (State band.) Shipping weight, 8 ounces. Cash Price.....\$4.80

57 PT 8295F—Crystals for 10 meter band. (For 20 meter operation 40 meter crystal is used in doubler circuit.) Shipping weight, 8 ounces. Cash Price.....\$5.75

HT-4 450-WATT Transmitter

\$695⁰⁰
Cash Write for
Easy Terms

(C) The development of this new transmitter followed no blind pursuit of tradition. The design of the transmitter was approached from a fresh viewpoint with the principles of functional design ever in mind. The result is the Model HT-4, a distinct departure from customary principles, yet meeting every requirement for the best in a high powered transmitter. Remember! The HT-4 is not of the sectional or unit type but rather a transmitter with all component parts—R.F., power supplies, modulator—everything housed in one attractive cabinet. An additional feature is the HT-5 separate preamplifier-control unit.

(C) The HT-5, with volume indicator, is intended to be placed on the operating table alongside of the receiver. Modulation, keying and standby are controllable thru the HT-5 although the transmitter itself may be located some distance from the operating table. Fully inclosed in heavy metal, three appropriately located inter-lock switches, insulated controls, each circuit individually fused—every conceivable precautionary measure has been adopted to make this unit safe.

The HT-4 operates on any amateur frequency from 160 to 10 meters inclusive. Due to the fact that both the exciter and final amplifier coils are of the plug-in type the transmitter can be operated on any amateur band, with provision for band switching the exciter on any three bands (the final amplifier coil is manually changed when changing bands). Plate modulation.

SPECIFICATIONS: Carrier Power Output: 325-watts phone, 450-watts CW. **Frequency Range:** any 3 crystal controlled frequencies in the 10 to 160 meter amateur bands. **Tubes:** 1-6F6 Osc., 1-6L6 Dbl., 2-RK30 Drivers, 1-RK63C Amp., 2-RK38 Cl., B Mod., 2-2A3 Drivers, 2-866 and 2-5Z3 Rect. **Power Supplies:** 3 Heavy Duty Power Supplies, 2000-volt, 400-volt and 375-volt. **Meters:** Filament Voltage, Excitation Plate Current, Grid Current, Amplifier Plate Current, Modulator Plate Current, Controls: Filament Voltage, Excitation Plate Current, Amplifier Plate Current, Modulator Plate Current. **Power Supply:** 110-volts, 50-60-cycles. Cabinet 29¼x19¼x40 in. high, finished in black and chromium.

See Page 2 for Easy Payment Terms.

57 PTM 9618—HT-4 Transmitter complete with HT-5 Remote Control Unit and Speech Amplifier. All tubes, crystals and coils for any three amateur bands you specify (160 to 10 meters). For 110-volt, 50-60-cycle A. C. Not Mailable. Shipping weight, 425 lbs. Cash Price.....\$695.00

57 PT 9619—Additional set of coils for any one amateur band (10 to 160 meters). Specify band wanted. Shipping weight, 5 pounds.

Each set.....\$26.00

NATIONAL TRANSMITTERS



National NTX-30 CW Transmitter

\$11700
Cash

57 PTM 9014
Terms: \$10 Down
See Page 2

Ⓐ A compact, highly efficient transmitter or RF exciter for four band operation. Push button band change control. 6L6 crystal oscillator, three 6L6 buffer doubler stages, and parallel 6L6's in RF stage. The three doubler stages drives amplifier on 10, 20, 40, and 80 meters. Metering of all circuits. Keying is in final amplifier, or in oscillator for break-in power. Plug-in tank coils. Normal input 60 watts. Power output 30 to 40 watts. Suitable for phone operation if modulator listed below is provided. For 110-volt, 60-cycle AC.

57 PTM 9014—Complete with tubes, tank coils for 10, 20, 40, and 80 meter operation. 4-in-1 crystal holder. No crystals. Black wrinkle finished table model metal cabinet. Shpg. wt., 70 lbs. See Page 2 for Terms. Cash Price.....\$117.00
57 PTM 9347—Relay rack model. Shpg. wt., 74 lbs. Not carried in stock. Allow 14 days for shipment.....\$123.00

National NSM Modulator

Type NSM Modulator (Not illustrated—similar in appearance to NTE (B) at right) is intended particularly for use with the NTX-30 Transmitter, shown above, but its many advanced features make it desirable for any modulating job within its 30-watt rating. Automatic Volume Compression, permitting high modulation levels without danger of overmodulation; DB meter indicating the amount of compression; four-position tone control.

Four stages of resistance-couple amplification with 57 input, 58 second stage, 6F8G phase inverter, and push pull 6L6G output—power gain approximately 135 db, output 30 watts—6X5 high voltage rectifier used in Automatic Volume Compression circuit—VR-150 Voltage Regulator. Two separate input circuits, one of which omits the first 57 amplifier tube.

57 PTM 9317—The type NSM Modulator, complete with tubes and mounted in the table model steel cabinet, finished in black wrinkle. Not Mailable. Shipping weight, 57 lbs.....\$78.00

Special Order

The following items are not carried in stock. Allow 14 days for shipment.

57 PTM 9318—Type NSM furnished with a 1/4-in. steel relay rack panel. Not Mailable. Shipping weight, 60 lbs.....\$84.00

57 PTM 9319—NSM Modulator unit and NTX-30 transmitter available as a combination unit in a steel cabinet finished in black wrinkle, with equipment as listed with the single units above. Not Mailable. Shipping weight, 120 lbs.....\$207.00

National NTE Exciter and Speech Amplifier

\$12900
Cash

57 PTM 9015
Terms: \$10 Down
See Page 2

Ⓑ The new National Combination Exciter and Speech Amplifier is the ideal answer to transmitter control at the operating position. It includes a versatile multi-band exciter unit with a choice of frequencies in each band, and a high-gain speech amplifier. The exciter can be used with either a conventional single crystal, a National "Vari-gap" variable frequency holder, or a National four-crystal multiple holder, although the multiple holder is usually supplied. The crystal oscillator is followed by three frequency-multiplier stages using 6L6's. The crystals can be controlled from the front panel, and the same is true of the frequency-multiplier stages which are selected by a convenient interlocking push switch of special low-loss design. The four-stage amplifier delivers 10 watts output from PP 2A3's with an input of .005 Volts. Although the power supply is entirely self-contained, the hum level is exceedingly low. A meter is provided for circuit adjustments.

Table models are furnished in black wrinkle-finish steel cabinets to match the NC-101X receiver.

57 PTM 9015—NTE-A Exciter-Speech Amplifier for 5, 10, 20, and 75 meters. Table model. Not Mailable. Shpg. wt., 70 lbs. Cash Price.....\$129.00

57 PTM 9016—NTE-B. Same as above but for 10, 20, 40 and 75 meters. Shipping weight, 70 lbs. Cash Price.....\$129.00

57 PTM 9017—NTE-C. Same as NTE-B except without speech amplifier. Shpg. wt., 70 lbs.. \$93.00

We can supply on special order relay rack models of the above at an additional cost of \$6.00 for black wrinkle finish, or \$9.00 for black leather-like enamel or gray enamel finish. State choice. Allow 14 days for shipment.

NSA Speech Amplifier

Ⓒ The new National Speech Amplifier has two input channels with an electronic mixer. One input circuit provides an over all gain of 125 db, and is suitable for crystal microphones, etc. The other input circuit has one less amplifier stage and is intended for high level sources such as phonograph pickups, etc. The frequency characteristic is flat within less than 1 db. from 25 to 10,000 cycles. A separate rectifier supplies bias voltage for the PP 2A3's, which deliver 15 watts output. A tone control is provided.

57 PTM 9018—NSA Speech Amplifier, table model in black wrinkle-finish steel cabinet, including tubes. Not Mailable. Shpg. wt., 50 lbs. Cash Price.....\$69.00

We can supply on special order relay rack models of the above at an additional cost of \$6.00 for black wrinkle finish or \$9.00 for black leather-like enamel or gray enamel finish. State choice. Allow 14 days for shipment.

National 600-Watt Transmitter

\$10170
Cash

KIT 57 PTM 9009
Terms: \$10 Down
See Page 2

Ⓓ One of the finest transmitters ever offered! Designed and built by National engineers to commercial standards, it gives top-notch performance and dependability on those high frequency bands where you want to step out and do business. Puts out a signal that will make the boys sit up and take notice. And now you can buy this "Commercial" type transmitter in kit form on Sears Easy Payment plan and save the cost of factory wiring and assembly.

Essentially an NTE-A or NTE-B combination R.F. exciter unit and speech amplifier with suitable components added to make a 600-watt (input) phone or C.W. rig for the 10, 20, 40 or 80 meter bands. A 35T buffer amplifier drives a pair of push pull 100TH's in the final amplifier. Compact open type construction used in buffer—final stage for short leads, high efficiency and easy accessibility. Uses XR plug in forms. Modulators are push-pull 203Z's driven by NTE audio output. Conventional circuits used throughout. Transformers are the new Thordarson CHT series. Special Pi network enables efficient coupling to any type of antenna. Panels black crackle lacquered finish with engraved markings.

Complete kits include all component parts, meters, panels, hardware, instructions, etc. Easy to wire up in a few hours time. Tubes not included. Complete RF kit, unwired. Tubes required 1-35T and 2-100TH's. Shipping weight, 40 pounds.

57 PTM 9009—Not Mailable. Cash Price.....\$101.70 Complete Modulator Kit, unwired. Tubes required 2-203Z's. Shipping weight, 75 pounds.

57 PTM 9010—Not Mailable.....\$57.00 Complete medium voltage supply kit, unwired. Uses 2-866's. Shipping weight, 50 lbs.

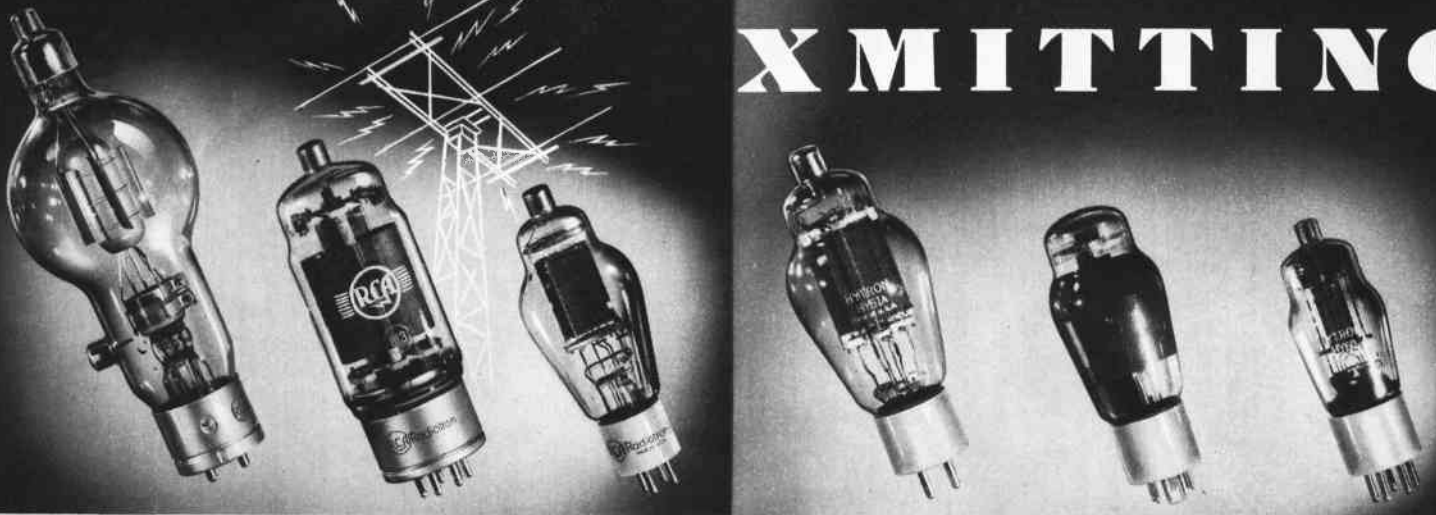
57 PTM 9011—Not Mailable.....\$69.90 Complete high voltage supply kit. Uses 2-866 tubes. Shipping weight, 75 lbs.

57 PTM 9012—Not Mailable.....\$135.00 Pi network coupler kit. Shipping weight, 20 lbs.

57 PT 09314.....\$20.10 Complete kit of parts for transmitter and pi network coupler. Choice of NTE-A or NTE-B. Includes enclosed rack, all component parts, meters, coil forms, hardware, etc. but less tubes and crystals. Shpg. wt., 350 lbs. Write for Easy Payment Terms.

57 PTM 9013—Not Mailable.....\$590.42

XMITTING



RCA Transmitting Tubes

Type No.	Catalog Number	Max. Plate Dissipation	Fil. Volts	Shpg. Wt.	Cash Price
Triodes					
203A	57 PT 07500	100 watts	10	6 lbs.	\$10.00
211	57 PT 07501	100 watts	10	6 lbs.	10.00
800	57 PT 07502	35 watts	7.5	6 lbs.	10.00
801	57 PT 07503	20 watts	7.5	4 lbs.	3.45
805	57 PT 07504	125 watts	10	5 lbs.	13.50
806	57 PT 07505	150 watts	5	6 lbs.	22.00
808	57 PT 07506	50 watts	7.5	6 lbs.	7.75
809	57 PT 07507	25 watts	6.3	2 lbs.	2.50
810	57 PT 07508	125 watts	10	6 lbs.	13.50
834	57 PT 07509	50 watts	7.5	5 lbs.	12.50
838	57 PT 07510	100 watts	10	5 lbs.	11.00
845	57 PT 07511	75 watts	10	5 lbs.	10.00
Beam Power					
807	57 PT 07512	21 watts	6.3	2 lbs.	3.50
813	57 PT 07513	100 watts	10	6 lbs.	28.50
814	57 PT 07514	50 watts	10	5 lbs.	17.50
832	57 PT 07515	15 watts	6.3	5 lbs.	28.75
1619	57 PT 07516	15 watts	2.5	2 lbs.	4.75
Pentodes					
802	57 PT 07517	10 watts	6.3	2 lbs.	3.50
803	57 PT 07518	125 watts	10	6 lbs.	28.50
804	57 PT 07519	40 watts	7.5	5 lbs.	15.00
837	57 PT 07520	12 watts	12.6	4 lbs.	7.50
Rectifiers					
866	57 PT 07521	5000 V.*	2.5	4 lbs.	1.50
866A	57 PT 07522	10000 V.*	2.5	4 lbs.	2.50
872	57 PT 07523	7500 V.*	5	6 lbs.	9.00
872A	57 PT 07524	10000 V.*	5	6 lbs.	11.00

*Indicates Peak Inverse Voltage.

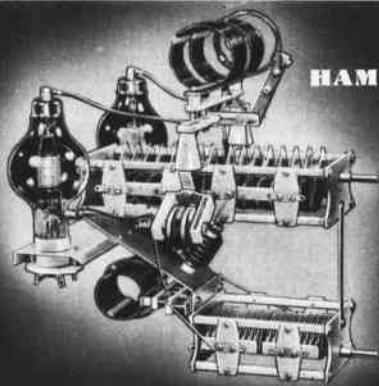
Hytron Ceramic Base Tubes

Type	Catalog Number	Shpg. Wt.	Cash Price
Acorns			
954	57PT07525	1 lb.	\$5.00
955	57PT07526	1 lb.	3.00
956	57PT07527	1 lb.	6.00
957	57PT07528	1 lb.	3.00
958	57PT07529	1 lb.	3.00
959	57PT07530	1 lb.	5.00
Cathode Ray			
902	57PT07531	2 lbs.	7.50
906	57PT07532	10 lbs.	13.50
913	57PT07533	2 lbs.	4.00
Miscellaneous			
879	57PT07534	2 lbs.	3.00
884	57PT07535	1 lb.	2.00
885	57PT07536	1 lb.	2.00
1851	57PT07537	1 lb.	2.10
1852	57PT07538	1 lb.	1.85
1853	57PT07539	1 lb.	1.85
VR-105/30	57PT07540	1 lb.	1.25
VR-150/30	57PT07541	1 lb.	1.25

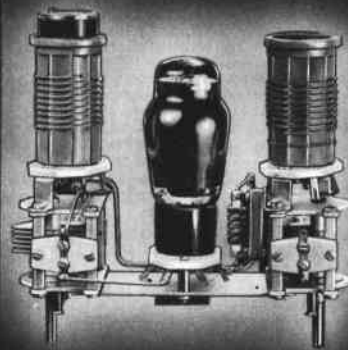
Type	Catalog Number	Description	Shpg. Wt.	Cash Price
HY25	57 PT 07550	25 Watt triode. Fil., 7.5 V., 2.25 A.	1 lb.	\$1.45
HY40	57 PT 07551	40 Watt triode. Fil., 7.5 V., 2.25 A.	1 lb.	2.75
HY40Z	57 PT 07561	40 Watt Zero-bias Fil., 7.5 V., 2.5 A.	1 lb.	2.75
HY51A	57 PT 07552	65 Watt triode. Fil., 7.5 V., 3.5 Amp.	2 lbs.	3.95
HY51B	57 PT 07553	65 Watt triode. Fil., 10 V., 2.25 Amp. otherwise same as HY51A.	2 lbs.	3.95
HY51Z	57 PT 07554	65 Watt triode. Fil., 7.5 V., 3.5 A.	2 lbs.	3.95
HY60	57 PT 07555	Beam tube. Heater 6.3 V., .5 Amp.	2 lbs.	2.50
HY61	57 PT 07556	Beam tube heater. 6.3 V., 9 A.	2 lbs.	3.00
HY866Jr	57 PT 07557	H. W. M.V. Rect. P.I.V. 1750 A.C. Fil., 2.5 V.	2 lbs.	1.05
HY866	57 PT 07558	H. W. M.V. Rect. P.I.V. 7500 A.C. fil., 2.5 V.	2 lbs.	1.50
6L6GX	57 PT 07559	Beam Tetrode heater. 6.3 V., 9 A.	2 lbs.	1.55
HY615	57 PT 07560	UHF Oscillator. R.F. Amp. Det. heater. 6.3 V., .15 A.	1 lb.	2.00
HY114	57 PT 07562	UHF Triode. Fil., 1.4 V., 0.12 A.	1 lb.	2.00

Heintz and Kaufman Gammatron Tubes

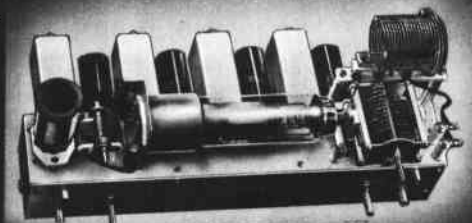
Type	Catalog Number	Description	Shpg. Wt.	Cash Price
HK 24	57 PT 07568	87.5 Watt UHF Power Tube F.I., 6.3 V., 3.0A.	1 lb.	\$3.50
HK 54	57 PT 07565	210-Watt UHF Power Tube F.I., 5.0V., 5.0A.	2 lbs.	6.75
HK 254	57 PT 07566	450-Watt Power Tube F.I., 5.0V., 7.5A.	4 lbs.	12.50
HK 354E	57 PT 07567	630-Watt Power Tube F.I., 5.0V., 10A.	5 lbs.	24.50



**HAMMARLUND
PA-500
PUSH-PULL
POWER
AMPLIFIER
KIT**



**HAMMAR-
LUND
OD-10
OSCILLATOR
DOUBLER
KIT**



**HAMMARLUND ED-4
COMBINED BAND SWITCHING
EXCITER AND AMPLIFIER KIT**

This push pull power amplifier can be operated with outputs up to 500 watts and over. RK38 and similar tubes requiring up to 2000 or more volts on the plates can be used. Designed for Hammarlund TC Condensers. Either the TCD-55-F or the TCD-75-G can be used in plate circuit and TCD-50-H or TCD-165-K in the grid circuit. Barker and Williamson standard, fixed or swinging link coils are recommended. Other parts required in addition to those included in foundation kit price are: 2-S-4 or similar sockets, 2-N-10 Neutralizing condensers, 1-CH500 choke, 1-Variable Plate Condenser, 1-Variable grid condenser and tubes. Can be used as final amplifier in all amateur transmitters from 80 to 10 meters. The PA-500 and the ED-4 constitute the complete R.F. portion of a 500 watt phone or CW transmitter. Size 15 1/2 in. high, 10 1/2 in. wide, 12 in. deep.

57 PT 09663—PA-500 Foundation Kit of brackets, nuts, screws and instructions. Shipping weight, 2 pounds. **\$2.55**

Page 12

The OD-10 is a standard tri-tet oscillator doubler and can be used as a low power 1 tube transmitter, or in conjunction with the BD-40 Buffer Driver Kit and PA-300 amplifier kit, shown on the following page, in a multi-band transmitter. The unit employs a 6L6G or similar tube and will operate on two amateur bands with a single crystal. The crystal socket is mounted inside of the Cathode coil form so that coil and crystal can be changed in one operation. Other parts required in addition to those included in foundation kit are: 2-MTC-100-C Condensers, 2-S-4 Sockets, 1-S-8 Socket, 1-CHX Choke, 1-XS2 Socket, 2-SWF-4 Coil Forms. Size 8 1/4 x 7 1/2 x 3 1/4 in.

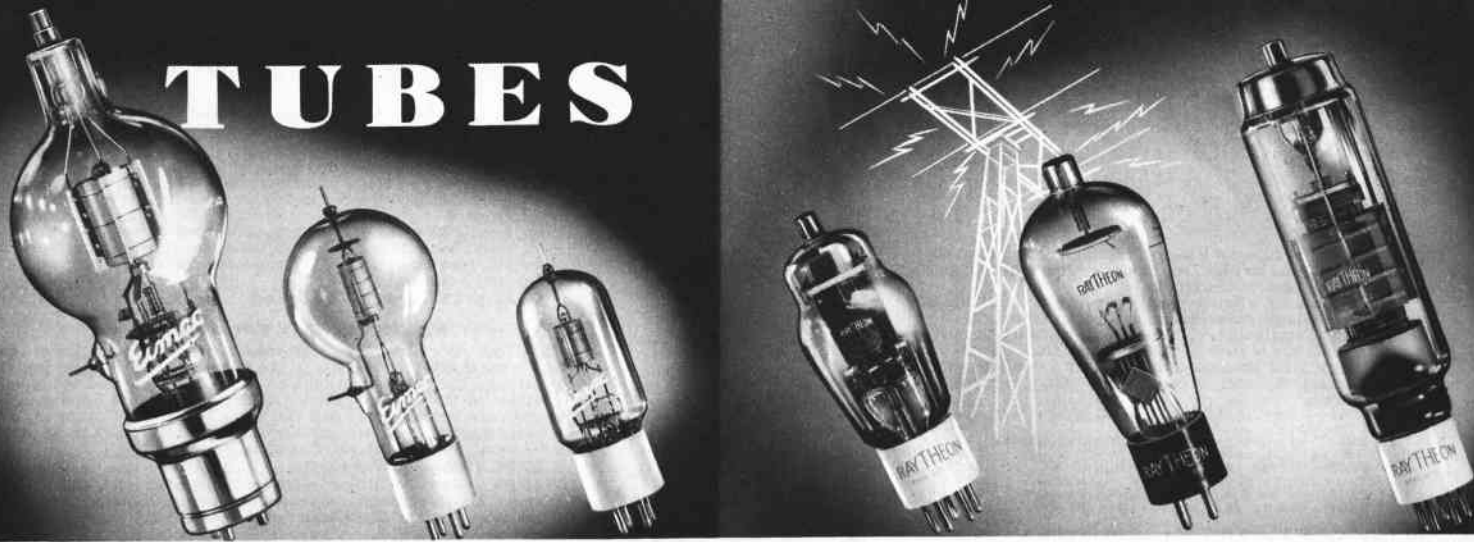
57 PT 09664—OD-10 Oscillator Doubler Kit of brackets, screws, nuts, etc. Shpg. wt., 8 oz. **\$1.68**

All Merchandise Shipped from Chicago But You Pay Transportation Charges only from Sears Nearest Mail Order House. See How-To-Order, Page 2.

The ED-4 is the same as the EU-4 described on the following page except that a power amplifier tube (RK47, 814 or their equivalent) has been added so that it can be used as a driver for the PA-500, or as a transmitter with an output of nearly 100 Watts. This Kit contains the same hardware as the EU4 with the addition of a tube shield, bracket for mounting the addition of a tube shield, bracket for mounting the addition of a tube shield, bracket for mounting the addition of a tube shield, and 2 tube socket, special spring plate connector, and 2 pillars for mounting standard plate coil. An extremely compact and efficient transmitter or driver. Other parts in addition to those included in the foundation kit price are: 1 ETU Exciter tuning unit for 80, 40, 20, or 10 meter band (See Page 22), 1-XS-2 socket, 4-5-8 sockets, 6-CHXRF Chokes, 1-S4 socket, 1-S-5 socket, 1-MC 100S condenser, 1-MTC-100-B Condenser, 3-SOS-100 insulators, 2-SOSP Insulator hardware, 4 SWF-4 Coil forms. Size, 8x9 1/4 x 17 in.

57 PT 09665—ED-4 Kit of hardware drilled and shaped, nuts, screws and 2 switches. Shipping weight, 4 pounds. **\$8.10**

TUBES



Eimac High Frequency Tubes

Type	Catalog Number	Description	Shpg. Wt.	Cash Price
RX-21	57 PT 07570	H.W.-M.V. Rect. P.I.V., 11000 Plate, 3A., Fil., 2.5V., 10A.	2 lbs.	\$7.50
KY-21	57 PT 07571	Has control electrode, otherwise same as RX-21.	2 lbs.	10.00
35-T	57 PT 07572	R.F. Amp.-Doublers. Plate 200-2000V., Fil., 5V., 4A	2 lbs.	6.00
75-T	57 PT 07577	Plate disc. 75 w., 2000V., 175. MA Fil., 5.0v., 6.5A	3 lbs.	9.00
100-TH	57 PT 07573	Class C.R.F. Amp. Class B Mod. T.K.W. input. in PP. Fil. 5V., 6.5A.	4 lbs.	13.50
100-TL	57 PT 07574	Low Mu version of 100-TH Replaces Eimac 50T.	4 lbs.	13.50
250-TH	57 PT 07575	For 1 KW Rigs. Class C.R. F. Amp.-Doubl. Fil., 5V., 10.5A.	5 lbs.	24.50
250-TL	57 PT 07576	Low Mu version of 250-TH Replaces Eimac 150-T.	5 lbs.	24.50

Grid and Plate Caps

Type 355. For plate of Eimac 100TH, RCA 807, RK-39, HY61 and corresponding tubes. For grid of older Eimac 250 and corresponding Gammatrons. 57 PT 8143—Snipping weight, 4 ounces. **40c**

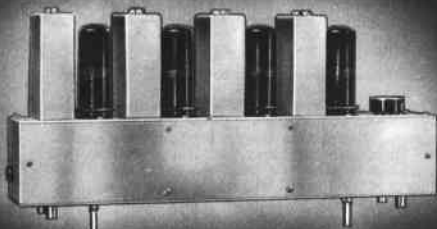
Type R-62. For plate of Eimac 35T-75T and grid of later type Eimac 250 and corresponding Gammatron types. 57 PT 8144—Shipping weight, 4 ounces, **25c**



Raytheon Power Tubes

Type	Catalog Number	Kind	Plate V.	Watts Output	Filament Volts	Filament Amps	Driving Power	Shipping Weight	Cash Price
RK-11	57 PT 07585	Triode	750	55W	6.3	3.0	3.2W	2 lbs.	\$2.50
RK-12	57 PT 07586	Triode	750	55W	6.3	3.0	5.2W	2 lbs.	2.50
RK-20A	57 PT 07587	R-F Pent.	1250	64W	7.5	3.25	1.6W	4 lbs.	15.00
RK-23	57 PT 07588	R-F Pent.	500	18W	2.5	2.0	0.5W	2 lbs.	4.50
RK-24	57 PT 07589	Triode	180	2.0W	2.0	0.12	0.5W	2 lbs.	2.25
RK-25	57 PT 07590	R-F Pent.	500	22W	2.5	2.0	0.5W	2 lbs.	4.50
RK-28A	57 PT 07591	R-F Pent.	2000	200W	10.	5.0	1.6W	4 lbs.	28.50
RK-31	57 PT 07592	Triode	1250	90W	7.5	3.0	3.9W	2 lbs.	10.00
RK-34	57 PT 07593	Dual Tri.	300	16W*	6.3	0.8	1.8W*	2 lbs.	3.50
RK-37	57 PT 07594	Triode	1500	122W	7.5	4.0	7W	3 lbs.	6.95
RK-38	57 PT 07595	Triode	2000	225W	5.0	8.0	10W	1 lbs.	13.50
RK-39	57 PT 07596	Beam R-F Tet.	600	36W	6.3	0.9	0.38W	2 lbs.	3.50
RK-41	57 PT 07597	Beam R-F Tet.	600	36W	2.5	2.4	0.38W	2 lbs.	3.50
RK-42	57 PT 07598	Triode	180	1.5.06	1.5	.12	0.2W*	1 lbs.	1.10
RK-43	57 PT 07599	Dual Tri.	135	1.25W*	1.5	.12	0.2W*	1 lbs.	1.50
RK-47	57 PT 07600	Beam R-F Tet.	1250	120W	10.0	3.25	1.0W	3 lbs.	17.50
RK-48	57 PT 07601	Beam R-F Tet.	2000	250W	10.0	5.0	1.0W	4 lbs.	27.50
RK-49	57 PT 07602	Beam R-F Tet.	400	25W	6.3	0.9	0.2W	2 lbs.	2.10
RK-51	57 PT 07603	Triode	1500	170W	7.5	3.75	10W	3 lbs.	6.95
RK-52	57 PT 07604	Triode	1500	135W	7.5	3.75	7W	3 lbs.	6.95
RK-56	57 PT 07605	Beam R-F Tet.	300	12.5W	6.3	0.55	0.1W	2 lbs.	3.00
57/805	57 PT 07606	Triode	1500	215W	10.0	3.25	8.5W	3 lbs.	13.50
RK-59	57 PT 07607	Dual Tri.	500	32W*	6.3	1.0	1.3W*	2 lbs.	4.50
RK-62	57 PT 07608	Gas Triode	45	.....	1.4	0.05	.....	2 lbs.	3.50
RK-63	57 PT 07609	Triode	3000	525W	5.0	10.0	17W	4 lbs.	22.00
RK-64	57 PT 07610	R-F Pent.	300	10W	6.3	0.5	0.18W	2 lbs.	3.50
RK-1851	57 PT 07611	Pentode	300	.....	6.3	0.45	.....	2 lbs.	2.10
RK-1852	57 PT 07612	Pentode	300	.....	6.3	0.45	.....	1 lbs.	1.85
RK-1853	57 PT 07613	Pentode	300	.....	6.3	0.45	.....	1 lbs.	1.85
866	57 PT 07614	Half W. Rect.	..	1 PV 7500 1 A.	2.5	5.0	.....	1 lbs.	1.50
866A	57 PT 07615	Half W. Rect.	..	1 PV 10000 1 A.	2.5	5.0	.....	2 lbs.	2.50
872A	57 PT 07616	Half W. Rect.	..	1 PV 10000 1 A.	5.0	10.0	.....	3 lbs.	11.00

*Indicates Value for Two Tubes or Two Sections of Dual Types.



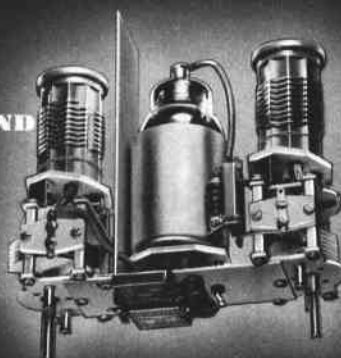
HAMMARLUND EU-4
BAND SWITCHING EXCITER KIT
For 10, 20, 40 and 80 Meter Bands

Unit covers the 80, 40, 20, and 10 meter amateur bands. There are four stages employing 6L6 tubes. The first is an 80 meter crystal oscillator and the remaining three stages are for frequency multiplication. Band changing is accomplished with a single 4-point rotary switch. This switch adds the proper number of multiplier stages to provide the output frequency desired and also connects the output link to the particular stage being used. Link coupling. Another switch is provided for metering the four stages. Power output is sufficient for driving small and medium power beam tubes, pentodes and triodes. Foundation unit includes all hardware for building the "EU-4" and includes the two special rotary switches. Other HAMMARLUND parts needed: 1 "ETU-80"; 1 "ETU-40"; 1 "ETU-20"; 1 "ETU-10"; 1 "XS-2"; 4 "S-8" sockets; 5 "CHX" R.F. chokes. The "EU-4" is 17 in. long x 8 in. wide x 2 3/4 in. high.

57 PT 09666—EU-4. All hardware, nuts, screws, switches, etc. Shpg. wt., 3 lbs. Price. **\$6.90**

HAMMARLUND

BD-40
BUFFER
DRIVER
KIT



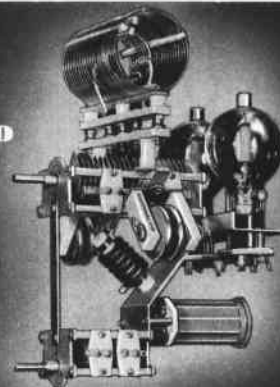
THE "BD-40" is a buffer-driver-multiplier unit of compact design and can be used in multi-stage transmitters where several multiplier stages are necessary or can be used as the driving unit for the "PA-300." The "BD-40" employs an 807 or similar beam tube and has an output of nearly 40 watts on all bands from 80 to 10 meters. Ideal for beginners desiring to start out with a small inexpensive transmitter. The "BD-40," when used in conjunction with the "OD-10," provides a neat, compact low power transmitter. Other HAMMARLUND parts needed: 2 MTC-100-C; 2 S-4; 1 S-5; 1 CH-X; 8 SWF-4 coil forms. Dimensions 8 1/4 in. x 7 1/2 in. x 3 1/4 in.

57 PT 09667—BD-40. Includes all brackets, tube shield, screws, washers and nuts. Shipping weight, 1 pound. Complete Kit. **\$2.16**

All merchandise shown in this Catalog can be bought on Easy Terms if your order is \$10 or more . . . See Page 2

HAMMARLUND

PA-300
AMPLIFIER
FOUNDATION
KIT



These units are so simple to assemble that even the most inexperienced person can build a neat, business-like transmitter. All brackets are completely drilled and shaped to fit standard HAMMARLUND parts and can be assembled in only a few minutes time. This unit is suitable for either a low or medium power transmitter. Such tubes as 809's, 10's, and many others can be used for low power output. For higher output either 808's, RK-37's, 11K-24 or HK-54 provide excellent results. The plate tuning condenser has .070 inch spacing. Voltages up to 2000 may be applied to the tubes. The brackets are designed to accommodate standard variable link inductors. Other HAMMARLUND parts used are—1 MTCD-100-B; 1 MTCD-100-C; 2 N-10; 1 CH-500; 2 S-4; 1 S-5; 4 SWF-4 coil forms. Dimensions 13 in. x 8 1/2 in. x 8 in.

57 PT 09668—PA-300. Includes all brackets, screws, washers and nuts. Shipping weight, 1 lb. Complete Kit. **\$1.95**

BLILEY CRYSTALS

A Type BC3. For the 40, 80 and 160-meter bands. The accurately-cut crystal is an active oscillator and has a drift of only 23 cycles /mc. /degree centigrade. Stainless-steel holder cover-plate. Shpg. wt., ea., 8 oz.
57 PT 8260—Within 5 KC. of specified frequency in the 40-80-meter bands, negative drift..... **\$3.35**
57 PT 8261—Within 10 KC. of specified frequency in the 160-meter band (+) drift..... **\$3.35**
57 PT 8262 F—At exact integral specified KC's in the 40 or 80-meter bands. Allow 10 days for shipment..... **\$4.95**

B TYPE B5. A superior low-drift crystal for the 20 and 40-meter amateur bands. Drift not exceeding plus or minus 4 cycles /mc. /degrees centigrade.
 The B5 Unit for 40-meters possesses high activity and a comparatively large power handling capacity (rated r.f. current, 135 ma. maximum). The frequency stability at operating temperature is over 5 times greater than obtainable with the type HF2 20-meter unit with only a small decrease in relative activity and power output. Shipping weight, each, 8 ounces.
57 PT 8263—7.0 to 7.3 MC. within 5 KC of specified frequency..... **\$4.80**
57 PT 8264 F—Frequency to exact integral specified KC's. Allow 10 days for shipment..... **\$5.90**
57 PT 8265—14.0 to 14.4 MC., within 15 KC. of specified frequency..... **\$7.50**
57 PT 8266—Within 5 KC. of specified frequency..... **\$12.00**
57 PT 8267—14.4 to 15.0 MC., within 30 KC. of specified frequency..... **\$7.50**
57 PT 8268—Within 5 KC. of specified frequency..... **\$17.50**

C Type HF2. A fully dependable crystal unit for the 10 and 20-meter amateur bands. In use, the HF2 Unit for 20-meters is directly applicable to conventional circuits. With the HF2 10-meter Unit, specifically recommended for 5-meters, certain circuit considerations are necessary to assure correct performance—for details, consult Engineering Bulletin (See Page 35, 57PT8189). Shipping weight, ea., 8 oz.
57 PT 8269—14.0 to 14.4 MC., drift (+) 20 cycles /mc. /°C., within 15 KC..... **\$5.75**
57 PT 8270—14.4 to 15.0 MC., drift (+) 20 cycles /mc. /°C., within 30 KC..... **\$5.75**
57 PT 8271—28.0 to 30.0 MC., drift (+) 43 cycles /mc. /°C., within 50 KC..... **\$6.75**

D TYPE LD2. This mounted, precision low-drift crystal for the 80 and 160-meter amateur bands is carefully cut from selected Brazilian Quartz. It possesses high activity and has a frequency drift of less than plus or minimum 4 cycles /mc./degree centigrade. The holder is low-loss molded Bakelite with crystal held under the constant pressure between two stainless steel electrodes. It plugs into any standard 5-prong tube socket. Shipping weight, each, 4 ounces.
57 PT 8272—Within 5 KC. of specified frequency or choice from our stock..... **\$4.80**
57 PT 8273 F—Supplied to exact integral specified KC's. Allow 10 days for shipment..... **\$5.90**

E TYPE VF1. By a mere twist of the control knob on the Type VF1 Variable Frequency Crystal Unit, you can instantly shift your transmitter frequency. Wide adjustable frequency range without detrimental effects from arcing or air-gap resonance. Up to 6 kc. variation with the 80-meter unit or 12 kc. with the 40-meter unit. When frequency multiplying the variation is proportionately increased to 24 kc. at 20-meters or 48 kc. at 10-meters.
 Each crystal is individually finished for best variable frequency performance and has a drift not exceeding (+) 4 cycles /mc. /degree centigrade. The crystal activity, at minimum frequency, is only slightly less than the activity of a corresponding fixed frequency unit, and decreases somewhat as the frequency is increased. Shpg. wt., each, 8 oz.
57 PT 8274—Within 5 KC of specified minimum frequency in the 80-meter band..... **\$6.60**
57 PT 8275 F—Minimum frequency to exact integral specified KC's., 80-meters. Allow 10 days for shipment. Specify minimum frequency..... **\$8.50**
57 PT 8276—Within 15 KC. of specified minimum frequency in the 40-meter band..... **\$6.60**
57 PT 8277—Within 5 KC. of specified minimum frequency in the 40-meter band..... **\$8.50**

F Type CF1. Assures maximum selectivity and minimum signal loss. The low-loss Steatite holder plugs into any standard 5-prong tube socket. Shpg. wt., ea., 4 oz.
57 PT 8278—For 456 KC, 465 KC, or 500 KC. I.F. (Specify One Wanted)..... **\$5.50**
57 PT 8278—For 1600 KC. I.F..... **\$9.50**

G Type SMC 100. An inexpensive frequency standard for calibrating receivers; signal generators and monitors can easily be constructed with this dual frequency unit (100-KC and 1000-KC). The 100-KC may be adjusted to exact value. The 1000-KC is accurate to within .05%. Frequency drift: 100-KC—10 Cy. /MC/degrees centigrade; 1000-KC—23 Cy. /MC/degrees centigrade. Reference frequencies can be obtained up to 20,000-KC from 100-KC, and up to 60,000-KC from 1,000-KC signal. Constructional details of a complete practical standard covered in bulletin sent with each unit. Shpg. wt., 4 oz.
57 PT 8280..... **\$7.75**

H Type SOC100. A 100 kc. mounted crystal and tank coil of high precision for use in primary or secondary frequency standards. Frequency-temperature coefficient of less than plus or minimum 3 cycles /mc. /degree centigrade. Circuit instructions are supplied with each unit. Allow 10 days for shipment. Shipping weight, each, 4 ounces.
57 PT 8281 F—Calibrated at room temperature (average 25 degrees C)..... **\$15.50**
57 PT 8282 F—Calibrated at specified oven temperature..... **\$21.00**
 SOC100X Standard Frequency Crystal Unit is a mounted 100 kc. X-cut bar for use in frequency standards. Has a frequency-temperature coefficient of minus 10 cycles /mc./degree centigrade. Calibrated for use with any conventional triode, pentode, or Tri-tet oscillator circuit. Shpg. wt., ea., 1 lb.
57 PT 8283—Type SOC100X, calibrated at room temperature (average 25 degrees C)..... **\$9.50**
57 PT 8284 F—Calibrated at specified oven temperature. Allow 10 days for shipment..... **\$10.00**

J Bliley Crystal Holder. Molded Bakelite. Fits standard 5-prong tube socket. Shipping weight, each, 4 ounces.
57 PT 8285—20-40 Meter Size..... **95c**
57 PT 8286—80-160 Meter Size..... **95c**

NATIONAL

4-in-1 Multiple Crystal Holder

K So designed that four crystals can be accommodated, any one of which can be selected by a simple switch adjustment. The four-position switch is especially designed low-loss unit. One plate of the holder is common to all four crystals. Plates are of solid metal 2 3/8 x 1 1/4 inch by 3/4 inch thick. Accommodates crystals up to 1 inch square. Supporting structure and plug in base are made of low-loss R-39 material. A very convenient device when an immediate choice of frequencies is desirable. Unit as illustrated is unassembled to better show component parts. Shipping weight, 1 pound 6 ounces.

57 PT 9165—Type NC 4 H. Each..... **\$4.50**

NATIONAL CHV Variable Holder

L This piece of apparatus provides a frequency variation of one part in 600 (about 6 KC on the 80-meter band) without loss of output. The variation is doubled in the 40-meter band and quadrupled in the 20-meter band. Holder has standard 5-prong plug and flexible shaft, knob and dial plate for panel mounting. Only zero temperature co-efficient crystals of 1 inch square or less can be used. Shipping weight, 2 pounds, 3 ounces.

57 PT 9166—Without Crystal..... **\$5.70**

57 PT 9167 F—With Special Meter Hollister Crystal. 40-80 or 16 meter crystal ground to desired frequency. Specify frequency wanted and allow 10 days for shipment..... **\$19.50**

National Vertical Holders

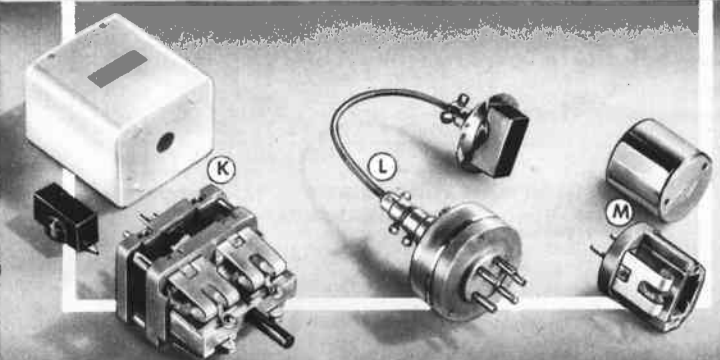
M These Crystal holders are a long way ahead of the average run of such devices. Yet when you compare prices you will notice that only a few cents must be added to the cost of an ordinary holder to get a NATIONAL. The insulating material is made of R39—that well-known low loss material which so many amateurs are turning to for best high-frequency results. Nickel finished metal cover. Five-prong socket mounts one crystal up to 1 inch square in vertical position. Shipping weight, each, 4 ounces.

57 PT 9168—Model CHR for use in receivers, resonator type..... **\$1.50**

57 PT 9162—Model CHS for use in transmitters, pressure constant air-gap type..... **\$1.50**

57 PT 9163—Model CHT—for use in transmitters, pressure type. No air gap..... **\$1.50**

USE YOUR CREDIT—BUY BETTER QUALITY



SILVERTONE UNMOUNTED CRYSTALS

\$1.50
AND UP

- Insures in-the-band operation.
- Lowest frequency drift.
- Highest power handling capacity.
- Unusually free oscillators.



The fine X-Cut Crystals are furnished to us by one of America's largest and best known crystal laboratories whose products are noted for their dependability, accuracy, and workmanship. Only the best grade of Brazilian quartz is used in the manufacture of these units and all quartz must pass many rigid optical mechanical tests before it is ground. Frequency calibrations are made by reference to a primary standard of frequency maintained accurate to within two parts in ten million.

Our immense stock of approximately 300 crystals insure you of frequencies very close to those which you specify on your order—never more than 5 KC above or below your specifications. Size 1 inch square. Specify Frequency. Shipping weight, each, 3 ounces.

57 PT 8287—For 80 and 160 meter band..... **\$1.50**

57 PT 8288—For 40 meter band..... **1.95**

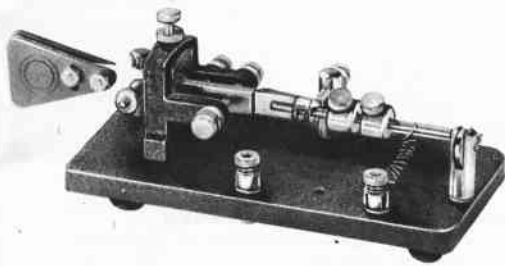
All merchandise shown in this Catalog can be bought on Easy Terms if your Order is \$10 or more... See Page 2

Hammarlund XS-2 Crystal Socket

A new crystal socket designed to follow the modern trend toward compact transmitter design. Pure Isolantite with heavy re-inforced contacts to insure perfect connection. Can be mounted above or below base or inside Hammarlund XP-53 coil form shown on Page 17. Mounting centers 1 3/4 inch. Shipping weight, 3 ounces.

57 PT 8445..... **30c**

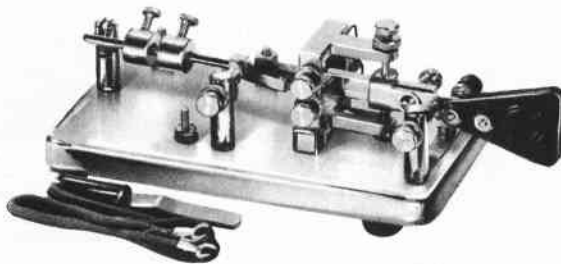




SPEED-X No. 515
Speed Key \$5.44

This semi-automatic radio telegraph key will enable you to transmit code faster and more legibly. The Speed-X Model 515 was designed for the amateur who demands a durable, heavy-duty key at low cost. The parts are finished in Heavy Nickel and the black wrinkle on the base and casting make this an outstanding key in appearance. The same standard construction used on all Speed-X keys is one of the features of this key. No switch or plug. Base 3x6 1/4 x 1/2 in.

57 PT 8740—Shipping wt., 4 lbs. \$5.44



SPEED-X No. 501
Professional \$10.29

This model has Heavy Duty 1/4-inch coil silver contacts, pigtail connections to the vibrator arm, no current through the bearings. Vibrator arm extra fast and Dot U spring designed for heavy duty work. Adjustable from 8 words per minute to as high a rate as is desired. It has standard construction used throughout. Heavy construction will hold adjustment at all speeds. Polished chromium base and machined parts. All machine parts nickel plated. Complete with switch, cord and plug. Base 3 1/2 x 6 1/4 x 1/2 in. Shpg. wt., 5 lbs.

57 PT 8741—Speed-X No. 501 \$10.29
57 PT 8742—Model 500. Same as above except black wrinkle base and nickel plated machine parts. \$7.94



SPEED-X
Practice Set \$1.91

One of the requirements for obtaining a government license for operating an Amateur Radio Station is the ability to send and receive the continental code. This inexpensive device will assist you to qualify. The ideal practice set for the beginner. Moulded entirely of Walnut Bakelite. Consists of a Hi-Frequency buzzer and a special key. The best results are usually obtained with two or three dry cells. Shipping weight, 1 pound 4 ounces.

57 PT 8743 \$1.91

SPEED-X
320 Key

The last word in appearance and performance. The Amateur's favorite. 1/4-inch coin silver contacts—well insulated for heavy current. All machine parts chromium plated. Black wrinkle base. Shipping weight, 2 lbs.
57 PT 8744
Each \$1.91

SPEED-X
300 Key

This practice key is well built and inexpensive for the beginner. The base is moulded of Walnut Bakelite, all machine parts are finished in staturary bronze, this makes a very attractive combination. Perfect action—simple adjustments, Coin Silver Contacts. Shipping weight, 1 pound.
57 PT 8745
Each 88c

SIGNAL
1/4 K.W. Key

For the beginner in the field of radio. Combines desirability and inexpensiveness. Well made throughout, with polished key lever and lacquered parts. Contact points are Platinor. Shipping weight, 1 pound.
57 PT 8738
Each \$1.65

SIGNAL
Std. Key

A scientifically correct key at an attractive price. Black enamel key base, mounted on mahogany finish wood base. Key lever is nickel plated. Contact points are Platinor. Shipping wt., 2 lbs.
57 PT 8739
Each \$1.32

SPEED-X High
Freq. Buzzer

Many beginners prefer to construct their own code practice sets. This buzzer of improved design, either a standard or semi automatic key, and 2 dry cells are all that is required. Moulded base and top. Will hold adjustment under all conditions. Resistance 2 Ohms. Shpg. wt., 8 oz.
57 PT 8746 73c

SPEED-X Key
Replacements

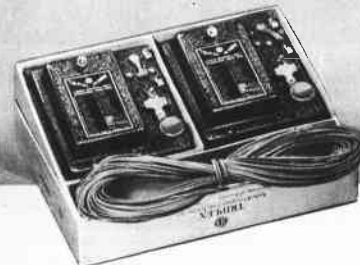
Navy Type knob, moulded Bakelite. Shipping weight, 3 ounces.
57 PT 8747 9c
Plug and cord set for semi-automatic speed keys. Shipping weight, 8 ounces.
57 PT 8748 54c
Everything in this Catalog can be purchased on Convenient Easy Payment Plan. See Page 2



PHONES... KEYS... RELAYS

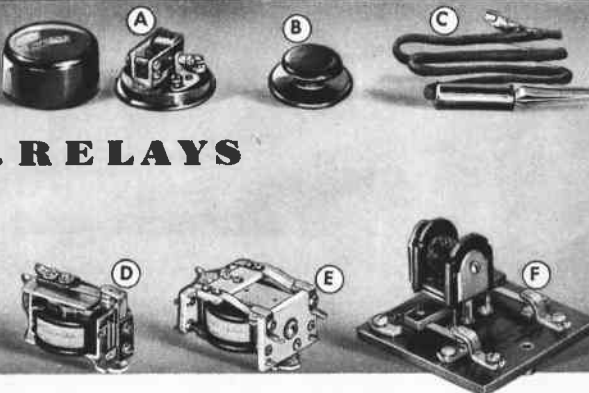


Quality
HEADSETS



TRIPLEX CODE
Practice Set

The ideal instrument to learn Telegraphy-Radio Code Signals and Blinker or Navy Signaling. Composed of a High Frequency Buzzer-Blinker-Light and telegraph under. Easy and economical to operate. Only 2 Standard Flashlight Batteries needed.
Code instruction is mounted on signal box. A switch is provided on panel board, enabling the user to change from one type signal to another. Clips are provided for connecting to an additional set. When the two sets are connected, messages can be sent or received by either set. Complete instructions.
57 PT 8797—Two instruments and 50 feet of connecting wire. Shpg. wt., 3 lbs. \$1.85
57 PT 8798—Single Instrument. No wire. Shipping weight, 1 lb. 4 oz. 85c



Advance General Purpose Relay

Designed primarily as a substitute for larger and more expensive relays. Entire relay is "above ground." Size 2 1/4 x 1 1/2 inches. Height, 1 1/2 in. Shipping weight, each, 1 lb.
57 PT 9400—Type 951SP-ST (Normally Open) \$1.91
57 PT 9401—Type 952SP-ST (Normally Closed) \$1.91
57 PT 9402—Type 953SP-DT 1.91

Advance Antenna Change-Over Relay

This DP-DT Relay designed for all types of mobile and portable rigs where space is at a premium. Size 2 3/4 x 1 1/2 inches. Isolantite insulation is used throughout. No flexible leads. 1/4-inch pure silver contacts. Rating: 15 amperes at 115 volts. Shipping weight, 1 pound 8 ounces.
57 PT 9403—Series 1000 for 110-volt 60-cycle A.C. operation \$4.41

Advance Keying Relay

Not Illustrated. Similar in appearance to (D). Mounted on Bakelite base 3 1/4 x 2 1/2 inches. Phosphor bronze spring leaves. 1/4 inch pure silver contacts. Two sets of single pole single throw switches in series allows a carrying capacity of 5000 volts. For 110 volt 60 cycle A.C.
57 PT 9404—Type 101K. Shpg. wt., 2 lbs. \$2.94

Staco Antenna Change-Over Relay

Ideal for R.F. in multi-band transmitter tank switching, shorting coil turns, adding condensers, switching crystals etc. 3/16 inch pure silver contacts. Handles 4 amperes. Double pole, double throw. Base 3 1/4 x 3 1/4 inches. Shipping weight, 2 pounds.
57 PT 9407—For 110 volts A.C. \$2.55
57 PT 9408—For 6 volts D.C. \$2.55

BRUSH CRYSTAL PHONES

Brush crystal phones are becoming increasingly popular for communication work. When crystal phones are used a plate voltage must be fed by blocking condensers with current carried by a choke or resistors of 10,000 to 100,000 ohms. Type A. Response 100 to 10,000 cps. High impedance. Moulded plastic case. Standard headband. 5 foot cord with pin tip ends. Shipping weight, 2 lbs.
57 PT 8875—Double Earphone Type. \$5.29
57 PT 8876—Single Earphone Type. Shipping weight, 1 pound. \$2.94
Type BJ—An improved model with sealed cartridge and 5 ft. yokeless cord. Shpg. wt., 2 lbs.
57 PT 8877—Double Earphone Type. \$7.06

Cannon-Ball "MASTER" Headphones
Exceptionally high quality and rugged construction. Concealed terminal type. Diameter of diaphragm 2 1/4 in. Bakelite shell. Double cases. Chrome magnet steel magnets. Stainless steel adjustable headband. Has 4 1/2-ft. cord. Shpg. wt., 1 lb.
57 PT 8880—5000 Ohm Dbl. Earphone Type \$2.35
57 PT 8881—2000 Ohm Dbl. Earphone Type \$1.75

Cannon Ball "DIXIE" Headphones
The old reliable low priced head set. Outside terminals. Diameter of diaphragm 2 1/4 inches. Aluminum case, lucanite ear caps. Double cases. Stainless steel headband. Adjustable. 4 1/2-ft. cord. Shpg. wt., 1 lb.
57 PT 8882—3000 Ohm Double Earphone Type. \$1.65
57 PT 8883—2000 Ohm Dbl. Earphone Type \$1.25
Cannon Ball "GRAND" Single Headphone. Diameter of diaphragm 1 1/4 inch. Aluminum case, lucanite cap. Spring steel headband. Shipping weight, 12 ounces.
57 PT 8884—Resistance 1000 Ohms D.C. 66c

Headphone Adapter
Designed to permit the use of headphones with a radio not equipped with headphone jack. No changes in wiring of the radio necessary.
57 PT 8886—Shpg. wt., 8 oz. 85c

Hearing Volume Control
A small metal box containing a volume control and a jack to receive a standard phone plug.
57 PT 8945—Shpg. wt., 1 lb. 8 oz. \$1.59

NATIONAL
Code Practice
Oscillator

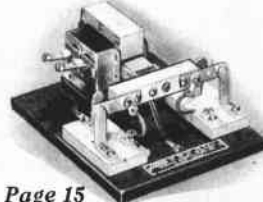


\$3.60

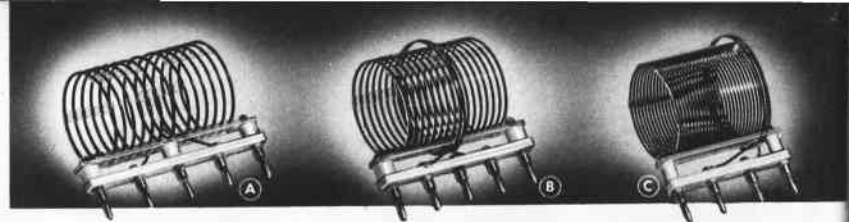
This small audio oscillator will make it easy for you to learn the radio telegraph code in a week or so. Also suitable as an audio signal for I.C.W. ultra high frequency bands. Requires a type 30 tube and four ordinary flashlight batteries. Substantially made throughout. Steel case black wrinkle enamel finish.
57 PT 9164—Shpg. wt., 5 lbs. \$3.60

GORDON
H.D.R.F. Relay

Handles 1 K.W. D.P. D.T. Alsimag insulation. 3/8-in. coin silver contacts. Spaced 1/2-in. apart. Self wiping. Size, 4 3/4 x 5 1/4 x 3 in. For 110-volt, 60-cycle A.C. Shipping wt., 4 lbs.
57 PT 9409 .. \$8.82



BARKER AND WILLIAMSON COILS



Barker and Williamson Air Inductors

We have selected this line of coils for our catalog because we believe that their quality and value will be appreciated by our customers. Most certainly there is no better merchandise of this kind to be had at any price. All coils are center tapped for your convenience, in case you want to use them that way. A complete selection of jack bars and accessories for mounting them is listed at the bottom of this page.



Barker and Williamson Swinging Link Inductors

You can buy no finer apparatus for adjustable link setups. Equally well suited to inter-stage or antenna circuits. Provide accurate, positive control of loading and excitation in the final stage. Supplied with 4 plugs to provide twin metering in the plate circuits of push pull stages. All base assemblies allow front-of-panel coupling control. Swinging link may be coupled direct to feeders of approximately 72 ohms. For high impedance feeders use HDA or TA antenna matching coil shown at lower left corner of this page.



57 PT 7666—BVL Base, Swing Link and Jack Bar. Shpg. wt., 12 oz. \$2.50
57 PT 7667—TV Base, Link and Jack Bar. Shipping weight, 2 lbs. 4.00
57 PT 7668—HDV Base, Link and Jack Bar. Shipping weight, 4 lbs. 6.00

Band (Meter)	Type BVL 100 Watts			Type TVL 250 Watts			Type HDVL 1 Kilowatt		
	Catalog Number	Shpg. Wt.	Price	Catalog Number	Shpg. Wt.	Price	Catalog Number	Shipping Weight	Price
160	57PT7650	12 oz.	\$2.10	57PT7656	1 lb.	\$2.25	57PT7661	2 lbs. 4 oz.	\$5.25
80	57PT7651	12 oz.	1.90	57PT7657	1 lb.	2.15	57PT7662	2 lbs. 4 oz.	4.50
40	57PT7652	12 oz.	1.65	57PT7658	1 lb.	1.90	57PT7663	2 lbs. 4 oz.	4.00
20	57PT7653	12 oz.	1.45	57PT7659	1 lb.	1.65	57PT7664	2 lbs. 4 oz.	3.75
10	57PT7654	12 oz.	1.40	57PT7660	1 lb.	1.60	57PT7665	2 lbs. 4 oz.	3.25
5	57PT7655	12 oz.	1.35						

Band (Meter)	Shpg. Wt.	A No Link		B Center Link		C End Link		Induct. Micro Henries	Cap. Mmf. Req.	Wire Size	Coil Diam. In.	Outside Plug Ctrs.
		Catalog Number	Price Each	Catalog Number	Price Each	Catalog Number	Price Each					
Types B and BL Rating 100 Watts												
160	1 lb.	57PT7669	\$1.75	57PT7674	\$2.50	57PT7679	\$2.50	78.0	110	18	2.5	3 1/2
80	1 lb.	57PT7670	1.55	57PT7675	2.30	57PT7680	2.30	39.0	52	16	2.5	3 1/2
40	1 lb.	57PT7671	1.30	57PT7676	2.05	57PT7681	2.05	12.0	43	14	2.0	3 1/2
20	1 lb.	57PT7672	1.05	57PT7677	1.80	57PT7682	1.80	3.0	40	14	2.0	3 1/2
10	1 lb.	57PT7673	1.00	57PT7678	1.75	57PT7683	1.75	1.1	28	12	2.0	3 1/2
Types BX and BXL Rating 250 Watts												
160	1 lb. 4 oz.	57PT7684	\$1.80	57PT7689	\$2.80	57PT7694	\$2.80	84.0	100	14	4.0	4
80	1 lb. 4 oz.	57PT7685	1.60	57PT7690	2.60	57PT7695	2.60	37.0	54	14	3.0	4
40	1 lb. 4 oz.	57PT7686	1.35	57PT7691	2.35	57PT7696	2.35	10.0	51	14	2.5	4
20	1 lb. 4 oz.	57PT7687	1.10	57PT7692	2.10	57PT7697	2.10	2.8	45	14	2.0	4
10	1 lb. 4 oz.	57PT7688	1.05	57PT7693	2.05	57PT7698	2.05	1.0	35	12	2.0	4
Types T and TL Rating 500 Watts												
160	1 lb. 4 oz.	57PT7700	\$1.85	57PT7705	\$2.85	57PT7710	\$2.85	74.0	115	12	5.0	5
80	1 lb. 4 oz.	57PT7701	1.65	57PT7706	2.65	57PT7711	2.65	35.0	60	12	3.5	5
40	1 lb. 4 oz.	57PT7702	1.40	57PT7707	2.40	57PT7712	2.40	13.5	38	12	2.5	5
20	1 lb. 4 oz.	57PT7703	1.15	57PT7708	2.15	57PT7713	2.15	4.3	30	12	2.5	5
10	1 lb. 4 oz.	57PT7704	1.10	57PT7709	2.10	57PT7714	2.10	1.3	25	12	2.0	5
Types HD and HDL Rating 1 K.W.												
160	4 lbs.	57PT7715	\$4.25	57PT7720	\$6.25	57PT7725	\$6.25	94.0	90	10	5.0	7 1/2
80	4 lbs.	57PT7716	3.50	57PT7721	5.50	57PT7726	5.50	40.0	50	10	3.5	7 1/2
40	4 lbs.	57PT7717	3.00	57PT7722	5.00	57PT7727	5.00	15.0	35	8	3.5	7 1/2
20	4 lbs.	57PT7718	2.75	57PT7723	4.75	57PT7728	4.75	4.2	29	8	3.0	7 1/2
10	4 lbs.	57PT7719	2.25	57PT7724	4.25	57PT7729	4.25	1.3	25	4	2.0	7 1/2

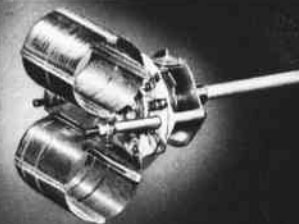
Include Items on this and opposite page with your Easy Payment Order . . . See Page 2.

NEW B & W BABY TURRETS FOR LOW POWER EXCITERS



Designed for maximum efficiency in low power exciter stages having a 35 watt maximum rating. All Baby Turrets contain five coils for operation from 10 to 160 meters and may be tuned with any of the popular 100 mmfd. condensers. If a split stator condenser is used, the capacity per section should be 200 mmfd. Complete front panel frequency control available with the flick of the wrist. Baby Turrets may be used with any of the popular screen grid and beam power tubes or low power triodes. Switches are of special design employing ceramic sections for the coil ends and high quality bakelite sections for center tap and link connections where excessive voltages do not require the use of a ceramic section. Model BTM comprises five untapped, unlinked coils; 10 to 160 meters inclusive. Suitable for operation in capacity coupled, single ended, unneutralized circuits.

- 57 PT 7736—Shipping weight, 1 pound. \$8.50
- Model BTCT comprises five coils, 10 to 160 meters inclusive, center tapped and suitable for use in neutralized single ended stages or push-pull stages employing capacity coupling.
- 57 PT 7737—Shipping weight, 1 pound. \$8.50
- Model BTCL, five coils 10 to 160 meters inclusive, end linked for inter-stage link coupling, employing single ended tank circuit. \$8.50
- 57 PT 7738—Shipping weight, 1 pound. \$8.50
- Model BTCL, comprises five coils, 10 to 160 meters inclusive center tapped and center linked for use in balanced output stages employing low impedance link line coupling.
- 57 PT 7739—Shipping weight, 1 pound. \$8.50



B and W Model 2A Band Switch

The obvious need for a small, compact, reliable band switch unit suitable for use in low power exciter stages led to the development of the extremely simple little device shown above.

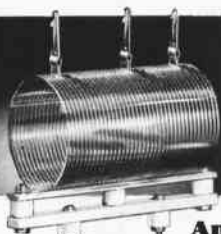
You can now build a complete low powered all band exciter unit without the necessity of changing coils.

To secure the greatest operating efficiency, the Model 2A band switch should be placed as close as possible to its associated tuning condenser, thus making an extremely compact tuning assembly which is not only ideal for exciter service but also for that little emergency transmitter where space is at a premium and dependability of the utmost importance.

The Type 2A band switch is for use in all capacity coupled stages with such tubes as the 6L6, 6G6, 802, 807, RK39, T21, etc.
57 PT 7735—Shipping weight, 1 pound. \$3.25

Barker and Williamson "Babies"

The smallest, best looking, most efficient 25 watt coil we have yet examined. You would hardly expect such quality for \$1. Each turn is securely imbedded in tough cellulose acetate strips less than 1/2 in. thick. Less insulating material than ever before, yet, all turns are perfectly air spaced — absolutely symmetrical — ideal for use in low power oscillators, buffer, doubler, grid and final stages. Universal 5-prong Alsimag base. Available for 160, 80, 40, 20 or 10 meter bands. Specify band wanted. Shipping wt., each, 8 oz.
57 PT 7730—Type M. Not Tapped. \$1.00
57 PT 7731—Type MC. Center Tapped. 1.00
(E) 57 PT 7732—Type MEL. End Linked 1.00
(F) 57 PT 7733—Type MCL. Ctr. Lkd. 1.00
57 PT 7734—Type MTL Tritet Cathode. 1.00
Cathode Condenser should be approximately 100 mmf. variable shunted by 100 uufd. fixed condenser.



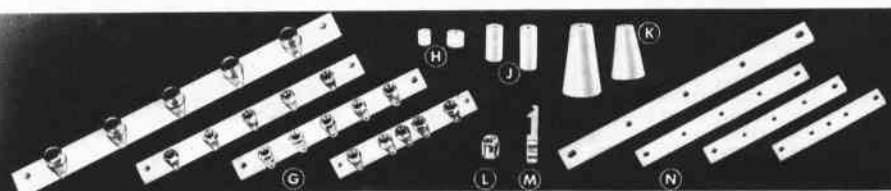
Antenna Coil

Model HDA. High impedance. Antenna matching coil for HDVL link assemblies. With three inductance clips and alsimag mounting base.
57 PT 7740—Shipping weight, 1 pound 4 ounces. \$4.00
57 PT 7741—Model TA high impedance. Antenna matching coil for 250 watt or 100 watt link assemblies. Shipping weight, 1 pound. \$1.75



Turret

Model B turret provides quick, efficient band switching. Positive action wiping contact switch affords quick selection of any of three bands. Plug-in feature permits any 3-band combination of coils 160 to 10 meters. Five jacks provide for single ended, center tapped, end linked or center linked type B coils. Ideally suited to crystal controlled or electron coupled oscillators as well as buffer, doubler, or final amplifier stages where inputs of 100 watts and 1000 volts are not exceeded.
57 PT 7742—Shipping weight, 1 pound 12 ounces. \$7.50



Barker and Williamson Accessories

- (C) Jack Bars. Shipping weight, each, 8 oz.
57 PT 7743—For HD-HDL-HDVL Coils. \$1.75
- 57 PT 7744—For T-TL-TVL coils. 1.25
- 57 PT 7745—For BX-BXL Coils. 1.15
- 57 PT 7746—For B-BL-BVL Coils.85
- (H) Steatite Bushings. Shpg. wt., 3 oz.
57 PT 7747—Diam. 1/2 in. Length 3/4 in. 3c
57 PT 7748—Diam. 3/4 in. Length 1 in. 2c
- (J) Steatite Post Insulators. Shipping weight, each, 4 ounces.
57 PT 7750—Diam. 1/2 in. Length 1 in. 18c
57 PT 7751—Diam. 1/2 in. Length 1 1/2 in. 18c
- (K) Cone Insulators. Shpg. wt., each, 8 oz.
57 PT 7752—2 in. high tapped. 30c
57 PT 7753—1 1/2 in. high tapped. 20c
- (L) Hexagon Nickled Brass Posts. Shipping weight, each, 2 ounces.
57 PT 7754—3/8 x 3/4 in. long. Each. 3c
57 PT 7755—1/2 x 3/4 in. long. Each. 6c
- (M) Inductance Clip. Shpg. wt., each, 2 oz.
57 PT 7756—Each. 10c
- (N) Plug Bars. Shpg. wt., each, 6 oz.
57 PT 7757—For HD-HDL-HDV Coils. \$1.10
57 PT 7758—For T-TL-TVL Coils. 30c
57 PT 7759—For BX and BXL Coils. 25c
57 PT 7760—For B-BL-BVL Coils. 20c

COIL FORMS, COILS AND CHOKES

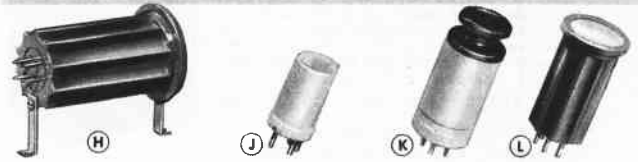


NATIONAL Coils and Forms

OUTSTANDING QUALITY AT
AMAZINGLY LOW PRICES

- A** AR-16 Exciter and Buffer Coils. Spaced Victron insulation. All sizes will tune with 30 mmf. condenser. Specify End-Link, Center-Link or Swing-Link. Swing-link type not available for 5 and 160-meter bands. Base included; socket is extra. Shpg. wt., each, 1 lb.
 57 PT 9310—160-Meter Coil and Plug... 90c
 57 PT 9273—80-Meter Coil and Plug... 90c
 57 PT 9274—40-Meter Coil and Plug... 90c
 57 PT 9275—20-Meter Coil and Plug... 90c
 57 PT 9276—10-Meter Coil and Plug... 90c
 57 PT 9311—5-Meter Coil and Plug... 90c
 57 PT 9277—XB16. Plug-in socket. Shpg. wt., 8 oz. 30c
- B** XR-13 Buffer Coil form. Winding length, 2 1/4 in. Diameter, 1 1/4 in. Isolantite.
 57 PT 9284—Shpg. wt., 8 oz. 66c
- C** Receiver Coil Form. Made of R39. Easy to drill and wind. Size, 2 1/4 in. long, 1 1/4 in. diameter. Shpg. wt., each, 4 oz.
 57 PT 9281—XR 4. 4-prong... 45c
 57 PT 9282—XR51. 5-prong... 45c
 57 PT 9283—XR 6. 6-prong... 45c
- D** XR-13A Buffer Coil Form. Winding length, 2 3/4 in., diameter, 1 in. Isolantite.
 57 PT 9285—Shpg. wt., 4 oz. 36c
- E** Exciter Coil Assembly. Consists of XR-16 Coil form (having a winding length of 1 3/4 in. and a diameter of 1 1/4 in.), PB-16 Plug and

- XB-16 sockets. Shipping weight, 1 pound.
 57PT9315... 90c
 57PT9288—Coil form only. Shpg. wt., 8 oz. 36c
 57PT9287—PB-16 Plug. Shpg. wt., 8 oz. 24c
 57PT9277—XB-16 Socket. Shpg. wt., 8 oz. 30c
- F** Buffer Coil Assembly consists of XR-13A Coil form (D) PB-5 Plug and XB-5 Socket. Plug and socket are made of R39. Shipping weight, 1 lb. 8 oz.
 57 PT 9312—UR13A... \$1.20
 57 PT 9309—UR13 Assembly same as above except XR-13 Coil (B) is used.
 Shpg. wt., 2 lbs. \$1.50
 57 PT 9290—PB-5 Plug only. Shipping weight, 8 oz. 45c
 57 PT 9291—XB-5 Socket only. Shipping weight, 8 oz. 45c
- G** Transmitter Coil Forms. Made of heavy Isolantite. Will fit PB-15 Isolantite plug and XB-15 Socket. The XB-15 Socket clamps on the tie bars of a TMA condenser.
 57 PT 9292—XR10A coil form only. 2 1/2 in. winding diameter, 5 in. long. For 20 and 40-meter bands. Shpg. wt., 1 lb. 90c
 57 PT 9293—XR14A coil form only. 5-inch winding diameter, 5 inches long. For 80-meter band. Shpg. wt., 3 lbs. \$2.10
 57 PT 9294—PB-15 Plug. Shpg. wt., 6 oz. 81c
 57 PT 9295—XB-15 Socket only. Shpg. wt., 8 oz. \$1.05



HAMMARLUND Coil Forms

- H** Made of low loss XP-53. Winding diameter 2 1/4 inches; length overall 3 3/4 in., exclusive of prongs. Mounting brackets included. Shpg. wt., ea., 8 oz.
 57 PT 9669—TCF-4. 4 prong. 42c
 57 PT 9670—TCF-5. 5 prong. 42c
- J** Ultra high frequency coil form. Made of Isolantite. Correct form factor. The number and location of holes facilitate the exact inductance desired. Form is 1 1/4 in. x 2 in. long.
 57 PT 9671—CF5-M. 5 Prong. Shipping weight, 6 oz. 60c
- K** The low loss and stability of these forms of extruded Isolantite afford efficient high frequency performance. Black enameled handle. Numerous holes. Diameter 1 1/2 in., length 2 1/2 inches exclusive of prongs. Shpg. wt., each, 8 oz.
 57 PT 9672—CF-4. 4 prong. 75c
 57 PT 9673—CF-5. 5 prong. 75c
 57 PT 9674—CF-6. 6 prong. 75c
- L** Receiving coil form made of XP-53. Has a special threaded molded inside to permit mounting a Hammarlund APC air padding condenser. Diameter, 1 1/2 in. Length, 2 3/4 in. Shpg. wt., each, 4 oz.
 57 PT 9675—SWF-4. 4 prong. 21c
 57 PT 9676—SWF-5. 5 prong. 21c
 57 PT 9677—SWF-6. 6 prong. 24c



TRIPLETT PANEL INSTRUMENTS



We carry in stock only those meter types for which there is an active demand. However we can supply on special order at regular trade prices any type Triplett meter desired. Allow 10 days for shipment of special order. Shipping weight, each meter listed, 2 lbs.

Scale	Round Type (A) Case Diam. 2 1/2 in.		Round Type (A) Case Diam. 3 1/2 in.		Square Type 2 1/2 x 2 1/2 in.		Square Type 3 x 3 inches	
	Catalog No.	Price	Catalog No.	Price	Catalog No.	Price	Catalog No.	Price
0-1 D.C.-M.A.	57 PT 8332	\$3.75	57 PT 8341	\$4.55	57 PT 8350	\$3.75	57 PT 8354	\$4.55
0-100 "	57 PT 8333	2.94	57 PT 8342	3.75	57 PT 8351	2.94	57 PT 8355	3.75
0-300 "	57 PT 8334	2.94	57 PT 8343	3.75	57 PT 8352	2.94	57 PT 8356	3.75
0-400 "	57 PT 8335	2.94	57 PT 8344	3.75	57 PT 8353	2.94	57 PT 8357	3.75
0-500 "	57 PT 8336	2.94	57 PT 8345	3.75	57 PT 8354	2.94	57 PT 8358	3.75
0-10 A.C. Volts	57 PT 8337	2.94	57 PT 8346	2.94	57 PT 8355	2.94	57 PT 8359	3.75
0-150 "	57 PT 8338	3.75	57 PT 8347	3.75	57 PT 8356	2.94	57 PT 8397	4.55
0-2.5 RF Amps.	57 PT 8339	6.71	57 PT 8348	6.54	57 PT 8357	3.75	57 PT 8398	6.54
0-5 "	57 PT 8340	6.71	57 PT 8349	6.54	57 PT 8358	3.75	57 PT 8399	6.54

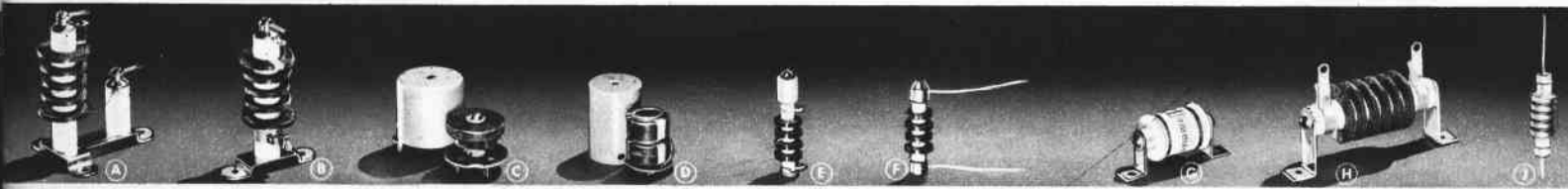
NATIONAL Mounted "S" Meter

- B** For use with NC80X or 81X Receivers. Same type as that used in the HRO. Handy desk mounting. The necessary resistor net work is built into the above mentioned National receivers and it is only necessary to connect 2 wires to install the meter. Shipping weight, 2 pounds.
 57 PT 9296—Black wrinkle finish. \$6.00
 57 PT 9297—Gray wrinkle finish. 6.00

HAMMARLUND XP-53 Plug-In Coils

When building a receiver don't overlook the importance of good coils. Good ones cost but little more than those of questionable quality. These high efficiency coils provide greater signal strength and better selectivity. All the amateur and broadcast short wave bands are tunable at low capacity. Four coils tuned by a 140 mmf. condenser cover 17 to 270 meters. Shipping weights, 1 coil, 8 ounces; 4 coils, 1 pound.

Catalog Number	No. of Coils	No. of Prongs	No. of Windings	Wire Length Meters	Cash Price
57 PT 9678	4	4	2	17-270	\$1.80
57 PT 9679	4	6	3	17-270	2.25
57 PT 9680	1	4	2	10-20	.60
57 PT 9681	1	4	3	17-41	.60
57 PT 9682	1	4	3	33-35	.60
57 PT 9683	1	4	3	66-150	.45
57 PT 9684	1	4	3	135-270	.45
57 PT 9685	1	6	3	250-560	.75
57 PT 9686	1	6	3	10-20	.75
57 PT 9687	1	6	3	17-41	.75
57 PT 9688	1	6	3	32-75	.75
57 PT 9689	1	6	3	66-150	.60
57 PT 9690	1	6	3	135-270	.60
57 PT 9691	1	6	3	250-560	.90



- A** National Honeycomb coil transmitter chokes. 0.6 amps. Isolantite core. Shpg. wt., each, 8 oz.
 57 PT 9298—R-152. For 80 and 160 meter bands. Inductance 4 m.h.; D.C. resistance 10 ohms. \$1.35
 57 PT 9299—R-154. For 20, 40, and 80 meter bands. Inductance 1 m.h.; D.C. resistance 60 ohms. \$1.35
- B** 57 PT 9300—R154U. Same as R-154 except that it has no insulating pillar or third mounting foot. \$1.05
- C** National Low frequency oscillator coil. Two separate inductances, closely coupled, in an aluminum shield. It is used in the SRR and other super regenerative receivers for the interruption frequency oscillator. Secondary inductance 6.25 m.h.; tunes to 100 K.C. with .00041 Mfd. condenser.
 57 PT 9301—Type OSR. Shpg. wt., 6 oz. 90c
- D** National honeycomb wound choke. Two sections. Case molded of R-39. Suitable for output circuit of second detector in H.F. receivers (475 K.C. intermediate frequency) Inductance approximately 12 m.h.; D.C. resistance 120 ohms.
 57 PT 9302—Type R-201. Shpg. wt., 6 oz. 75c
- E** National R-100 U Choke. Designed to mount directly on chassis like a standoff insulator. Inductance 2 1/4 m.h.; distributed capacity 1 mmf.; D.C. resistance 50 ohms. Current rating 125 M.A.
 57 PT 9303—Type R-100 U. Shpg. wt., 4 oz. 36c
- F** National R-100 Choke. Isolantite mounting. Continuous universal winding in 4 sections. Same electrical properties as R-100 U above.
 57 PT 9304—Type R-100. Shpg. wt., 4 oz. 30c
- G** Hammarlund CH-8 R.F. Choke. Isolantite spool. Flexible leads. Inductance 8 m.h.; D.C. resistance 70 ohms; Dist. Cap. 3 mmf.; rating 125 m.a.
 57 PT 9692—Shipping weight, 4 oz. 66c
- H** Hammarlund CH-500 Choke. Designed for parallel feed in high powered transmitters in the 10, 20, 40, 80 and 160 meter bands. Not recommended between 5300 and 6400 K.C. and 8000 and 9000 K.C. Inductance 2.5 m.h.; D.C. Resistance 8 ohms, Dist. cap., 1.5 mmf. rating 500 M.A.
 57 PT 9693—Shipping weight, 8 oz. \$1.05
- J** Hammarlund CHX Midget Choke. Size 1 1/2 in. long x 1/2 in. diameter. Inductance 2.1 m.h.; D.C. resistance 25 ohms Dist. cap., 1 mmf., rating 125 m.a.
 57 PT 9694—Shipping weight, 4 oz. 36c

BROWNING Frequency Monitor

A direct reading heterodyne frequency meter with built-in mixing circuit, incorporating a highly stable 100-1000 K.C. oscillator which can be easily and quickly checked against known frequency broadcasts such as WWV for the calibration of transmitters operating on all amateur frequencies. Has calibrated 5 1/2-inch laboratory-type dial which enables checking as close as 2 KC at 14 MC. Electric eye provides visual indication of zero beat, as well as frequency deviation of carrier. Operates on 110-volt A.C. or D.C. Comes complete with tubes and full instructions for use. Shipping weight, 13 lbs.

57 PT 08836—Cash Price \$31.35

For the benefit of those who wish to construct their own monitor, the Browning 100-1000 KC EC Coil Unit is available. Housed in a shielded can, 2x2x5 inches. Has "Silver Cap" padders. Shpg. wt., 1 lb.

57 PT 08837—Each \$3.45



\$3135



BROWNING Preselector

Complete Kit \$1350

A precision product of the Browning Laboratories, this regenerative type preselector unit covers 5 to 180 meters in five bands. Provides high gain for the successful reception of signals too weak to be tuned in satisfactorily on the unaided receiver. Has main tuning dial and separate band spread dials. Sensitivity is variable by means of regeneration control. For 110 volt 60-cycle A.C. Requires 1-1851 or 1-1852 tube—see Page 12 for tubes. Requires hookup with receiver for filament and plate supply.

57 PT 08838—Kit of Complete Parts including Cabinet; less tubes and power supply. Size, 7x10x6 inches. Full instructions for assembly. Shpg. wt., 9 lbs. Cash Price..... \$13.50

57 PT 08839—Completely Wired. Less tubes and power supply. Shipping weight, 9 lbs. Cash Price..... \$16.50



Precision I. F. Transformers

NATIONAL

NATIONAL I.F.'s have air dielectric condensers, isolated from each other by aluminum. Litz wound coils specially impregnated against moisture and mounted on Isolantite bases assure faultless performance regardless of climatic conditions. Shipping weight, each, 1 pound.

Fixed Tuned Exciter Tank

A Has two 25 mmf., 2,000 Volt air condenser, XR-2 (R39) coil form. Square aluminum shield can, 4 1/4 x 2 3/4 x 2 inches. Suitable for either capacitive or inductive coupling.

57 PT 9050—Without plug in base..... \$2.70

57 PT 9051—With 5-prong plug in base. 2.94

57 PT 9052—With 6-prong plug in base. 2.94

I. F. Transformers

B Type IFD Diode transformer air core. Round aluminum shield can. Designed for use in the new Noise silencer circuits or in A.V. C. circuits. Air tuned primary. Untuned secondary. Diam. 2 1/4 in.; ht., 4 1/4 in. Shipping weight, each, 1 lb.

57 PT 9053—For 175 KC use. Each \$2.10

57 PT 9054—For 450-550 KC use. Each. 2.10

C Type IFC I.F. transformers. Square aluminum shield can. Air dielectric condenser tuned. Adjustments on top. Size, 4 1/4 x 2 3/4 x 2 inches. Shpg. wt., 1 lb. each.

57 PT 9055—Air Core 450-550 KC. Ea. \$3.00

57 PT 9056—Iron Core 450-550 KC. Each 3.30

57 PT 9057—Air Core 175 KC. Each.. 3.00

57 PT 9058—Type IFCO 450-550 Beat Oscillator..... 3.00

HAMMERLUND

Type "ST" (D) and "T" (E) I.F. transformers are high grade units designed for experimental work and replacements in standard receivers of all types. The sensitivity, selectivity of these units make them equally satisfactory in superheterodynes employing either one or two stages of I.F. in connection with any type of second detector. All transformers are the tuned grid, tuned plate type with lattice wound coils impregnated to prevent moisture effects. Litz windings are used in the 465 KC. units. Tuning condensers are of the best quality mica compression type mounted on Isolantite and adjustable from the top of the shield can. Secondaries are either plain or center-tapped. Aluminum shield can of type "T" measures 2 1/4 inches outside diameter and 3 1/4 inches high. Mounting is by means of threaded lugs on 2 inch centers. "ST" type measures 2 3/4 inches high x 1 3/4 inch square with threaded mounting studs on 1 1/2-inch centers. Tunable plus or minus 10 kc. Shipping weight, each, 1 pound.

Catalog No.	Size/Freq.	Type	Price, Each
(D) 57PT8435	ST 465	Standard	99c
(E) 57PT8436	T 465	Standard	99c
(D) 57PT8437	ST 175	Standard	99c
(E) 57PT8438	T 175	Standard	99c
(D) 57PT8439	ST 465	Center Tapped	99c
(E) 57PT8440	T 465	Center Tapped	99c
(D) 57PT8441	ST 175	Center Tapped	99c
(E) 57PT8442	T 175	Center Tapped	99c
(D) 57PT8443	ST 465	Beat Osc.	99c
(E) 57PT8444	T 465	Beat Osc.	99c



STANCOR 110-CM Transmitter Kit

\$4875 For Easy Terms
Cash See Page 2

The application of cathode modulation in the 110-CM permits the construction of a complete 100-watt phone-CW transmitter on a standard 17x10x3-in. chassis.

The 6L6 crystal oscillator is of the regenerative type which will give harmonic output. For this reason only three crystals, one 160-meter, one 40-meter and one 10-meter will provide operation on all five bands.

The audio channel for cathode modulation employs a 6SJ7 high gain input amplifier, permitting the use of low level microphones, such as the crystal type. A 6C5 tube is used as a driver for the push-pull 6V6G tubes in Class AB1. The audio output easily attains 100 per cent modulation of the R.F. amplifier.

In shifting operating frequencies from one band to another, merely change both the oscillator and amplifier plug-in coils. Two switches in the power supply are arranged to permit pre-heating of filaments. For 110-volt 50-60-cycle A.C.

57 PT 08095—Complete Kit of parts for building except tubes, cabinet, coils, crystal, and meter. Shipping weight, 42 lbs. Cash Price..... \$48.75

57 PT 8096—Oscillator Coil. (State band.) Shpg. wt., 1 lb. Each..... 99c

57 PT 8097—Tank Coil. (State band.) Shpg. wt., 1 lb. Each..... 93c

57 PT 8093—Cabinet as illustrated. Shipping weight, 30 lbs. Each..... \$7.36

57 PT 08448—Kit of 8 Tubes. (1-812, 1-6L6, 1-6SJ7, 1-6C5, 2-6V6G, 1-RK60, 1-5Z3.) Shipping weight, 5 lbs. Kit..... \$9.95

57 PT 08331—Triplet 327, 0-200 D.C. Milliammeter. Square Type. Shipping weight, 2 lbs. Each..... \$3.75



STANCOR 60-P Transmitter Kit

\$4480 For Easy Terms
Cash See Page 2

A complete 60 watt phone-CW transmitter on a standard 17x10x3 inch chassis. The regenerative type crystal oscillator produces harmonic output and, for this reason, only three crystals will provide operation on all five bands, from 10 to 160 meters inclusive. The HK24 tube in the amplifier circuit is easy to drive and provides high efficiency.

A high fidelity audio channel employing a 6SJ7 high gain input amplifier allows the use of low level microphones, such as the crystal type. A 6N7 tube in Class A makes a desirable driver for the push-pull 6L6 tubes in Class AB1. Thirty-two watts of audio permits one hundred per cent modulation of the Class C amplifier to be easily attained. The desired speech level is obtained by adjustment of the gain control. For CW operation, the key is plugged into J2, opening the oscillator cathode circuit to permit break-in procedure. For 110-volt 50-60-cycle A.C.

57 PT 08092—All parts for building except coils, meter, crystal, cabinet and tubes. Shpg. wt., 43 lbs. Cash Price. \$44.80

57 PT 08093—Cabinet as illustrated. Shipping weight, 30 lbs. Each..... \$7.36

57 PT 08447—Kit of 8 Tubes. (1-HK24, 3-6L6, 1-6SJ7, 1-6N7, 1-5Z3, 1-RK60.) Shipping weight, 5 lbs. Cash Price..... \$10.87

57 PT 08331—Triplet 327 0-200 D.C. Milliammeter. Square Type. Shipping weight, 2 pounds. Each..... \$3.75

57 PT 8094—Tank Coils. (Specify band.) Shpg. wt., 1 lb. Each..... 90c

Oscillator Coils are wound on standard 1 1/2-inch forms. See Page 17 for these.



STANCOR 100-MB Transmitter Kit

\$4200 For Easy Terms
Cash See Page 2

A novel band switching 100-watt (final plate and screen input) transmitter, using a 6L6G oscillator in a tritet circuit and a pair of beam power tetrodes operating as an R.F. amplifier. The exciter, the amplifier, and the antenna circuits are simultaneously changed with a single switch. Frequency range 1.7 to 30 MC. Switching of one meter gives three important readings during adjustments. Amplifier designed as high efficiency natural doubler on higher frequencies and as a straight push-pull amplifier on the two lower frequency bands. A separate linked tank coil is used for each band. Terminals on back of chassis accommodate the secondary winding of a modulator's output transformer, an extension for remote switching of the plate power of the transmitter, and a telegraph key. For 110-volt 60-cycle A.C.

57 PT 08098—All parts for building except tubes, coils, meter, cabinet, and crystals. Shpg. wt., 35 lbs. Cash Price.. \$42.00

57 PT 08093—Cabinet as illustrated. Shipping weight, 30 lbs. Each..... \$7.36

57 PT 08449—Kit of 4 Tubes. (1-6L6G, 2-807, 1-5Z3.) Shpg. wt., 3 lbs. Kit..... \$8.22

57 PT 08331—Triplet 327 0-200 D.C. Milliammeter. Square Type. Shipping weight, 2 pounds. Each..... \$3.75

57 PT 8094—Oscillator Coil. (State band.) Shpg. wt., 1 lb. Each..... 95c

Tank Coils. Use Barker and Williamson 100-watt center linked type. See Page 16 for prices.

For Phone Operation, Stancor Modulation Kit 440M is available. Write Personal Service Dept., Chicago, for prices.



STANCOR 10-P Transmitter Kit

\$2100 Terms
Cash \$2.50 Down

A compact, low power phone-CW transmitter kit, covering five band operation. Uses a 6J5 tube in an untuned crystal oscillator circuit and a 6L6 as an R.F. amplifier. Audio-section consists of a 6L6 in Class A-1 plate and screen modulating the 6L6 R.F. amplifier. Kit includes single button carbon mike. High percentage of modulation can be obtained with a class "C" R.F. amplifier input of 12 Watts. For CW operation an amplifier input up to 20 watts is allowable. Frequency range 1.7 to 30 MC. Crystal controlled. Cabinet size: 10 1/2 x 6 1/2 x 6 1/2 inches. For 110-volt 50-60-cycle A.C.

57 PT 8090—Complete Kit of parts and Instructions for assembling. No tubes, crystal, coils, meter or key. Shpg. wt., 14 lbs. Cash Price..... \$21.00

57 PT 8091—Plug-in Coil with Link. (State band.) Shpg. wt., 1 lb. Ea..... 95c

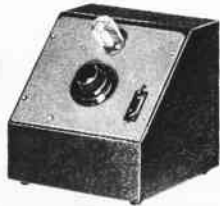
57 PT 8351—0-100 D.C. Triplet. Square type Milliammeter. Shpg. wt., 2 lbs..... \$2.94

57 PT 08448—1-6J5, 2-6L6, and 1-80 Tubes. Shpg. wt., 1 lb. 4 oz. Set \$2.76



Crystal Sets

NO BATTERIES
NO TUBES
NO EXPENSE



PHILMORE Blackbird

An efficient crystal receiving set which will receive broadcasting through headphones over a considerable distance. Will bring endless hours of pleasure to any youngsters. Housed in a crystalline finished metal cabinet with attractive front panel. Combines good appearance with good results. Shipping weight, 3 pounds. 57 PT 8772—Price less ear-phone and antenna\$1.62

ICA Top-Notch

A super-sensitive crystal mounted under a dust-proof glass cover. Brings in many stations with exceptional clarity and volume. Has beautifully engraved calibrated dial—housed in a handsome black crystalline metal case. Selector coil wound on solenoid form assuring clear and perfect reception. Shipping weight, 1 pound 8 ounces. 57 PT 8770—Each.....88c

ICA No. 7

(Not Illustrated) A new type of low-loss inexpensive crystal set for sensitive reception. Has a specially developed adjustable crystal and an adjustable slider tuning coil. To operate the crystal set it is necessary only to connect up the aerial and ground and attach headphones. It is then ready to tune in. Complete with crystal and catwhisker. Shipping weight, 1 pound. 57 PT 8771—Each.....59c

Crystal Set Accessories

57 PT 5575—Complete aerial kit consisting of 60 feet of copper aerial wire, 35 feet of lead-in wire, two aerial insulators, one ground connector, one window lead-in strip, two lead-in insulators, one lightning arrestor. Shipping weight, 2 pounds.....59c
Single Headphone especially designed for crystal sets. 57PT8773—Shpg. wt., 1 lb.....66c



22c

Covered Crystal
Dustproof—super sensitive crystal. Glass enclosed. Readily adjustable. 57 PT 8774—Shipping weight, 8 ounces... 22c



43c

Fixed Crystal
Point of highest sensitivity determined at factory and fixed to prevent variation. 57 PT 8775—Shipping weight, 4 ounces... 43c



5c

Galena Crystal
Galena Crystals are all carefully tested at factory. Very sensitive in reflex and crystal sets. 57 PT 8776—Shipping weight, 4 oz. Each... 5c

Inter Communicator Systems

FOR OFFICES,
FACTORIES,
SCHOOLS,
STORES AND
HOMES

\$1995
Cash

Terms: \$2.50 Down
See Page 2



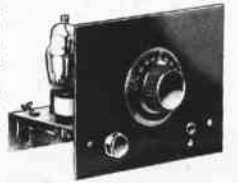
You cannot fully appreciate the convenience and time-saving qualities of these devices without having actually used them. Those who have them wonder why such things were not developed long ago. Business people find them much handier for office-to-office communication than the telephone. Factories are using them to transmit orders and instructions. Schools are using them to maintain contact between principal and teachers. Stores and garages and material yards buy them for directing personnel. For housewives they save steps in many ways. Anyone can install them. All that is needed is two insulated wires of practically any variety between the units.

They operate from 110-volt, 60-cycle house current and consume but little electricity. Talk into one unit and the voice is reproduced in the other. Conversations can be originated at either unit. Housed in handsome walnut finished case. See Page 2 for Sears Easy Payment Terms.
57 PT 08794—Master station and one sub-station. Shpg. wt., 14 pounds.....\$19.95
57 PT 8795—10 Station Selector Switch. Required if more than one sub-station is used. Shipping weight, 4 pounds.....\$6.30
57 PT 8796—Additional sub-stations; shipping weight, 4 pounds. Each..... 8.95

MEISSNER 1, 2, and 3-Tube Midget Radio Kits

With these new Meissner Kits you can make remarkable little radio receivers. Each kit complete with all parts necessary including panel, chassis, sockets, resistors, condensers, wire, hardware and the broadcast band plug-in coil. Tubes, batteries or head phone not included. All of these kits operate on a single 1 1/2-volt dry cell for "A" battery. The 1-tube kit requires in addition only a single 45-volt "B" battery; 2 and 3 "tube kits require two 45-volt "B" batteries and one 7 1/2-volt "C" battery. Each kit supplied with coil to cover Broadcast Band (200 to 545 meters). Coils to cover 17 to 200 meters listed below.

ONE-TUBE KIT—Requires 1-1E4G tube. 57 PT 8408—Shipping weight, 2 pounds.....\$2.65
TWO-TUBE KIT—Requires 1-1C5G, and 1-1E4G tube. 57 PT 8409—Shipping weight, 3 pounds.....\$2.94
THREE-TUBE KIT—Requires 1-1C5G tube, 1-1H5G tube, and 1-1E4G tube. 57 PT 8410—Shipping weight, 3 pounds..... 3.67
57 PT 8725—1E4G Tube. Shpg. wt., 8 oz..... 71c
57 PT 8726—1C5G Tube. Shpg. wt., 8 oz..... 75c
57 PT 8727—1H5G Tube. Shpg. wt., 8 oz..... 75c



Short Wave Plug-in Coils for Above Kits

57 PT 8411—Covers 70 to 200 Meters. Shpg. wt., 4 oz..... 24c
57 PT 8412—Covers 35 to 70 Meters. Shpg. wt., 4 oz..... 24c
57 PT 8413—Covers 17 to 35 Meters. Shpg. wt., 4 oz..... 24c



Midget Crystal Set
\$|31

Will bring in broadcasting from a distance of 25 miles under average conditions. Has spring-action locator and station selector knob. Housed in an attractive walnut finish cabinet. Size 4 1/2 x 3 3/4 x 2 1/4 inches. Shipping weight, 3 pounds.

57 PT 8777—Complete with special earphone, and roll of ground and aerial wire.....\$1.31



Junior Crystal Set
\$|98

Somewhat larger than the Midget Crystal set described at left; same characteristics and range. Spring-action locator and easy-to-adjust crystal. Housed in a solid walnut cabinet. Size 5 1/2 x 4 1/4 x 3 3/4 inches. Shipping weight, 5 pounds.

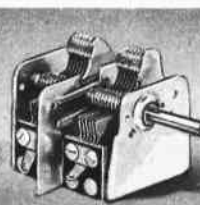
57 PT 8778—Complete with earphone, and coil of ground and aerial wire. Each.....\$1.98



De Luxe Crystal Set
\$329

Unquestionably the most attractive crystal set on the market. Combines the fine operating characteristics of the Junior Crystal Set with a better cabinet of solid walnut with genuine decorative inlay. Has double adjustable headphone with headband. Shpg. wt., 8 lbs.

57 PT 8779—Complete with headphones as described and roll of aerial and ground wire...\$3.29

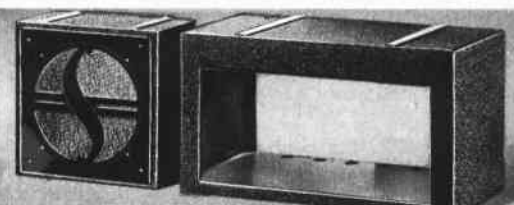


Midget Tuning Condensers
As Low As 72c

Roller bearings on both ends. Brass wiping contacts. Clockwise rotation.

Single-Gang
Shipping weight, 8 ounces.
57 PT 8780—140 Mmfd \$72c
57 PT 8781—350 Mmfd \$72c
Two-Gang
Shipping weight 1 pound.
57 PT 8782—140 Mmfd \$95c
57 PT 8783—350 Mmfd \$85c

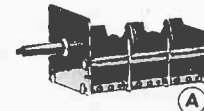
Three-Gang
Shipping weight, 1 lb. 8 oz.
57 PT 8784—140 Mmfd.
Each.....\$1.45
57 PT 8785—350 Mmfd.
Each.....\$1.29



Receiver and Speaker Cabinets

Here is your opportunity to get high-quality speaker and receiver cabinet combination at a fraction of its value. We have less than 100 of these and are offering them to you at less than cost as long as our supply lasts. Made of heavy steel, attractively finished in baked-on black wrinkle enamel. Highly polished stainless steel strips on top. Cabinet size over all, 12 inches high, 10 1/2 inches deep, 19 1/2 inches wide (for standard 19-inch panel). Speaker cabinet 12 in. square by 6 in. deep. Has baffle for 10-inch speaker.

57 PT 08786—One speaker cabinet and one receiver cabinet as described. Shpg. wt., 17 lbs.\$2.95



Experimenters' Tuning and Band Spread Condenser Combination

Set Builders! Here's a value that should interest you. A 3-gang superheterodyne-type 281.2 Mmfd. (A) Tuning Condenser and a 3-gang 12 MMfd (B) Band Spread Condenser to match, both for less money than you would expect to pay for the main tuning condenser alone. With each pair of condensers we furnish complete coil data (coil diameter, wire size, number of turns and spacing) for a six-band assembly tuning from 65 MC to 540 k.c.

These condenser combinations are left-over stock from a run of our own communications receivers and we have less than 100 pairs to sell at this price. First come first served, so send us your order promptly to avoid your missing out on this rare opportunity. Size of end plate, 2 3/4 x 3 1/4 inches. Length of body 4 3/4 inches. Shaft diameter 3/8 inch.

57 PT 8422—Shipping weight, 5 pounds. Per pair while supply lasts\$2.50



Home Microphones

© Microphone Booster—For increasing sensitivity of home microphones in order that they may be more satisfactorily used in connection with radio sets. Shipping weight, 1 pound 8 ounces. 57 PT 8787—Each.....59c
© Hand Microphone—Single-button carbon type for home use in connection with radio. 57 PT 8788—Shipping weight, 2 pounds. Each \$1.18
© Desk Microphone—Single-Button carbon type for home use. Full directions for using in connection with radio. 57 PT 8789—Shipping weight, 1 pound..... 54c



R. F. Chokes

For short wave receivers. Very low distributed capacity. Silk covered wire. Insulux form. Capacity 2.5 millihenries. D.C. resistance 16 ohms. Maximum current 150 M.A. 57 PT 8790—Shpg. wt., 3 oz. 29c

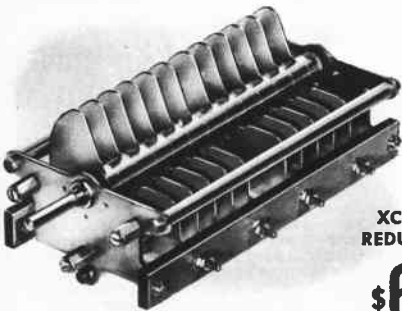
Plug-In Receiving Coils

Ribbed Bakelite forms. Space wound. For 140 Mmfd. tuning condenser. Two windings, tickler and grid input.
57 PT 8791—Set of four 4-prong to cover 15 to 200 meters. Shipping weight, 1 pound..... 84c
57 PT 8792—Set of two coils to cover 185 to 565 meters. Shipping weight, 12 oz..... 65c
57 PT 8793—Single 4-prong coil to cover 9.5 to 21 meters. Shipping weight, 8 ounces 35c

CARDWELL VARIABLES

Multi-Band Condensers

Provide proper LC ratio with standard transmitting inductances. Have jumpers to cut in additional sections. Tables give available (split stator) capacities. Type numbers indicate maximum per section capacity V_z: XG-70-50-XQ has two sections of 70 Mmf. each, and two sections of 50 Mmf. each.



XC-40-XD
REDUCED TO
\$6.90
Each

57 PT 9811

Catalog Number	Type Number	Bal. Capacity Range in Mmfds.			Airgap, Inch	*Length, Inches	Shipping Wt., Lbs.	Cash Price
		2 small Sec. In Series	2 Large Sec. In Series	2 Large, 2 small Sec. Series Par.				
57 PT 9800	MT- 70-35-GQ	18- 5 Mmf.	35- 7 Mmf.	52-10 Mmf.	.070	6 1/2	2	\$6.90
57 PT 9801	XE-160-70-KQ	34- 9 Mmf.	83-13.5 Mmf.	114-19 Mmf.	.084	10 1/2	5	13.20
57 PT 9802	XG- 70-50-XQ	30-11 Mmf.	40-13 Mmf.	64-20 Mmf.	.171	13 1/2	5	11.40

"X" Type Dual Transmitting Condensers

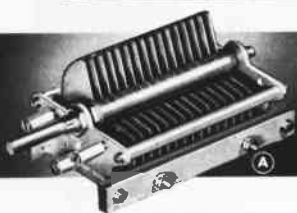
Rounded edges. Polished aluminum plates .040 inch thick on all except XT, GEM colix insulation. 1/4 inch steel shaft. Nickel plated brass mounting feet furnished. Panel space, 4 1/4 x 3 1/4 inches.

Catalog Number	Type No.	Cap. Per Sec. Range	Nr. Plates	Airgap, Inch	*Lgth., In., See Note	Shipping Weight	Cash Price
57 PT 9804	XT-210-PD	210 22	21	.070	5	3 lbs.	\$5.22
57 PT 9805	XP- 90-KD	95 15	11	.084	3 1/4	2 lbs.	4.60
57 PT 9806	XP-165-KD	165 23	19	.084	5	3 lbs.	6.60
57 PT 9807	XP-325-KD	325 38	37	.084	10 1/4	5 lbs.	13.20
57 PT 9808	XE-120-XD	120 19	17	.100	5	3 lbs.	6.00
57 PT 9809	XG- 50-XD	50 14	11	.171	5	3 lbs.	6.42
57 PT 9810	XG-110-XD	110 27	23	.171	10 1/4	4 lbs.	10.80
57 PT 9811	XC- 40-XD	40 14	11	.200	6	3 lbs.	6.90
57 PT 9812	XC- 75-XD	75 21	19	.200	10 1/4	4 lbs.	9.00

"X" Type Single Transmitting Condensers

Catalog Number	Type No.	Capacity Range	Nr. Plates	Airgap, Inch	*Lgth., In. See Note	Shpg. Wt., Lbs.	Oz.	Cash Price
57 PT 9813	XT-220-PS	220 20	21	.070	3 1/4	1	8	\$2.70
57 PT 9814	XT-440-PS	440 40	43	.070	5	1	4	4.62
57 PT 9815	XP- 90-KS	90 16	11	.084	2 1/4	1	4	2.70
57 PT 9816	XP-290-KS	290 35	33	.084	5	2	8	5.70
57 PT 9817	XP-330-KS	330 37	37	.084	5	2	8	6.48
57 PT 9818	XE-120-XS	120 19	17	.100	3 1/4	1	4	3.60
57 PT 9819	XG-110-XS	110 26	23	.171	5	2	4	5.82

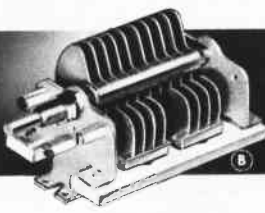
*NOTE: Dimension given is length over outside end plates. For overall length, back of panel, add 1/2 inch to this dimension when using panel mounting Hex posts. For length when using mounting feet for chassis add 1 1/4 inch to dimension given.



MIDWAY Feather-weight Condensers

For low and medium power transmitters and receivers. Panel mounting space only 2 1/2 x 3 inches with condenser open. 1/4-inch steel shaft; aluminum frame; brass bearings; plates buffed, rounded on all airgaps .070 inch or over. Supplied with aluminum mounting feet. G. E. Mycalex insulation. For "upside-down" mounting, use new type "M" mounting brackets for high efficiency. Airgap Data: Type MR .030 In., Type MT .070 In. Shipping Weights: Single Section types, 1 pound 8 ounces; Dual Units, 2 pounds.

Catalog No.	Type Number	Cap. Range	Price
Single Section Types			
57PT9820	MR-105-BS	105- 8	\$1.83
57PT9821	MR-150-BS	150-10	1.89
57PT9822	MR-260-BS	260-11	1.98
57PT9823	MR-365-BS	365-14	2.28
57PT9824	MO-165-BS	165-15	1.98
57PT9825	MT- 50-GS	50- 8	2.34
57PT9826	MT-100-GS	100-12	2.94
57PT9827	MT-150-GS	150-16	3.60
Dual Section Types			
57PT9828	MR-100-BD	100- 8	\$3.06
57PT9829	MR-260-BD	260-11	3.30
57PT9830	MR-180-BD	180-15	4.80
57PT9831	MT- 50-GD	50- 9	3.81
57PT9832	MT- 70-GD	70-10	4.20
57PT9833	MT-100-GD	100-13	4.80



Ultra High Frequency Transmitting Condensers

Airgaps—NT units .070 in., NP units .084 in., NG units .171 in. Isolantite insulation.

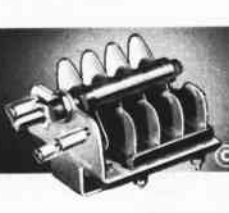
Catalog No.	Type No.	Cap. Range	Price
Singles—Shipping weight, 1 pound.			
57PT9834	NP- 50-DS	50- 9	\$2.10
57PT9835	NP- 75-DS	75-11.0	2.46
57PT9836	NP-100-DS	100-13	2.82
57PT9837	NP-150-DS	150-19	3.66
57PT9838	NG- 35-DS	35-11	3.12
Duals—Shipping weight, 1 lb. 8 oz.			
57PT9839	NT- 50-GD	50- 7	\$3.60
57PT9840	NP- 35-ND	35- 5	3.60
57PT9841	NP- 35-DD	35- 5	3.21
57PT9842	NP- 50-DD	50- 9	3.60
57PT9843	NP- 75-DD	75-11	4.32

H. F. Neutralizing Condensers

High frequency neutralizers for low capacity tubes. Mycalex insulation; heavy buffed plates with rounded edges. 180-degree rotation permits calibration and reset. Air gap, .218 in. Shipping weight, 12 ounces.

Catalog No.	Type No.	Cap. Range	Price
57PT9844	NA- 4-NS*	4 2.25	\$2.16
57PT9845	NA- 6-NS	6 4	2.16
57PT9846	NA-10-NS	11 6	2.70

*Adjustable Air gap.



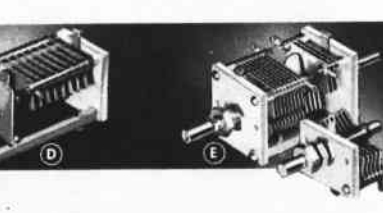
Dual "TRIM-AIR" Midget Condensers

Airgap Data: ER units, .030 in., EU units, .020 in., ET units, .070 in., ES units, .140 in. Shipping weights, Duals, 12 oz; Singles, 8 oz.

Catalog No.	Type No.	Cap. Range	Price
Dual "Trim-Airs"			
57PT9847	ER- 10-AD	10 1.2	\$1.58
57PT9848	ER- 15-AD	15 1.5	1.56
57PT9849	ER- 25-AD	25 2	1.82
57PT9850	ER- 35-AD	35 2.5	1.74
57PT9851	ER- 50-AD	50 2.8	1.86
57PT9852	EU- 75-AD	75 2.7	1.98
57PT9853	EU-100-AD	100 3	2.04
57PT9854	EU-140-AD	140 5	3.60
57PT9855	ET- 15-AD	15 3	1.80
57PT9856	ET-15-ADI	15 3	2.10
57PT9857	ET-30-AD	30 4	2.18
57PT9858	ET-30-ADI	With insulated coupling	2.46
57PT9859	ES- 4-SD	4 1.5	2.16
57PT9860	ES- 4-SDI	With insulated coupling	2.46
57PT9861	ES- 7-SDI	7 4	2.70

"Trim-Air" Accessories
Shipping weight, 3 ounces.

57 PT 9889—Mounting Bracket, with 2 screws and nuts. Each 6¢
57 PT 9890—Mounting Posts, 1/4 x 1/2 inch long with screws and lock washers. Each 8¢



Single "TRIM-AIR" Midget Condenser

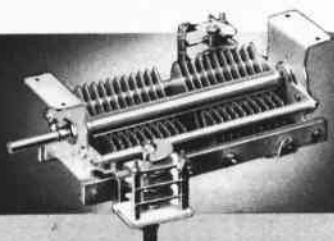
For heterodyne frequency meters, wave meters, etc. Use band-spread dial on small capacity section—band is set in middle of dial by adjusting 100 mmfd. section. Shipping weight, 1 pound.

Catalog No.	Type No.	Tuning Cap.	Cash Price
57PT9876	EU-25-100-AF	25	\$1.80
57PT9877	EU-50-100-AF	50	1.96

Single "Trim-Airs"

Catalog No.	Type No.	Cap. Range	Price
57PT9862	ZR- 10-AS	10 1.2	\$7.76
57PT9863	ZR- 15-AS	15 1.5	7.76
57PT9864	ZR- 25-AS	25 2	.84
57PT9865	ZR- 35-AS	35 2.5	.90
57PT9866	ZR- 50-AS	50 2.8	.96
57PT9867	ZU- 75-AS	75 2.7	1.02
57PT9868	ZU-100-AS	100 3	1.05
57PT9869	ZU-140-AS	140 5	1.89
57PT9870	ZV- 5-TS	5 1.5	.75
57PT9871	ZT- 10-AS	11 3.6	.87
57PT9872	ZT- 15-AS	15 3	.93
57PT9873	ZT- 30-AS	30 4	1.11
57PT9874	ZS- 4-SS	4 1.5	1.11
57PT9875	ZS- 7-SS	7 4	1.28

*Double bearing—2 end plates.
†Supplied with 2 segment stator for U.H.F. circuits. Extra plate also supplied; easily installed; making it 3 plates as listed.
‡Neutralizer condenser—.040" thick plates, buffed—4500 V. peak.



100 Watt Final Kit

Covers 5 to 80 meters inclusive, with RCA 808's. B. & W. type "B" Jack Bar, and standard B. & W. type B, BL, or BVL Coils, as additional accessories. Foundation includes: MT-100-GD Dual Midway Condenser, 2—"BWZ" "Trim-Air-Neutralizer-to-Midway" Brackets, 2—"ZS-7-SS" "Trim-Air" Neutralizers, 1—"BW" Jack Bar Mounting Brackets, 1—"M" Mounting Brackets. Shpg. wt., 10 lbs. 57 PT 9878—Type "AFU" Foundation, assembled. \$7.99
"Midway" Mounting Feet Made of heavy aluminum. 57 PT 9879—Shpg. wt., 3 oz. Per pair. 12¢

Fixed Air Condensers

For fixed capacity loading. Plates can be easily removed. Air gap Data JCO units .250 in., JD units, .125 in., JR units, .030 in. Shipping weight, 1 lb.

Type "J" Plug-In Fixed Air Condensers

Catalog No.	Type No.	Capacity	Price
57PT9880	JCO-50-OS	50 mmf.	\$3.30
57PT9881	JCO-25-OS	25 mmf.	2.40
57PT9882	JD-100-OS	100 mmf.	3.90
57PT9883	JD- 80-OS	80 mmf.	3.30
57PT9884	JD- 50-OS	50 mmf.	2.40
57PT9885	JD- 25-OS	25 mmf.	1.68

57 PT 9886—Base. Shpg. wt., 8 oz. 60¢

Neutralizers

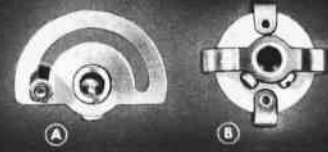
For low capacity triodes. Alsimag insulation, polished aluminum discs. Fine screw thread adjustment in long nickel silver bearing. Shipping weight, 12 ounces ea.

Disc Type Neutralizers

Catalog Number	Type	Max. cap.	Air-Gap	Min. cap.	Air-Gap	Price Each
57PT9887	ADN	7 mmf.	.1"	1 mmf.	.7"	\$1.80
57PT9888	BDN	15 mmf.	.2"	3 mmf.	1.0"	3.00

See (C) above for Type N.A. Neutralizers.

Buy Now on Sears Easy Payment Plan . . . See Page 2



Shaft Lock Panel Bushing For 1/4-inch shafts, tapered. Fits 1/4-in. hole in panel. Shpg. wt., 8 oz. 57 PT 9881—Type ALB. Each. . . 12¢

Rotor Lock

For locking "X" standard or "M" Midway rotor shafts. Shpg. wt., 10 oz. 57 PT 9882—Type ARL. Each. . 36¢

Insulated Couplings—Flexible

Catalog Number	For Shaft Diam., in.	Flash-Over	Shpg. Wt.	Price
57 PT 9894	1/4	3,700 V.	1 oz.	36¢
57 PT 9895	3/8 and 1/2	10,000 V.	4 oz.	90¢



NATIONAL PRODUCTS

Type TML Condensers

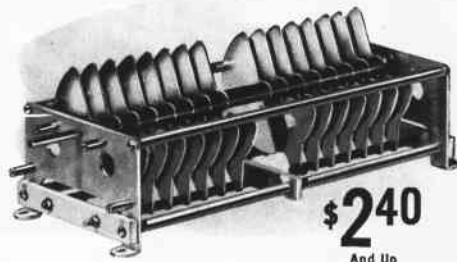
The TML condenser is a 1-KW job throughout. Isolantite insulators, specially treated against moisture absorption, prevent flashovers. A large self-cleaning rotor contact provides high current capacity. Thick capacitor plates, with accurately rounded and polished edges, provide high voltage ratings. Sturdy cast aluminum end frames and dual tie bars permit an unusually rigid structure. Precision end bearings insure smooth turning and permanent alignment of the rotor. End frames are arranged for panel, chassis or standoff mounting.

Catalog Number	Code	Capacity Mmf.	Gap, Inch	Wt. Lbs.	Cash Price
57PT9060	TML-75E	75	.719	5	\$15.60
57PT9061	TML-150D	150	.469	5	15.90
57PT9062	TML-100D	100	.469	5	14.10
57PT9063	TML-50D	50	.469	4	9.90
57PT9064	TML-245B+	245	.344	5	17.10
57PT9065	TML-150B+	150	.344	5	15.60
57PT9066	TML-100B+	100	.344	5	15.00
57PT9067	TML-75B+	75	.344	5	10.80
57PT9068	TML-500A+	500	.219	6	21.00
57PT9069	TML-350A+	350	.219	6	16.80
57PT9070	TML-250A+	250	.219	5	15.60
57PT9071	TML-30DE	30-30	.719	5	15.90
57PT9072	TML-60DD	60-60	.469	5	17.10
57PT9073	TML-100DB+	100-100	.344	6	18.90
57PT9074	TML-60DB+	60-60	.344	6	16.50
57PT9075	TML-200DA+	200-200	.219	6	21.00
57PT9076	TML-100DA+	100-100	.219	6	17.10

Type TMA Condenser

The TMA is a larger model of the popular TMC. The frame is extremely rigid and arranged for mounting on panel, chassis or standoff insulators. The plates are of heavy aluminum with rounded and buffed edges. Insulation is Isolantite, located outside of the concentrated electric field. There is a size available for all working potentials between 3000 and 20000 volts.

Catalog Number	Code	Capacity Mmf.	Gap, Inch	Shpg. Wt.	Price
57PT9077	TMA-300	300	.077	3 lbs.	\$7.20
57PT9078	TMA-200D	200-200	.077	3 lbs.	9.00
57PT9079	TMA-50A	50	.171	2 lbs.	3.90
57PT9080	TMA-100A	100	.171	3 lbs.	6.00
57PT9081	TMA-150A	150	.171	3 lbs.	7.20
57PT9082	TMA-230A	230	.171	3 lbs.	9.80
57PT9083	TMA-50DA	50-50	.171	2 lbs.	6.60
57PT9084	TMA-100DA	100-100	.171	4 lbs.	10.50
57PT9085	TMA-100B	100	.265	4 lbs.	8.10
57PT9086	TMA-150B	150	.265	4 lbs.	10.20
57PT9087	TMA-60DB	60-60	.265	4 lbs.	11.10
57PT9088	TMA-50C	50	.359	2 lbs.	4.80
57PT9089	TMA-100C	100	.359	3 lbs.	8.70
57PT9090	TMA-40DC	40-40	.359	3 lbs.	8.10



\$240
And Up

Type TMC Condenser

The TMC is designed for use in the power stages of transmitters, where peak voltages do not exceed 3000. The frame is extremely rigid and arranged for mounting on panel, chassis or standoff insulators. The plates are aluminum, with buffed edges. Insulation is Isolantite, located outside of the concentrated electrostatic field. The stator in the split stator model is supported at both ends.

Catalog No.	Code	Capacity	Volts	Shpg. wt.	Price
57PT9091	TMC-50	50 Mmf.	3,000	2 lbs.	\$2.40
57PT9092	TMC-100	100	3,000	2 lbs.	2.70
57PT9093	TMC-150	150	3,000	2 lbs.	3.15
57PT9094	TMC-300	300	3,000	2 lbs.	3.90
57PT9095	TMC-100D	100-100	3,000	3 lbs.	4.50

Plate Spacings and Voltage Data. Refer to column in Tables headed "Gap, Inch" for plate Spacing

Peak Volts	Air Gap	Peak Volts	Air Gap	Peak Volts	Air Gap	Peak Volts	Air Gap	Peak Volts	Air Gap
1000	.026 inch	3000	.077 inch	7500	.219 inch	10000	.344 inch	15000	.469 inch
2000	.065 inch	6000	.171 inch	9000	.265 inch	12000	.359 inch	20000	.719 inch



All Purpose Condenser

(A) National EMC Condensers have high electrical efficiency, and calibrations may be relied on. Insulation is of Isolantite, and Peak Voltage Rating is 1000 volts. Plate Shape is SLW.

Catalog Number	Code	Cap. Mmf.	No. Plates	Shpg. Wt.	Price Each
57PT9105	EMC-150	150	9	2 lbs.	\$1.95
57PT9106	EMC-250	250	14	2 lbs.	2.25
57PT9107	EMC-350	350	18	2 lbs.	2.55
57PT9108	EMC-500	500	26	3 lbs.	2.85
57PT9109	EMC-1000	1000	56	3 lbs.	4.35

Split-Stator Models
57PT9169 EMC-350-350-350-118-18 | 3 lbs. | 4.50

Type TMS

(B) Type TMS is a condenser designed for transmitter use in low power stages. It is compact, rigid, and dependable. Provision has been made for mounting either on the panel, on the chassis, or on two stand-off insulators. Single Section Type is shown (C) above.

Catalog Number	Code	Cap. Mmf.	Volts	Shpg. Wt.	Price Each
57PT9096	TMS-100	100	1,000	2 lbs.	\$1.50
57PT9097	TMS-150	150	1,000	2 lbs.	1.65
57PT9098	TMS-250	250	1,000	2 lbs.	1.80
57PT9099	TMS-300	300	1,000	2 lbs.	2.16
57PT9100	TMS-500	50-50	1,000	2 lbs.	2.25
57PT9101	TMS-1000	100-100	1,000	2 lbs.	2.70
57PT9102	TMSA-35	35	2,000	2 lbs.	1.80
57PT9103	TMSA-50	50	2,000	2 lbs.	1.95
57PT9104	TMSA-500	50-50	2,000	2 lbs.	2.40

Type SE

(D) The SE Condenser has 270° Straight-Line-Frequency plates. Insulation is Isolantite. Two rotor bearings. The SEU models are suitable for high voltages as their plates are thick polished aluminum with rounded edges. The other SE models do not have this feature.

Catalog Number	Code	Cap. Mmf.	Air-Gap	Shpg. Wt.	Price Each
57PT9110	SEU-15	15	.055 inch	2 lbs.	\$1.50
57PT9111	SEU-20	20	.055 inch	2 lbs.	1.65
57PT9112	SEU-25	25	.055 inch	2 lbs.	1.65
57PT9113	SE-50	50	.026 inch	2 lbs.	1.80
57PT9114	SE-75	75	.026 inch	2 lbs.	1.95
57PT9115	SE-100	100	.026 inch	2 lbs.	2.10
57PT9116	SE-150	150	.026 inch	2 lbs.	2.25
57PT9117	SEH-200	200	.018 inch	2 lbs.	2.25
57PT9118	SEH-250	250	.018 inch	2 lbs.	2.40
57PT9119	SEH-300	300	.018 inch	2 lbs.	2.40
57PT9120	SEH-335	335	.018 inch	2 lbs.	2.55

"Experimenter" Models

(E) All-brass construction. Bakelite insulation. Rotor has one bearing. Removable plates. EX15, EX25, EX35 have double spaced plates. See illustration (F).

Catalog Number	Code	Cap. Mmf.	Air-Gap	Shpg. Wt.	Price Each
57PT9121	EX-15	15	.045 inch	1 lb.	51c
57PT9122	EX-25	25	.045 inch	1 lb.	51c
57PT9123	EX-35	35	.045 inch	1 lb.	60c
57PT9124	EX-50	50	.017 inch	1 lb.	54c
57PT9125	EX-100	100	.017 inch	1 lb.	60c
57PT9126	EX-140	140	.017 inch	1 lb.	75c

NATIONAL Type ST

(F) The ST Condenser has 180° Straight-Line-Wavelength plates. General construction is the same as the SE Condenser although its overall height is less. All models are double bearing. Two split-stator models are available. Air-Gap Data: STH and STHS and STHD, .018 In.; ST and STD, .026 In.

Catalog Number	Symbol	Cap. Mmf.	Shpg. Wt.	Cash Price
57PT9127	STHS-15	15	1 lb.	\$1.84
57PT9128	STHS-25	25	1 lb.	.90
57PT9129	STHS-50	50	1 lb.	.96
57PT9130	ST-35	35	1 lb.	.90
57PT9131	ST-50	50	1 lb.	1.08
57PT9132	ST-75	75	1 lb.	1.20
57PT9133	ST-100	100	2 lbs.	1.35
57PT9134	ST-140	140	2 lbs.	1.50
57PT9135	ST-150	150	2 lbs.	1.50
57PT9136	STH-200	200	2 lbs.	1.65
57PT9137	STH-250	250	2 lbs.	1.80
57PT9138	STH-300	300	2 lbs.	1.95
57PT9139	STH-335	335	2 lbs.	2.10
57PT9140	STD-50	50	2 lbs.	2.10
57PT9141	STHD-100	100-100	2 lbs.	2.70

Type UM

(J) (K) The UM Condenser is designed for ultra high frequency use and is small enough for convenient mounting in our square shield cans. They are particularly useful for tuning receivers, transmitters and exciters. Shaft extensions at each end of the rotor permit easy ganging when used with one of our flexible couplings. The UMB-25 Condenser (J) is a balanced stator model, two stators act on a single rotor. The UM can be mounted by the angle foot supplied or by bolts and spacers.

Number Catalog	Symbol	Cap. Mmf.	Air-Gap	Shpg. Wt.	Cash Price
57PT9142	UM-15	15	.017 inch	1 lb.	\$7.75
57PT9143	UM-35	35	.017 inch	1 lb.	.90
57PT9144	UM-50	50	.017 inch	1 lb.	.96
57PT9145	UM-75	75	.017 inch	1 lb.	1.02
57PT9146	UM-100	100	.017 inch	1 lb.	1.14
57PT9147	UMA-25	25	.050 inch	1 lb.	1.11
57PT9148	UMB-25	25	.017 inch	1 lb.	1.11

TEN Neutralizer

(Not illustrated). Very similar in appearance to EMC shown at (A). It has a maximum capacity of 25 mmf. and a 6000-volt rating. It is suitable for such tubes as 203A, 852, and 204A. Shipping weight, 1 lb. 6 oz.

57PT9160—Each.....\$2.40
Small items may be included in your Easy Payment Order. See Page 2.

Padding Condensers

(H) National Air-Dielectric Padding Condensers are extremely compact and have a very low temperature coefficient. The aluminum shield is 1/4 inches diameter by 1/4 to 1/2 inches high. Shipping weight, 1 pound.

57PT9149-W 75 (75 Mmf. Air). Ea. \$1.35
57PT9150-W100 (100 Mmf. Air). Ea. 1.50



Miscellaneous Accessories

- (A) Dial lock for type "O" Dial. 57PT9161—Shpg. wt., 2 oz. 30c
- (B) National Rotor Shaft Lock. Clamps securely on TMA or TNC rotor shafts. 57PT9152—Shpg. wt., 4 oz. 51c
- (C) National Shaft Bushing. For bringing 1/4-inch shaft through panel. 57PT9153—Shpg. wt., 3 oz. 15c
- (D) National Mica Padder. M30 Isolantite base. Maximum capacity, 30 mmf. Size, 1 1/2 x 1 1/2 x 1/2 inch.
- (E) 57PT9154—Shpg. wt., 4 oz. 18c
- (F) Hammarlund Type MEX Padder. Maximum capacity, 30 mmfs. Size, 1/2 x 3/4 inch.
- (G) 57PT9498—Shpg. wt., 4 oz. 18c

- (F) National NC-600 Neutralizing Condenser. Suitable for 6L6's and similar tubes. Adjustable 1/4 to 5 mmf. 57PT9156—Shpg. wt., 4 oz. 27c
- (G) NC-800 Neutralizing Condenser for RCA-800 and similar tubes. 57PT9157—Shpg. wt., 2 lbs. \$1.80
- (H) 57PT9158—NC-150 Same as NC-800 except for HK345, RK36, 300T and 852's. Shipping weight, 3 lbs. \$3.90
- (I) 57PT9159—NC-500 for WE251A and similar tubes. Shipping weight, 5 pounds \$7.50
- (J) PWL Warm Drive unit for using National TML Condensers parallel with panel.
- (K) 57PT9267—Shpg. wt., 5 lbs. \$6.70

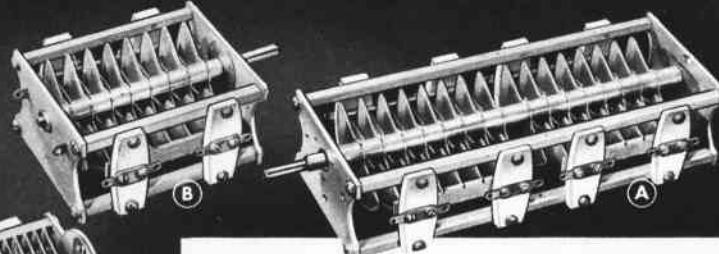
National Micrometer Dials and Precision Condensers

- (J) Dial reads direct to 1 part in 500. Division lines 1/4 in. apart. Dial revolves 10 times to cover tuning range. Three section condenser capacity 225 MMF per section, or 25 MMF per section. Stator insulation is Steatite. Shipping weight, 7 pounds.
- (K) 57PT9266—N-PW3 with 225 MMF condensers \$14.40
- (L) 57PT9266—N-PWX with 25 MMF condensers \$12.30
- (M) Dial and Drive only. No condenser. Shipping wt., 4 lbs.
- (N) 57PT9313—N-PWO \$8.10
- (O) Same dial description as (J). Condensers lie parallel to panel. Avail-

- able with 2, 3, or 4 Section Condensers 160 or 225 MMF per Section; Single Section, 150, 200, 350, or 500 MMF. Single spaced or up to 125 MMF double spaced. Not carried in stock. Allow 14 days for shipment.
- (P) 57PT9268F—With Single Section Condenser. Shpg. wt., 5 lbs. \$9.00
- (Q) 57PT9268F—With Two Section Condenser. Shpg. wt., 6 lbs. \$12.00
- (R) 57PT9270F—With Three Section Condenser. Shpg. wt., 7 lbs. \$14.40
- (S) 57PT9271F—With Four Section Condenser. Shpg. wt., 8 lbs. \$16.50
- (T) 57PT9272F—Dial and Drive only. Shpg. wt., 4 lbs. \$8.10

HAMMARLUND

VARIABLE CONDENSERS



TCD Transmitting Condensers

(A) Following 4 split stator types have all four horizontal tie pillars drilled and tapped to accommodate brackets for mounting neutralizing condensers and tank coil directly on tuning condenser: "TCD-55-F," "TCD-40-G," "TCD-50-H," and "TCD-110-H."

Catalog Number	Code TCD	Cap. mmf.	Frame Length	Shpg. Wt.	Price Each
57 PT 9450	+55-F	60	10 $\frac{3}{4}$ in.	4 lbs.	\$8.10
57 PT 9451	+40-G	48	6 $\frac{3}{4}$ in.	3 lbs.	6.30
57 PT 9452	+75-G	82	10 $\frac{3}{4}$ in.	4 lbs.	8.70
57 PT 9453	+50-H	53	5 $\frac{1}{2}$ in.	3 lbs.	5.88
57 PT 9454	+110-H	115	10 $\frac{3}{4}$ in.	4 lbs.	9.60
57 PT 9455	+240-J	250	10 $\frac{3}{4}$ in.	5 lbs.	11.40
57 PT 9456	+90-K	95	3 $\frac{1}{2}$ in.	2 lbs.	4.50
57 PT 9457	+165-K	170	5 $\frac{1}{2}$ in.	3 lbs.	6.60
57 PT 9458	+325-K	335	10 $\frac{3}{4}$ in.	5 lbs.	12.30
57 PT 9459	+80-L	88	3 $\frac{1}{2}$ in.	2 lbs.	3.30
57 PT 9460	+210-L	215	5 in.	3 lbs.	4.95
57 PT 9461	+500-M	505	3 $\frac{1}{2}$ in.	2 lbs.	3.90

†Polished round edged plates—.040-in. thick.
‡Standard type plates—.025-in. thick.

TC Transmitting Condensers

(B) Heavy aluminum end plates. Duraluminum pillars. Both rotor and stator plates are buffed and polished; rounded edges. The rotor plates staked to non-magnetic shaft. Stainless steel dial shaft $\frac{1}{4}$ -in. Full floating bearings. The rotor contacts are heavy silver plated Beryllium wipers. No metal-to-metal contacts through framework. Isolantite insulation. Three panel mounting bushings and special mounting feet for base or standoff insulator mounting furnished.

Catalog Number	Code TC	Cap. mmf.	Frame Length	Shpg. Wt.	Price Each
57 PT 9462	+55-F	60	5 in.	2 lbs.	\$4.80
57 PT 9463	+18-G	20	2 $\frac{1}{2}$ in.	1 lb. 8 oz.	3.12
57 PT 9464	+40-G	45	2 $\frac{1}{2}$ in.	2 lbs.	4.20
57 PT 9465	+65-G	72	3 $\frac{1}{2}$ in.	3 lbs.	6.28
57 PT 9466	+100-G	110	6 $\frac{1}{2}$ in.	3 lbs.	6.72
57 PT 9467	+150-G	165	9 $\frac{1}{2}$ in.	4 lbs.	8.88
57 PT 9468	+25-H	25	2 $\frac{1}{2}$ in.	1 lb.	2.10
57 PT 9469	+50-H	53	3 $\frac{1}{2}$ in.	1 lb. 8 oz.	3.60
57 PT 9470	+110-H	115	5 $\frac{1}{2}$ in.	3 lbs.	6.40
57 PT 9471	+240-J	250	5 $\frac{1}{2}$ in.	4 lbs.	8.12
57 PT 9472	+90-K	95	2 $\frac{1}{2}$ in.	2 lbs.	2.70
57 PT 9473	+165-K	170	3 $\frac{1}{2}$ in.	2 lbs.	3.90
57 PT 9474	+220-K	225	3 $\frac{1}{2}$ in.	3 lbs.	4.80
57 PT 9475	+290-K	300	5 in.	3 lbs.	6.70
57 PT 9476	+350-K	340	5 in.	4 lbs.	6.00
57 PT 9477	+220-L	220	3 $\frac{1}{2}$ in.	1 lb. 8 oz.	2.70
57 PT 9478	+440-L	465	5 in.	2 lbs.	4.62

†Polished round edged plates—.040-in. thick.
‡Standard plates—.025-in. thick.

MTC Transmitting Condensers

(C) A NEW popular series of transmitting condensers for high frequency and ultra-high frequency medium and low powered units. Construction is similar to the large "TC" type. General Specifications—Voltage ratings are: 5500-V, for "A" types; 3000-V, for "B" types; and 1000-V, for "C" types. Base mounting brackets and three panel mounting bushings furnished.

Catalog Number	Code MTC	Cap. mmf.	Frame Length	Shpg. Wt.	Price Each
57 PT 9479	+35-A	35	4 $\frac{1}{2}$ in.	2 lbs.	\$3.60
57 PT 9480	+20-B	20	2 $\frac{1}{2}$ in.	1 lb.	1.95
57 PT 9481	+35-B	7	2 $\frac{1}{2}$ in.	1 lb.	2.10
57 PT 9482	+50-B	11	2 $\frac{1}{2}$ in.	1 lb.	2.34
57 PT 9483	+100-B	21	3 $\frac{1}{2}$ in.	1 lb. 8 oz.	3.00
57 PT 9484	+150-B	31	4 $\frac{1}{2}$ in.	2 lbs.	3.66
57 PT 9485	S-50-C	5	2 $\frac{1}{2}$ in.	1 lb.	1.68
57 PT 9486	S-100-C	11	2 $\frac{1}{2}$ in.	1 lb.	1.83
57 PT 9487	S-150-C	15	2 $\frac{1}{2}$ in.	1 lb. 8 oz.	1.92
57 PT 9488	S-250-C	25	3 $\frac{1}{2}$ in.	2 lbs.	2.16
57 PT 9489	S-350-C	35	3 $\frac{1}{2}$ in.	2 lbs.	2.40

†Polished round edged plates—.040-in. thick.
‡Polished round edged plates—.025 inch thick. S Standard type plates—.025 inch thick.

MTCD Dual Types

Same constructional features as MTC type.

Catalog Number	Code MTCD	Cap. mmf.	Frame Length	Shpg. Wt.	Price Each
57 PT 9490	+20-B	10	3 $\frac{1}{2}$ in.	2 lbs.	\$3.15
57 PT 9491	+35-B	18	3 $\frac{1}{2}$ in.	2 lbs.	3.45
57 PT 9492	+50-B	25.5	3 $\frac{1}{2}$ in.	3 lbs.	3.90
57 PT 9493	+100-B	51	5 $\frac{1}{2}$ in.	4 lbs.	5.25
57 PT 9494	+50-C	25.5	3 $\frac{1}{2}$ in.	2 lbs.	2.70
57 PT 9495	+100-C	51	3 $\frac{1}{2}$ in.	2 lbs.	3.00
57 PT 9496	+150-C	77	3 $\frac{1}{2}$ in.	2 lbs.	3.15
57 PT 9497	+250-C	135	4 $\frac{1}{2}$ in.	2 lbs.	3.60

†Polished round edged plates.025 in. thick—.070 in. plate spacing. ‡Standard type plates.025 in. thick—.031 in. plate spacing.

You can include items on this and opposite page in your Easy Payment Order . . . See Page 2

MCD-X Double Spaced Units

(D) Split stator condensers designed for ultra-high frequency transmitting or receiving. Isolantite insulation. New split type rear bearing and noiseless wiping contact. Cadmium plated non-corrosive soldered brass plates. Air gap between plates .0715 in.

Catalog Number	Code MCD	Min. Cap.	Shpg. Wt.	Price Each
57 PT 9425	-35-MX	31 mmf.	1 lb.	\$2.10
57 PT 9426	-35-SX	31 mmf.	1 lb.	2.10

"MX" = Midline Plates
"SX" = Semi-Circular Plates

MC-X Double-Spaced Units

(E) An excellent variable condenser for ultra-high frequency receivers and transmitters, particularly compact transmitters. Air gap between plates. .0715 inches. New split type rear bearings and noiseless wiping contact. Cadmium plated soldered brass plates. Isolantite insulation.

Catalog Number	Code MC	Min. Cap.	Shpg. Wt.	Price Each
57 PT 9625	-100-SX	16.5 mmf.	1 lb.	\$2.10
57 PT 9626	-50-SX	9.5 mmf.	1 lb.	1.65
57 PT 9627	-50-MX	9 mmf.	1 lb.	1.65
57 PT 9628	-35-SX	7.5 mmf.	1 lb.	1.35
57 PT 9629	-35-MX	7 mmf.	1 lb.	1.35
57 PT 9630	-20-MX	7 mmf.	1 lb.	1.20
57 PT 9631	-20-SX	6.5 mmf.	1 lb.	1.20

MC-B Band Spread Condensers

(Not illustrated.) Designed for use as "band spread" tuning condensers for short wave receivers and for amateur band frequency meters. The "tank" section can be set and locked at any desired capacity permitting the tuning section to spread narrow frequency ranges over the entire dial. Cadmium plated non-corrosive soldered brass plates. Isolantite insulation. Uniform in construction with MC units. Shpg. wt., each, 8 oz.

Catalog Number	Code MC	Tank Cap.	Tuning Cap.	Price Each
57 PT 9632	-120-B	100 mmf.	18 mmf.	\$1.80
57 PT 9633	-150-B	100 mmf.	50 mmf.	1.95

MCD Split-Stator Condensers

(F) These duals incorporate rigidity, low losses, and careful construction. Isolantite base. Cadmium plated soldered brass plates. New split type rear bearing and noiseless wiping contact of silver plated Beryllium. Other specifications same as for "MC" single midgets. Normal spacing. Shpg. wt., ea., 1 lb. 8 oz.

Catalog Number	Code MCD	Cap. Range	Price Each
57 PT 9427	-140-S	140-8 mmf.	\$2.40
57 PT 9428	-140-M	140-7 mmf.	2.40
57 PT 9429	-100-S	100-6.5 mmf.	2.10
57 PT 9430	-100-M	100-6 mmf.	2.10
57 PT 9431	-50-S	50-5.5 mmf.	1.80
57 PT 9432	-50-M	50-5 mmf.	1.80

"M" = Midline Plates
"S" = Semi-Circular Plates.

HFD Split-Stator Condensers

(G) Like the "HF" single micro condensers in construction. Rotor contact can be shifted to three positions. Double spaced units are indicated by (*). Shipping weight, each, 1 pound 8 ounces.

Catalog Number	Code HFD	Cap. Range	Frame Length	Price Each
57 PT 9634	-50	50-3.7 mmf.	2 $\frac{1}{2}$ in.	\$1.65
57 PT 9635	-100	100-5.2 mmf.	2 $\frac{1}{2}$ in.	1.95
57 PT 9636	-140	140-6.2 mmf.	2 $\frac{1}{2}$ in.	2.25
57 PT 9637	*15-X	16-2.8 mmf.	2 $\frac{1}{2}$ in.	1.80
57 PT 9638	-30-X	28-5.5 mmf.	2 $\frac{1}{2}$ in.	1.95

ETU Exciter Tuning Unit

These handy units are intended for use in multi-band transmitter exciters and lend themselves readily to band switching arrangements. Available unwound or with windings for 10-20-40 and 80 meter bands. Designed to work with 6L6's. Consists of two 25 mmf., double spaced condensers and a 2x $\frac{1}{2}$ -in. diameter winding form. "ETU-10" for 10 meters, "ETU-40" for 40 meters, etc. When ordering 57 PT 9662 State band wanted.

Catalog No.	Code	Size, In.	Shpg. Wt.	Price
57 PT 9661	ETU	2x4 $\frac{1}{2}$ $\frac{1}{2}$	1 lb.	\$2.40
57 PT 9662	ETU-10-20-40-80	2x4 $\frac{1}{2}$ $\frac{1}{2}$	1 lb.	3.30

MC Midget Condensers

(H) Isolantite insulation. A wide split-type rear bearing and a wide special bearing at the front. Silver plated Beryllium wiping contact. Cadmium plated soldered brass plates. End plates of heavy aluminum. Plates are .0225 inch thick with .0245 inch air gap. Shafts are $\frac{1}{4}$ -inch diameter extending $\frac{3}{8}$ inch beyond rear frame to facilitate ganging. Shipping weight, each, 1 pound.

Catalog Number	Code MC	Capacity Range mmf.	Frame Length	Price Each
57 PT 9433	-325-M	320-13	2 $\frac{1}{2}$ in.	\$2.10
57 PT 9434	-250-M	260-11	2 $\frac{1}{2}$ in.	1.80
57 PT 9435	-200-M	200-10	2 in.	1.65
57 PT 9436	-140-M	140-8	1 $\frac{1}{2}$ in.	1.50
57 PT 9437	-140-S	140-9	1 $\frac{1}{2}$ in.	1.50
57 PT 9438	-100-M	100-7	1 $\frac{1}{2}$ in.	1.35
57 PT 9439	-100-S	100-7.5	1 $\frac{1}{2}$ in.	1.35
57 PT 9440	-75-M	80-6.5	1 $\frac{1}{2}$ in.	1.20
57 PT 9441	-75-S	80-7	1 $\frac{1}{2}$ in.	1.20
57 PT 9442	-50-M	50-6	1 $\frac{1}{2}$ in.	.96
57 PT 9443	-50-S	50-6	1 $\frac{1}{2}$ in.	.96
57 PT 9444	-35-S	35-5	1 $\frac{1}{2}$ in.	.90
57 PT 9445	-20-S	20-4.5	1 $\frac{1}{2}$ in.	.84

"M" Midline Plates "S" Semi-Circular Plates

HF Micro Condensers

(I) Cadmium plated soldered brass plates and Isolantite insulation. Special wide front bearing. *Double Spaced Units are indicated by (*). Shpg. wt., ea., 1 lb.

Catalog Number	Code HF	Capacity Range mmf.	Frame Length	Price Each
57 PT 9639	-15	17-5.3	$\frac{1}{4}$ in.	\$0.75
57 PT 9640	-35	35-3.6	1 $\frac{1}{2}$ in.	.96
57 PT 9641	-50	50-4.1	1 $\frac{1}{2}$ in.	.96
57 PT 9642	-100	100-5.6	2 $\frac{1}{2}$ in.	1.14
57 PT 9643	-140	140-6.7	2 $\frac{1}{2}$ in.	1.36
57 PT 9644	*15-X	15-2.6	$\frac{1}{4}$ in.	.96
57 PT 9645	*30-X	30-3.3	1 $\frac{1}{2}$ in.	1.11

APC Micro Condensers

(K) Ideal as air dielectric trimmers for gang condensers, I.F. transformers and for padding r.f. circuits. Isolantite base. Cadmium plated soldered brass rotors and stators. Screw driver adjustment. Shpg. wt., each, 1 lb.

Catalog Number	Code APC	Capacity Range mmf.	Plates	Frame Length	Price Each
57 PT 9646	-25	25-3	7	3 $\frac{1}{2}$ in.	\$0.78
57 PT 9647	-50	50-3.9	14	2 $\frac{1}{2}$ in.	.90
57 PT 9648	-75	75-4.5	20	2 $\frac{1}{2}$ in.	1.02
57 PT 9649	-100	100-5.5	27	2 $\frac{1}{2}$ in.	1.14
57 PT 9650	-140	140-6.5	37	2 $\frac{1}{2}$ in.	1.35

SM Star Midgets

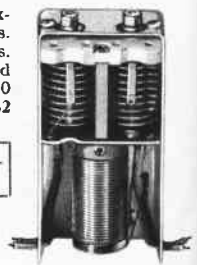
(L) A midget variable condenser for set-builders, experimenters, and laboratories. Bakelite insulation. Straight line capacity. Aluminum plates. Single hole mounting. Shaft $\frac{1}{4}$ -inch diameter. Mounting bushing is $\frac{3}{8}$ -inch diameter. Size is 1 $\frac{1}{2}$ inch wide by 1 $\frac{3}{4}$ inch high. Double spaced "X" types have .064 inch air gap. Shipping weight, each, 1 pound.

Catalog No.	Code SM	Cap. Range mmf.	Price Each
57 PT 9654	-15	15-3	\$0.61
57 PT 9655	-25	25-3.4	.61
57 PT 9656	-50	50-4	.64
57 PT 9657	-100	100-6	.60
57 PT 9658	-140	140-7	.75
57 PT 9659	-35-X	35-5.5	.60
57 PT 9660	-50-X	50-7.5	.75

Neutralizing Condensers

(M) Thick aluminum plates with rounded edges, polished on all surfaces. Fine thread screw provides smooth adjustment. Lock nut setting; plates cannot touch. Isolantite insulation.

Catalog Number	Code	Cap. mmf.	Shipping Weight	Price Each
57 PT 9651	N-10	2.1-10	1 lb. 8 oz.	\$1.80
57 PT 9652	N-15	3.2-14	2 lbs.	3.60
57 PT 9653	N-20	3.8-14	2 lbs.	3.90



CROWE AND GORDON

DIALS, KNOBS AND ACCESSORIES

GORDON Flanged Knobs

Black Bakelite. Brass bushing. For 1/4-inch shaft. 3-inch knob takes 5/8-inch scale. 2 1/4-in. knob takes 3/4 inch scale. Scale is made of heavy brass.



GORDON Handwheels

Molded Bakelite wheel. For 1/4-inch shaft. Brass pointer.

Catalog Number	Size, inches	Flange	Metal Pointer	Shpg. Wt.	Price Each
57 PT 8129	3	yes	yes	1 lb.	45c
57 PT 8130	3	yes	no	1 lb.	39c
57 PT 8131	2 1/4	yes	yes	12 oz.	36c
57 PT 8132	2 1/4	yes	no	12 oz.	36c
57 PT 8133	2 1/4	no	yes	12 oz.	36c
57 PT 8134	2 1/4	no	no	12 oz.	30c
57 PT 8135	1 1/2	no	no	8 oz.	24c
57 PT 8136	1 1/2	yes	no	8 oz.	27c
57 PT 8137	1 1/2	no	yes	8 oz.	24c
57 PT 8138	1 1/2	no	no	8 oz.	16c

Cat. No.	Diam.	Pointer	Shpg. Wt.	Price
Hand Wheels Only				
57 PT 8115	3 1/4 Inch	Yes	1 pound	82c
57 PT 8116	3 1/4 Inch	No	1 pound	76c
57 PT 8117	2 1/4 Inch	Yes	12 ounces	71c
57 PT 8118	2 1/4 Inch	No	12 ounces	65c
57 PT 8119	1 1/2 Inch	Yes	8 ounces	29c
57 PT 8120	1 1/2 Inch	No	8 ounces	24c
57 PT 8121	1 1/2 Inch	Yes	8 ounces	24c
57 PT 8122	1 1/2 Inch	No	8 ounces	18c
Scales Only. *Also for 1 1/2-inch wheel.				
57 PT 8123	5 1/4 Inch	3/4	6 ounces	30c
57 PT 8124	3 1/2 Inch	2 1/4	6 ounces	24c
57 PT 8125	2 1/2 Inch	1 1/2	6 ounces	24c



CROWE Station Emblem

For displaying call letters of amateur broadcasting stations. Emblem is illuminated from the rear; translucent letters. The frame is adjustable for 3, 4, or 5 characters. Two complete sets of alphabets furnished. Emblem complete with reflector box and wired for 110 volts.

57 PT 8103—Shipping wt., 4 lbs. Each.....\$2.35

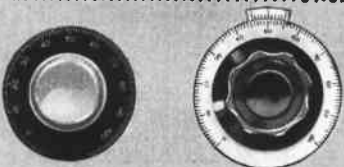
Emblem without sockets and reflector box. 57 PT 8104—Shipping weight, 1 pound. Each.....\$1.62



CROWE Slide Rule Dial

57 PT 8101—Requires panel opening of 1 1/2 in. x 3 3/4 in. Tuning shaft couples direct to condenser shaft. Mounting holes in front plate for fastening with angle brackets or mounting to front of chassis. Complete with escutcheon. Shpg. wt., 1 lb. 8 oz. Each.....95c

57 PT 8102—Requires panel opening of 1 1/2 inches x 5 1/2 inches—pointer travel 4 1/4 inches. Ratio 7 to 1 (180° condenser travel). Shpg. wt., 1 lb. 12 oz. Each.....\$1.41



CROWE Dials

Direct Drive. Black Anodized dial plate. 0-100, 270 or 180 degrees. For 1/4-in. shaft. Red or black knob. State color and calibration.

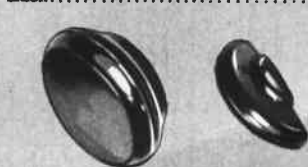
57 PT 8110—1 1/4-in. plate. Shipping weight, 8 oz. 44c

57 PT 8111—2 1/4-in. plate. Shipping weight, 12 oz. 76c

Transmitter type chromium spun ray finish. 0-100, 270; or 0-100, 180 degrees. State choice. Direct Drive.

57 PT 8112—2 1/4-in. Shipping weight, 12 oz. 88c

57 PT 8113—4 in. Shipping weight, 1 pound. \$1.32



CROWE Knobs

Croplastic. Red or black for 1/4 inch shaft. State color wanted.

57 PT 8107—1/2-in. Shipping weight, 4 oz. 7c

57 PT 8108—1 1/4-inches. Shipping weight, 6 oz. 15c

57 PT 8109—2 1/4-in. Shipping weight, 8 oz. 26c

Modernistic Bar Knobs. Red or Black. Brass bushing for 1/4-inch shaft. State color. Fine appearance and workmanship.

57 PT 8105—1 1/4-inch. Shipping weight, 6 oz. 8c

57 PT 8106—2 in. Shipping weight, 6 ounces. 11c



Bar Knob

For amplifiers and testing equipment. Bakelite. For 1/4-inch shaft. Black or Red. State color. Shpg. wt., each, 4 oz.

57 PT 9712—1 1/4 in. 4c

57 PT 9713—2 1/4 in. 7c



Arrow Knob

Molded black Bakelite. For 1/4-inch shaft. An old time favorite with set builders and experimenters. Shipping weight, ea., 4 oz.

57 PT 9710—1 in. 5c

57 PT 9711—1 1/4 in. 8c



GORDON Planetary Drive

Used as an auxiliary speed reducer. Mounts on condenser 1/4-in. shaft. Dual ratio, 7 to 1 and 1-1; each drive with separate knob. Mounts on control shaft behind panel. Drive shaft projects through panel.

57 PT 8126—Shipping wt., 8 oz. \$1.32

57 PT 8127—Black Bakelite knobs for above. Shipping weight, 4 oz. Each 12c



CROWE Anodized Dial Plates

Attractive. Legible black figures on a silvery-white color background. Lend distinction to the equipment on which used. 2 1/2 in. high x 2 1/2 in. wide. Available with the following markings:

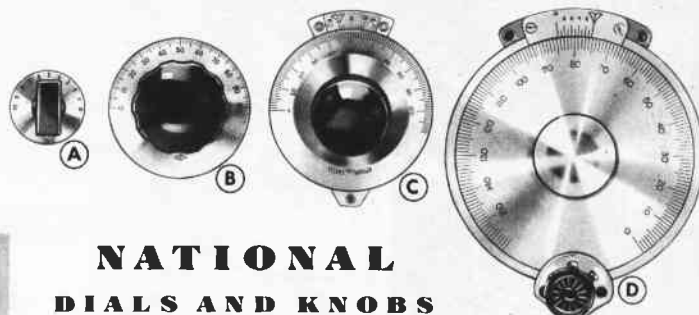
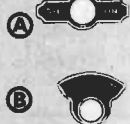
Tone 0-10	Microphone No. 1 0-10	Volume 0-10
Gain 0-10	Microphone No. 2 0-10	Fader 5-0-5
Master Gain 0-10	Gain 5-0-5	Bass 5-0-5
Record 0-10	Radio-Microphone 5-0-5	Treble 5-0-5
Microphone 0-10	Record-Microphone 5-0-5	Expansion 0-10

57 PT 9702—State marking. Shipping weight, 3 ounces. Each 18c

CROWE Etched Aluminum Switch Plates

“Off-on” switch plate. Etched aluminum. block 1 1/4 x 1 1/4 in. 57 PT 9700—Shipping weight, 2 ounces. 6c

“On-off” switch plate. Etched aluminum block. 1 1/4 x 1 in. 57 PT 9701—Shpg. wt., 2 oz. 6c



NATIONAL DIALS AND KNOBS

“HRO” Dial. Etched Nickel Silver, graduated 0 to 10 over 180 degrees. Drilled for 1/4-inch shaft. Diameter 1 1/2 inch. Shipping wt., 8 oz. 45c

57 PT 9029—Dial and Knob complete. 21c

57 PT 9028—Knob only with pointer. Shipping weight, 4 ounces. 21c

“O” Dial—Made of circular grained nickel silver. Highly polished. Deep sharp etching. Insulated. For 1/4-inch shaft. Comfortable grip block composition knob. Dial diameter 3 1/2 inches overall. Graduated 0 to 100 over 180 degrees. For counter-clockwise condenser.

57 PT 9030—Shipping weight, 1 pound. 90c

“N” Dial. Engine divided scales. Polished nickel silver. Flush vernier of smooth and powerful planetary drive. 50 to 1 ratio. Shipping weight, each, 1 pound 8 ounces.

57 PT 9031—0 to 100 counter clockwise 180 degrees. \$4.05

57 PT 9032—100 to 0 clockwise 180 degrees. \$4.05

57 PT 9033—150 to 0 clockwise 270 degrees. 4.05

57 PT 9034—200-0 clockwise 360 degrees. 4.05

“NW” Dial—A great precision dial of finest quality and appearance. Nickel silver, engine divided. Diameter 6 inches. Variable ratio drive. For large transmitters, frequency meters, and precision instruments. Shpg. wt., each, 4 lbs.

57 PT 9035—0 to 100 counter clockwise 180 degrees. \$9.00

57 PT 9036—100 to 0 clockwise 180 degrees. \$9.00

57 PT 9037—150 to 0 clockwise 270 degrees. 9.00

57 PT 9038—200 to 0 clockwise 360 degrees. 9.00

“BM” Dial—“Velvet Vernier” action. Variable ratio drive. Black Bakelite case. Diameter 3 inches. Shipping weight, each, 1 lb. 8 oz.

57 PT 9039—0-100-0 for either clockwise or counter clockwise condenser. 180 degrees. \$1.50

57 PT 9040—200 to 0 clockwise. 360 degrees. \$1.50

“B” Dial—Same as “BM” except 4 inches in diameter. Shipping weight, each, 1 pound 12 ounces.

57 PT 9041—0-100-0 for either clockwise or counter clockwise condenser. 180 degrees. \$1.65

57 PT 9042—200 to 0 clockwise. 360 degrees. 1.65

Illuminator for “B” and “BM” Dial.

57 PT 9043—Shipping weight, 4 ounces. 30c

“A” Dial—Unexcelled for general purpose. “Velvet Vernier” mechanism contained within the knob. No back-lash. Ratio 5 to 1. Shipping weight, 3 3/4-inch diameter, 1 lb. 4 oz.; 4-inch diameter, 1 lb. 8 oz.

57 PT 9044—3 3/4 inch. 0 to 100 counter clockwise 180 degrees. \$1.80

57 PT 9045—4 inch. 0 to 100 counter clockwise. 180 degrees. \$1.80

57 PT 9046—4 inch. 150 to 0 clockwise. 270 degrees. 1.80

57 PT 9047—4 inch. 200 to 0 clockwise. 360 degrees. 1.80

“HRK” Knob. Diameter 2 1/2 in. For 1/4-in. shaft. 57 PT 9048—Shipping weight, 8 ounces. 51c

Gordon World DX Clock—Tells World Time at a glance. No guesswork. No charts. This professionally styled life-time instrument tells you instantly GMT or Local time of stations you contact—in any one of the 24 time zones around the world! A necessity for every station owner. Genuine Waltham self-starting synchronous movement. Available for 110-volt 60-cycle AC. 24-hour colored dials plainly marked for direct reading. Information included for telling time in locations not shown on clock. Base removable for mounting flush in a panel. 57 PT 8128—Shipping weight, 4 pounds. \$8.82

CROWE Aluminum Title Plates



Anodized aluminum finish, silvery-white color background, with black figures. Size 1 1/4 inch x 1 1/4 inch, furnished with self-tapping screws. The use of these attractive plates will give your rig that professional touch. State marking wanted. See list below for titles carried in stock.

57 PT 8100—Shipping weight, each, 2 ounces. Each.....6c

AC Input	Doubler	Power Amp. Plate
AC Volts	Fader	Radio
Amplifier	Filament Voltage	Receive
Antenna	Freq. Meter	Record
Beat Osc.	Gain Control	Rectifier
Buffer	Grid Current	Screen Current
1st Buf. Dblr. Grid	Ground	Selector
2nd Buf. Dblr. Grid	Input	Send
3rd Buf. Dblr. Grid	Key	Speaker
1st Buf. Dblr. Plate	Microphone	Speech Amp.
2nd Buf. Dblr. Plate	Mike Current	Sp. Amp. Dvr. Plate
3rd Buf. Dblr. Plate	Modulator Grid	Transceiver
1st Buffer Grid	Modulator Plate	Transmitter
2nd Buffer Grid	Monitor	Tone
3rd Buffer Grid	Neut. Condenser	Volume
1st Buffer Plate	Off-On	50 Ohm Input
2nd Buffer Plate	Oscillator	50 Ohm Output
3rd Buffer Plate	Output	125 Ohm Input
Class A Modulator	Plate 1	125 Ohm Output
Class B Modulator	Plate 2	200 Ohm Input
Crystal Osc. Grid	Plate Voltage	200 Ohm Output
Crystal Osc. Plate	Phone—CW	500 Ohm Input
D.C. Voltage	Power Amp. Grid	500 Ohm Output



CORNELL-DUBILIER CAPACITORS

Dykanol Filters

(A) Type TLA Dykanol Filter Units in cylindrical aluminum containers are ideal for portable transmitters, power supplies and amplifiers. One terminal is well insulated, the other being the metal can itself. Insulating washers as well as a large spade lug are provided. Shipping weight, each, 1 pound.

D.C. Volts	Catalog Number	Cap. Mfd.	Size, Inches Lgth. Diam.	Price Each
600	57 PT 8565	2	2 1/2 x 1 1/2	\$1.62
	57 PT 8566	3	4 1/2 x 1 1/2	1.91
	57 PT 8567	4	4 1/2 x 1 1/2	2.20
1000	57 PT 8568	1	2 1/2 x 1 1/2	1.47
	57 PT 8569	2	4 1/2 x 1 1/2	1.91
	57 PT 8570	2	2 1/2 x 1 1/2	1.76
1500	57 PT 8571	1	4 1/2 x 1 1/2	1.91

Dry Electrolytics

Plain foil, dry electrolytic capacitors. EB has insulated, color-coded wire leads. In the EP units, the central insulated terminal is the positive, while the metal container is the negative. Lock washers and hexagon nuts furnished. Shipping weight, each, 1 pound.

Catalog Number	Capacity Mfd.	Size, Inches Lgth. Diam.	Price Each
Type EB-450 V.D.C.			
57 PT 8572	4	2 1/2 x 1 1/2	50c
57 PT 8573	8	4 1/2 x 1 1/2	62c
57 PT 8574	10	4 1/2 x 1 1/2	73c
57 PT 8575	12	4 1/2 x 1 1/2	81c
57 PT 8576	16	4 1/2 x 1 1/2	91c
57 PT 8577	18	4 1/2 x 1 1/2	97c
57 PT 8578	4-4	4 1/2 x 1 1/2	76c
57 PT 8579	4-8	4 1/2 x 1 1/2	85c
57 PT 8580	8-8	4 1/2 x 1 1/2	94c
475 V.D.C.			
57 PT 8581	8	4 1/2 x 1 1/2	88c
Type EP-450 V.D.C.			
57 PT 8582	8	4 1/2 x 1 1/2	62c
57 PT 8583	8	4 1/2 x 1 1/2	62c
57 PT 8584	8-8	4 1/2 x 1 1/2	94c

Compact Electrolytics Type KR

Compact etched foil dry electrolytic capacitors. Equipped with pal nut. Fully wax-potted sections are carefully and completely insulated from one another as well as from the metal container. Shpg. wt., ea., 12 ounces.

Catalog Number	Capacity Mfd.	Size, Inches Lgth. Diam.	Price Each
450 V.D.C.			
57 PT 8585	4	2 1/2 x 1 1/2	\$0.50
57 PT 8586	4	2 3/4 x 1 1/2	.62
57 PT 8587	12	3 1/2 x 1 1/2	.82
57 PT 8588	8-8	3 1/2 x 1 1/2	.94
57 PT 8589	8-8-8	4 1/2 x 1 1/2	1.36

Transmitting Capacitors

(C) C-D Dykanol Transmitting Filter Capacitors Type TJU are dependable units for amateur, broadcast and commercial transmitters. Compact, lightweight, safely-rated. Universal mounting clamp, well-insulated terminals, fire-proof.

Catalog Number	Cap. Mfd.	Size, Inches Length Width Thick	Price Each
600V.D.C. 440rms Rect. A.C. Shpg. wt. 1 lb. 8 oz.			
57 PT 8590	.5	2 1/2 x 1 1/2 x 1 1/2	\$1.62
57 PT 8591	1	2 1/2 x 1 1/2 x 1 1/2	2.06
57 PT 8592	2	2 1/2 x 1 1/2 x 1 1/2	2.50
57 PT 8593	4	3 1/2 x 2 1/2 x 1 1/2	3.23
1000 V.D.C. 660 rms Rect. A.C. Shpg. wt. 2 lbs.			
57 PT 8594	1.5	2 1/2 x 1 1/2 x 1 1/2	\$1.76
57 PT 8595	2	2 1/2 x 1 1/2 x 1 1/2	2.20
57 PT 8596	2	4 1/2 x 1 1/2 x 1 1/2	2.97
57 PT 8597	4	4 1/2 x 2 1/2 x 1 1/2	3.67
1500 V.D.C. 1000 rms Rect. A.C. Shpg. wt. 3 lbs.			
57 PT 8599	1	4 1/2 x 1 1/2 x 1 1/2	\$2.64
57 PT 8600	2	4 1/2 x 2 1/2 x 1 1/2	3.67
57 PT 8601	4	4 1/2 x 3 1/2 x 1 1/2	4.99
2000V.D.C. 1500 rms Rect. A.C. Shpg. wt. 4 lbs.			
57 PT 8602	1	3 1/2 x 2 1/2 x 1 1/2	\$3.23
57 PT 8603	2	4 1/2 x 3 1/2 x 1 1/2	3.82
57 PT 8604	4	4 1/2 x 3 1/2 x 2 1/2	5.29
2500V.D.C. 1800 rms Rect. A.C. Shpg. wt. 6 lbs.			
57 PT 8605	1	3 1/2 x 3 1/2 x 1 1/2	\$4.70
57 PT 8606	2	4 1/2 x 3 1/2 x 1 1/2	7.64
3000V.D.C. 2200 rms Rect. A.C. Shpg. wt. 8 lbs.			
57 PT 8607	1	4 1/2 x 3 1/2 x 2 1/2	\$7.06
57 PT 8608	2	4 1/2 x 3 1/2 x 3 1/2	8.82

Type TQ Dykanol Units

(D) Equipped with small insulated terminals and mounting ring, for mounting in any position. Never before has the amateur been offered such a marvelous line of D-X transmitting capacitors at such low prices!

Catalog Number	Capacity Mfd.	Size, Inches Length Diam.	Price Each
600 V.D.C. Shipping weight, 1 lb. 8 oz.			
57 PT 8609	2	2 1/2 x 2	\$1.91
57 PT 8610	4	3 1/2 x 2	2.65
1000 V.D.C. Shipping weight, 2 pounds			
57 PT 8611	2	2 1/2 x 2	\$1.62
57 PT 8612	2	2 1/2 x 2	2.20
57 PT 8613	4	3 1/2 x 2	2.79
1500 V.D.C. Shipping weight, 3 pounds			
57 PT 8614	1	2 1/2 x 2	\$2.06
57 PT 8615	2	3 1/2 x 2	2.79
2000 V.D.C. Shipping weight, 4 pounds			
57 PT 8616	1	3 1/2 x 2	\$2.65
57 PT 8617	2	4 1/2 x 2	2.94

Mica Transmitting Units

(E) Intended for amateur radio communicating fone. GW and ICW, for plate blocking, grid buffer, tank, and antenna coupling purposes. Shipping weight, each, 3 pounds.

Catalog Number	Cap. Mfd.	Max. D.C. Volt	Max. Current in Amps. 30 mc 7500kc 1875kc 40 M 160 M	Price Each
57PT8618	.00005	12,500	3.5 2.5	\$2.20
57PT8619	.0001	12,500	5 4	2.20
57PT8620	.00025	12,500	5 8	2.20
57PT8621	.0005	12,500	5 9	2.20
57PT8622	.0005	12,500	5 8	2.20
57PT8623	.001	7,000	5 10	2.94
57PT8624	.001	7,000	5 9	2.50
57PT8625	.001	3,500	5 9	2.20
57PT8626	.0015	12,500	6 10	3.23
57PT8627	.002	12,500	6 12	3.52
57PT8628	.002	7,000	6 10	2.94
57PT8629	.002	3,500	6 8	2.50
57PT8630	.005	10,000	7 13	5.59
57PT8631	.01	7,000	7 13	5.59
57PT8632	.01	3,500	7 13	4.12
57PT8633	.02	3,500	7 14	5.14
57PT8634	.1	2,000	7 14	6.47

Tubular Electrolytics

(F) Extremely small, handy to use, and completely eliminating exact duplicate replacement capacitors. Polarity is clearly indicated on a protective varnished cardboard sleeve fitted over aluminum cartridge. Hermetically sealed. Shipping weight, each, 4 ounces.

Catalog Number	Capacity Mfd.	Size, Inches Length Width	Price Each
450 V.D.C.			
57 PT 8635	8	1 1/2 x 3/4	32c
57 PT 8636	8	2 1/2 x 3/4	44c
57 PT 8637	12	2 1/2 x 3/4	53c
57 PT 8638	16	2 1/2 x 3/4	53c
57 PT 8639	20	2 1/2 x 1	59c
350 V.D.C.			
57 PT 8640	4	1 1/2 x 3/4	29c
57 PT 8641	8	1 1/2 x 3/4	32c
57 PT 8642	12	2 1/2 x 3/4	41c
57 PT 8643	16	2 1/2 x 3/4	47c
250 V.D.C.			
57 PT 8644	4	1 1/2 x 3/4	26c
57 PT 8645	8	1 1/2 x 3/4	29c
57 PT 8646	12	2 1/2 x 3/4	38c
57 PT 8647	16	2 1/2 x 3/4	44c
57 PT 8648	20	2 1/2 x 3/4	47c
57 PT 8649	40	2 1/2 x 3/4	56c
150 V.D.C.			
57 PT 8650	4	1 1/2 x 3/4	24c
57 PT 8651	8	1 1/2 x 3/4	26c
57 PT 8652	12	1 1/2 x 3/4	29c
57 PT 8653	16	1 1/2 x 3/4	32c
57 PT 8654	20	1 1/2 x 3/4	35c
57 PT 8655	40	2 1/2 x 3/4	38c
25 V.D.C.			
57 PT 8656	10	1 1/2 x 3/4	24c
57 PT 8657	25	1 1/2 x 3/4	29c

You can include anything Sears sell in your Easy Payment Order . . . See Page 2 for Easy Terms

Paper Tubular Units

(G) Non-inductively wound, specially sealed and impregnated. Wire leads. High melting point wax ends. Average shipping weight, 4 ounces.

Catalog Number	Capacity Mfd.	Price Each
400 V.D.C.		
57 PT 8658	.01	9c
57 PT 8659	.015	9c
57 PT 8660	.02	9c
57 PT 8661	.025	9c
57 PT 8662	.03	9c
57 PT 8663	.04	9c
57 PT 8664	.05	9c
57 PT 8665	.06	12c
57 PT 8666	.1	12c
57 PT 8667	.2	15c
57 PT 8668	.25	16c
57 PT 8669	.5	21c
57 PT 8670	1	29c
600 V.D.C.		
57 PT 8671	.0001	9c
57 PT 8672	.00025	9c
57 PT 8673	.0005	9c
57 PT 8674	.001	9c
57 PT 8675	.002	9c
57 PT 8676	.003	9c
57 PT 8677	.004	9c
57 PT 8678	.005	9c
57 PT 8679	.006	9c
57 PT 8680	.01	9c
57 PT 8681	.015	9c
57 PT 8682	.02	9c
57 PT 8683	.025	12c
57 PT 8684	.03	12c
57 PT 8685	.04	12c
57 PT 8686	.05	12c
57 PT 8687	.06	15c
57 PT 8688	.1	15c
57 PT 8689	.2	21c
57 PT 8690	.25	21c
57 PT 8691	.3	26c
57 PT 8692	.5	29c
1000 V.D.C.		
57 PT 8693	.001	12c
57 PT 8694	.002	12c
57 PT 8695	.003	12c
57 PT 8696	.004	12c
57 PT 8697	.005	12c
57 PT 8698	.006	12c
57 PT 8699	.007	12c
57 PT 8700	.008	12c
57 PT 8701	.01	18c
57 PT 8702	.015	18c
57 PT 8703	.02	18c
57 PT 8704	.03	21c
57 PT 8705	.04	21c
57 PT 8706	.05	21c
57 PT 8707	.06	21c
57 PT 8708	.075	24c
57 PT 8709	.1	24c
MICA Receiving and Transmitting Capacitors		
For radio frequency bypass high voltage D.C. blocking, low power tank capacitors, padders, coupling functions, audio and video purposes. Finest quality India ruby mica—select foil and the exclusive C-D stack assembly. Terminal studs in Type 9 are moulded into case; Type 4 uses short solder-lug terminals, and has insulated mounting holes for panel mounting. Shpg. wt., each, 8 ounces.		
Catalog Number	Cap. Mfd.	Price Each
Type 9—Working Voltage 600 V.D.C.		
57 PT 8450	.00005	35c
57 PT 8451	.0001	35c
57 PT 8452	.00015	35c
57 PT 8453	.0002	35c
57 PT 8454	.00025	35c
57 PT 8455	.0005	35c
57 PT 8456	.001	35c
57 PT 8457	.0015	38c
57 PT 8458	.002	38c
57 PT 8459	.0025	44c
57 PT 8460	.003	50c
57 PT 8461	.004	50c
57 PT 8462	.005	50c
57 PT 8463	.006	69c
57 PT 8464	.007	69c
57 PT 8465	.008	71c
57 PT 8466	.01	82c
57 PT 8467	.015	94c
Type 4—5000 V.D.C. Test Working Voltage 2500 V.D.C.		
57 PT 8500	.00005	\$0.53
57 PT 8501	.0001	.53
57 PT 8502	.0002	.62
57 PT 8503	.00025	.62
57 PT 8504	.0005	.73
57 PT 8505	.001	.88
57 PT 8506	.0015	1.15
57 PT 8507	.002	1.32
57 PT 8508	.0025	1.47
57 PT 8509	.003	1.62
57 PT 8510	.004	1.85
57 PT 8511	.005	2.00
57 PT 8512	.006	2.06
57 PT 8513	.007	2.23
57 PT 8514	.008	2.41
57 PT 8515	.01	2.41
57 PT 8516	.015	2.66
Type 4—1000 V.D.C. Test Working Voltage 800 V.D.C.		
57 PT 8517	.00005	\$0.29
57 PT 8518	.00005	.29
57 PT 8519	.0001	.29
57 PT 8520	.00015	.29
57 PT 8521	.0002	.29
57 PT 8522	.00025	.29
57 PT 8523	.0003	.41
57 PT 8524	.0004	.41
57 PT 8525	.0005	.41
57 PT 8526	.0006	.50
57 PT 8527	.0007	.50
57 PT 8528	.0008	.59
57 PT 8529	.001	.68
57 PT 8530	.0015	.85
57 PT 8531	.002	.91
57 PT 8532	.0025	1.12
57 PT 8533	.003	

STANCOR

NEW POLY PEDANCE ALL-PURPOSE TRANSFORMERS



DRIVER TRANSFORMERS

- Quality transformers with ratios for present and future needs provide for new tubes as announced.
- Correct impedance matching ALWAYS possible.
- Ratios are conveniently changed at terminal board.
- Two sizes in power ratings to permit use of ALL popular Class "B" tubes and circuits using them.
- Balanced pie-wound coils assure low leakage and high efficiency in all modern transmitter circuits.
- Low resistance secondary windings for minimum power loss and undistorted driving power.
- Transformers are securely clamped with four husky bolts. Hum-free; they don't "talk back."
- Every transformer furnished with wiring instructions and valuable data on best engineering practice.

Transformers Like Everything Else at Sears May Be Bought on Terms, See Page 2

MODULATION TRANSFORMERS

- Balanced pie-wound tapped coils for wide range of impedance ratios. Proved high efficiency.
- Liberal design insures maximum undistorted power output and maximum operating efficiency.
- Safe, sure and reliable connections easily made at the terminal board. Easy to get to for changes.
- Secondary designed to carry Class "C" current.
- Special impregnation to insure long life and quiet operation unaffected by humidity.
- Highest quality laminations reduce power losses.
- Outstanding in performance as well as value.
- Every transformer furnished with complete wiring instructions and valuable application data.

Buy Today With a Thought for the Future

There's a lot of satisfaction in building a rig around quality transformers. But it isn't exactly pleasant when you have to discard them later because new tubes or new circuits which you wish to use make them obsolete. That's why Stancor have developed for you this fine line of Driver and Modulation transformers.

When you select Stancor Poly-Pedance transformers you are assured not only of a better and closer match with existing tubes, but you can feel reasonably sure that when new tubes or circuits are developed you will not have to buy new transformers to rework your transmitter.

This new line of transformers has been factory-laboratory checked under actual service conditions to prove their frequency response and high efficiency generally. All coils are tapped to make impedance changes practical, easy and accurate. Ratios and impedance may easily be changed on terminal panel, thus eliminating the necessity of working under the chassis.

Refer to column at left for examples of the tremendous flexibility of these transformers.

POLY-PEDANCE Driver Transformers

Four sizes with the maximum number of usable ratios to match any driver to the modulator grid circuit.

Catalog Number	Cap. in Watts	Pri. M.A. per side	RATIO Primary to 1/2 Secondary	Mounting Dimensions, inches			Type Mounting	Shpg. Wt. Lbs. Oz.	Price
				Ht.	Wd.	Depth			
57 PT 8000	15	60	1.25:1, 1.4:1, 1.6:1, 1.8:1, 2:1, 2.2:1, 2.4:1	3 3/8	2 1/2	3 3/4	B*	3	\$3.38
57 PT 8001	15	60	2.6:1, 3:1, 3.2:1, 3.4:1, 4:1, 4.5:1, 5:1	3 3/8	2 1/2	3 3/4	B*	2 13	3.23
57 PT 8002	30	120	1.25:1, 1.5:1, 1.75:1, 2:1, 2.25:1, 2.5:1	3 3/8	3	4	B*	4 5	4.26
57 PT 8003	30	100	1.5:1, 2:1, 2.5:1, 3:1, 3.5:1	3 3/8	3	4	B*	4 5	4.26

*Indicates Ⓢ Type mounting with leads instead of lugs.

POLY-PEDANCE Modulation Transformers

Six transformers which cover a wide range of power ratings and will match practically all types of tubes to a wide variety of load impedances.

Catalog Number	Cap. in Watts	Pri. M.A. Per Side	Secondary Series	M.A. Parallel	Mounting Dimensions, inches			Type Mounting	Shpg. Wt. Lbs. Oz.	Price
					Ht.	Wd.	Depth			
57 PT 8004	15	45	45	90	3 3/8	2 3/4	3 3/4	B	2 8	\$2.94
57 PT 8005	30	80	80	160	3 3/8	3 3/4	4 3/8	B	7 5	3.82
57 PT 8006	60	125	125	250	3 3/8	3 3/4	5 1/2	B	12	4.70
57 PT 8007	125	200	150	300	4 3/8	3 3/4	5 1/2	B	12	6.17
57 PT 8008	300	260	260	520	7	6 1/4	6 3/4	A	35	17.64
57 PTM 8009	600	350	350	700	11	7 1/2	10	A	75	36.75

POLY-PEDANCE Line Drivers

Two units to match all common line impedances to the modulator grid circuit.

Catalog Number	Cap. in Watts	RATIO Primary to 1/2 Secondary	Mounting Dimensions, inches			Type Mounting	Shipping Weight	Price
			Ht.	Wd.	Depth			
57 PT 8010	15	1:0.75, 1:0.85, 1:1, 1:1.25, 1:1.45, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3, 1:3.15.	3 3/8	2 3/4	3 3/4	B*	3 lbs.	\$3.23
57 PT 8011	30	1:0.75, 1:0.85, 1:1, 1:1.25, 1:1.45, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3, 1:3.15.	3 3/8	3	3 3/4	B*	4 lbs.	3.82

*Indicates Ⓢ type with leads instead of lugs.

Consult This Chart For Correct Poly-Pedance Transformer For Any Popular Tube Combination

Our stock numbers which correspond to Manufacturer's type numbers given in this table are as follows:
 57PT8000:A-4761; 57PT8006:A-3893; 57PT8001:A-4762; 57PT 8007:A-3894;
 57PT8002:A-4763; 57PT8008:A-3895; 57PT8003:A-4764; 57PTM8009:A-3896;
 57PT8004:A-3891; 57PT8010:A-4765; 57PT8005:A-3892; 57PT 8011:A-4766.

Tube	Plate Volts	Watts Power	Plate to Plate Load-Ohms	Driver Tubes	Poly-Pedance Driver to use	Line Trans. Poly-Pedance	Poly-Pedance Modulation Transformer
RK-18	1,000	100	12,000	45	A-4762	A-4765	A-3894
T-20	600	50	8,100	45	A-4761	A-4765	A-3893
TZ-20	600	50	8,100	45	A-4762	A-4765	A-3894
TZ-40	800	70	12,000	45	A-4762	A-4765	A-3894
HK-24	1,250	120	21,200	45	A-4762	A-4765	A-3894
HY-25	650	60	7,200	45	A-4762	A-4765	A-3893
RK-31	1,250	120	13,500	2A3	A-4762	A-4765	A-3894
RK-31	1,250	140	16,800	2A3	A-4762	A-4765	A-3895
35-T	750	85	7,000	2A3	A-4762	A-4765	A-3894
35-T	1,250	130	17,000	2A3	A-4762	A-4765	A-3894
HY-40	1,000	175	7,000	2A3	A-4762	A-4765	A-3895
HY-40Z	1,000	180	6,900	45	A-4762	A-4765	A-3895
TZ-40	750	100	6,000	45	A-4762	A-4765	A-3894
TZ-40	1,000	175	6,900	2A3	A-4762	A-4765	A-3895
46	500	35	8,000	45	A-4762	A-4765	A-3893
50-T	1,000	100	7,500	2A3	A-4761	A-4765	A-3894
50-T	1,500	175	16,000	2A3	A-4761	A-4765	A-3895
HY-51-A & B	800	150	5,800	2A3	A-4762	A-4765	A-3895
HY-51-A & B	1,000	180	7,000	2A3	A-4762	A-4765	A-3895
RK-52	1,250	250	10,000	2A3	A-4762	A-4765	A-3895
HK-54	1,250	170	16,800	2A3	A-4752	A-4765	A-3895
HK-54	1,500	200	12,500	2A3	A-4762	A-4765	A-3895
T-55	1,000	125	10,000	2A3	A-4762	A-4765	A-3894
T-55	1,500	175	12,000	2A3	A-4762	A-4765	A-3895
HY-57	500	60	5,200	45	A-4762	A-4765	A-3893
HY-57	800	110	9,000	45	A-4762	A-4765	A-3894
HF-100	1,500	260	12,000	45	A-4761	A-4765	A-3895
100-TH	1,000	210	5,200	2A3	A-4762	A-4765	A-3895
100-TH	1,500	300	9,600	2A3	A-4762	A-4765	A-3895
100-TL	1,500	270	9,600	2A3	A-4761	A-4765	A-3895
100-TL	2,000	350	16,000	2A3	A-4761	A-4765	A-3896
ZB-120	750	150	4,800	2A3	A-4762	A-4765	A-3895
ZB-120	1,000	200	6,900	2A3	A-4762	A-4765	A-3895
150-T	1,500	375	8,000	4-2A3	A-4763	A-4766	A-3894
150-T	1,500	375	8,000	6L6	A-4764	A-4766	A-3896
HK-154	1,250	225	11,500	2A3	A-4761	A-4765	A-3895
T-155	1,500	300	9,600	2A3	A-4762	A-4765	A-3895
203-A	1,250	260	9,000	*2A3	A-4761	A-4765	A-3895
203-A	1,250	260	9,000	6L6	A-4764	A-4766	A-3895
203-Z	1,250	300	7,900	*2A3	A-4762	A-4765	A-3895
250-TL	1,000	350	2,360	2A3	A-4761	A-4765	A-3896
800	750	90	6,400	2A3	A-4762	A-4765	A-3894
800	1,000	100	12,500	2A3	A-4762	A-4765	A-3894
801	400	27	6,000	2A3	A-4762	A-4765	A-3892
801	600	45	10,000	2A3	A-4762	A-4765	A-3893
805	1,250	300	6,700	2A3	A-4762	A-4765	A-3895
808	1,250	190	12,700	2A3	A-4762	A-4765	A-3895
809	750	100	8,400	2A3	A-4762	A-4765	A-3894
809	500	60	5,200	45	A-4762	A-4765	A-3893
838	1,000	200	6,900	2A3	A-4762	A-4765	A-3895

6L6—Tubes with 16% inverse feed back.

2A3—Tubes operated 300 V. self bias unless preceded by * in which case they are operated 300 V. fixed bias.

45—Tubes operated 260 V. self bias.

500—Ohm line transformer ratio presupposes use of recommended driver tubes feeding 500 ohm line.

NATIONAL INSULATORS

AND MISCELLANEOUS SMALL PARTS

(A) National Steatite Bowls are designed for leads and high voltages. All fittings furnished.
 57 PT 9216—Type XS-3. Fits 2 3/4 inch hole. Shipping weight 3 lbs. Per pair..... \$3.00
 57 PT 9216—Type XS-4. For 3 3/4 inch hole. Shipping weight, 4 lbs. Per pair..... \$3.90
 (B) 57 PT 9217—Type XS-5 with flanges for bolting down. Diameter 5 1/4 in. Shipping weight 5 lbs. Per pair with fittings..... \$9.30
 (C) National stand-off insulators with metal base and cap, less jack. Steatite body. (D) Shows how type GSJ Jack is used in combination with types GS-3, GS-4, and GS-4A.)

Catalog No.	Type	Size, in.	Shpg. Wt.	Price
57 PT 9218	GS-1	1/2 x 1 3/4	3 oz.	15c
57 PT 9219	GS-2	1/2 x 2 1/4	4 oz.	21c
57 PT 9220	GS-3	3/4 x 2 1/2	4 oz.	54c
57 PT 9221	GS-4	3/4 x 4 1/4	8 oz.	86c
57 PT 9222	GS-4A	3/4 x 6	12 oz.	96c

(E) Steatite Spreaders. Lgth. 6 in. When used with No. 12 wire will give surge impedance of 600 ohms.
 57 PT 9223—Type AA-3. Shpg. wt., 8 oz. Ea. . . 18c
 (F) Steatite strain insulators. Long leakage path.
 57 PT 9224—Type AA-6. Shpg. wt., 8 oz. Ea. 21c

(G) Isolantite Q Insulator. When used to space 1/4 inch tube 2 inches apart will give a Q transformer matching a 72 ohm center fed full wave antenna to a 600 ohm line.
 57 PT 9225—Type QB. Shipping weight, 8 oz. . . 21c
 (H) Steatite aircraft type insulator
 57 PT 9226—Type AA5. Shpg. wt., 6 oz. . . . 18c
 (J) Steatite Cone Insulators with internal thread at each end for 1/2 screw.

Catalog Number	Type	Height	Shpg. Weight	Price Each
57 PT 9227	GS-10	3/4 inch	3 oz.	4 1/2 c
57 PT 9228	GS-5	1 1/4 inches	4 oz.	15c
57 PT 9229	GS-6	2 inches	6 oz.	27c
57 PT 9230	GS-7	3 inches	8 oz.	45c

(K) Hollow low-loss cone-type bushings. Stud bolt, washers, and 4 nuts included. Shpg. wt., pair, 1 lb.
 57 PT 9233—Type XS-1 for 1 in. hole. Pair..... 45c
 57 PT 9234—Type XS-2 for 1 1/2 in. hole. Pair..... 54c

(M) Lug Type Stand-off insulator. (L) Shows this bushing used with GSJ Jack. Shipping weight, 4 oz. each.
 57 PT 9231—Type GS-8 with threaded ends..... 21c
 57 PT 9232—Type GS-9 with Jack at top end. . . . 30c

National Miscellaneous Small Parts

(A) Center Insulator for National Dual Section condensers type TMC.
 57 PT 9235—Shipping weight, 8 ounces..... 18c
 (B) End insulator for National TMC condensers.
 57 PT 9236—Shipping weight, 8 ounces..... 18c
 (C) Insulator for National ST condensers.
 57 PT 9237—Shipping weight, 4 ounces..... 9c
 (D) Center Insulator for National Dual condensers TMA.
 57 PT 9238—Shipping weight, 8 ounces..... 24c
 (E) Insulator for National condensers type SE.
 57 PT 9239—Shipping weight, 4 ounces..... 9c
 (F) End Insulator for National condensers type TMA.
 57 PT 9240—Shipping weight, 8 ounces..... 24c
 (G) Steatite Insulator for mounting 5 meter inductances or as 5 meter lead-in spreader.
 57 PT 9241—Shipping weight, 3 ounces..... 18c
 (H) Steatite H.F. bushing. Diameter 3/4 in. Fits 1/2-in. panel, 1/8 inch thick.
 57 PT 9242—Type XS-6. Shipping weight, 2 oz. . . . 9c
 (I) National shaft coupling. Glazed Isolantite.
 57 PT 9243—Type TX-1 Leakage path 1 inch. Shipping weight, 6 ounces..... 60c
 57 PT 9244—Type TX-2. Leakage path 2 1/2 inches. Shipping weight, 8 ounces..... 66c
 (K) New FWA binding post. Takes banana plug at top. Has hole at base for wire. Positive clamping action.
 57 PT 9245—Type FWA. Shpg. wt., 2 oz. . . . 15c
 (L) National screw terminal. Shipping weight, 2 oz.
 57 PT 9246..... 9c
 (M) National 1 1/4-in. shaft extension. For 1/4 inch shaft.
 57 PT 9247—Shipping weight, 3 ounces..... 15c
 (N) Through-Point Bushing of injection molded victron. Has .093 inch conductor molded in but same can be removed if desired. Very low loss.
 57 PT 9248—Box of 12. Shipping weight, 8 oz. . . 45c

(P) FWE Jacks. Use with FWC insulator listed at (T).
 57 PT 9249—FWE. Shpg. wt., 3 oz. 9c
 (R) GSJ Jack. Screws into GS-3, GS-4 and GS-4A stand-off insulators. See (D) under National insulators.
 57 PT 9250—Type GSJ. Shpg. wt., 3 oz. Each. . . 6c
 (S) Victron terminal strip for high frequency use. Illustration shows its adaptability for use with FWA binding posts which are not included in the price.
 57 PT 9251—Type FWB. Shipping weight, 3 oz. . . 6c
 (T) Type FWC (R39) Insulators for use with FWA binding posts or FWE Jacks on 3/4 inch centers. Jacks not included. See (R) above.
 57 PT 9252—Type FWC. Shpg. wt., 4 oz. Per pr. 21c
 (U) Safety Plate grip of Molded R-39. For 866 and other tubes using 3/8 in. caps. Conductor opening will receive spark plug cable.
 57 PT 9253—Type SPG. Shpg. wt., 4 oz. Each. . . 21c
 (V) A new plug of R-39 that mounts 2 banana plugs on 3/4 inch centers. Leads may be brought out through top or side. When used with type FWE jacks and FWC insulators all metal parts are guarded when plugged in.
 57 PT 9254—Type FWF. Shpg. wt., 8 oz. . . . 60c
 (W) Flexible shaft. Length 4 1/4 inches.
 57 PT 9256—Type TX-11. Shpg. wt., 8 oz. . . . 36c
 (X) Flexible shaft with Isolantite insulation on each end. Shipping weight, 8 ounces.
 57 PT 9257—Type TX12. Length 4 1/4 inches. . . 75c
 57 PT 9258—Type TX13. Length 7 1/4 inches. . . 90c
 (Y) Coupling. Bakelite and canvas insulation. No backlash.
 57 PT 9259—TX-10. For 1/4 in. shaft. Shipping weight, 3 ounces..... 33c
 (Z) Steatite coupling. For 1/4 in. shaft. Shpg. wt., 6 oz.
 57 PT 9260—Type TX-9. Flexible..... 66c
 57 PT 9255—Type TX-8. Non-flexible..... 45c

Insuline Couplings . . . Rods . . . Jacks . . . Plugs and Bushings

(A) Shaft Extenders. Shipping weight, 3 ounces.
 57 PT 9750—1/4 in. hole, 1/4 in. extender..... 9c
 57 PT 9751—3/8 in. hole, 1/4 in. extender..... 9c
 57 PT 9752—1/2 in. hole, 3/8 in. extender..... 9c
 Solid Brass shaft coupling. Shipping weight, 3 oz.
 57 PT 9753—1/4 to 1/4 in. 9c
 57 PT 9754—3/8 to 3/8 in. 9c
 57 PT 9755—1/2 to 1/2 in. 9c
 Split Bushing. For increasing shaft diameter from 1/4 in. to 3/8 inch. Length 1/2 in. Shipping weight, 3 oz.
 57 PT 9756—Each..... 5c
 (B) Brass shafting. Round. 1/4 in. diameter.
 57 PT 9757—6 in. long. Shipping wt., 8 oz. . . . 9c
 Fiber shafting. Round. 1/4 in. diameter.
 57 PT 9758—6 in. long. Shipping weight, 4 oz. . . . 9c
 (C) Banana plug. For coils. Nickel plated brass.
 57 PT 9759—Shipping weight, 2 ounces. Each. 4c

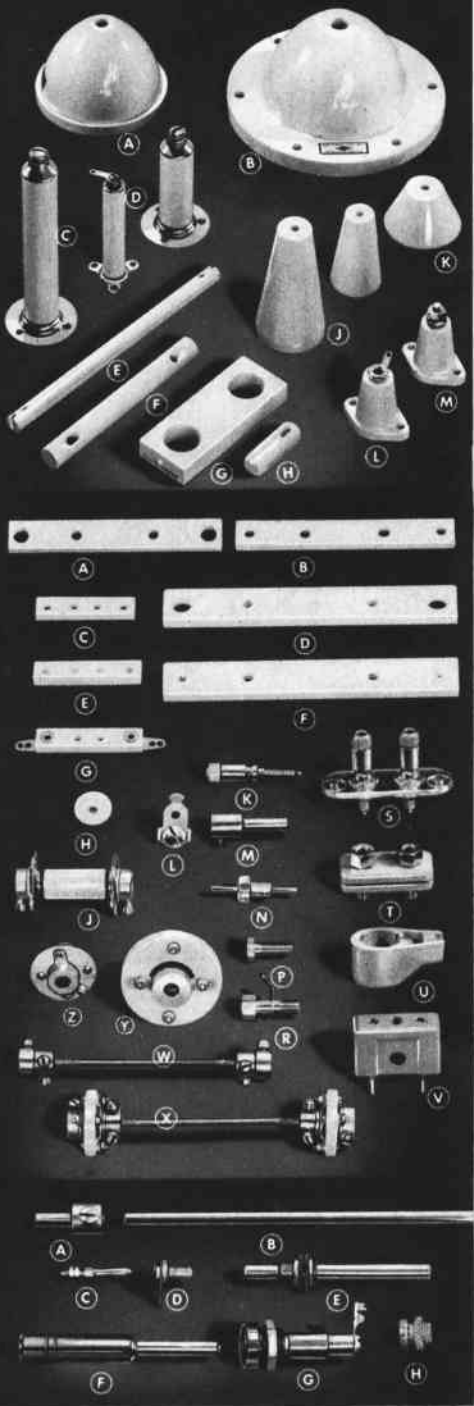
(D) Jack for above plug. Nickel plated brass.
 57 PT 9760—Shipping weight, 2 oz. Each. . . . 4c
 (E) Panel bearing assembly. For mounting volume controls, condensers, rheostats at a distance away from panel. For panels up to 3/8 in. thick. Shaft 1/4 in.
 57 PT 9761—Length over all 3 in. Shpg. wt., 4 oz. 18c
 57 PT 9762—Length over all 6 in. Shpg. wt., 6 oz. 24c
 (F) Giant insulated transmitting plug. Large wiping area. Use with high R.F. current. Handles 1,000 volts at 1 amp. Color coded. Specify color. Red or black. Size 1 1/2 x 1/2 x 2 1/4 in. long. Contact 3/8 x 1/4 inch.
 57 PT 9763—Plug. Shipping weight, 3 oz. Each. . . 15c
 (G) Jack for above plug. Specify color. Red or black.
 57 PT 9764—Shipping weight, 3 oz. Each. . . . 32c
 (H) Insulated bushings for insulating condenser shafts, or as grommets. Red or black, specify color.
 57 PT 9765—With 1/4 in. hole. Shpg. wt., 2 oz. Ea. 5c
 57 PT 9766—With 1/4 in. hole. Shpg. wt., 2 oz. Ea. 6c

Miscellaneous Small Radio Hardware in Glass Jars

(Not Illustrated) Shipping Weight, Each, 12 Ounces

Round Head Machine Screws
 57 PT 9955—90 pieces. 5/16 x 1/4 in. long. 24c
 57 PT 9956—80 pieces. 5/16 x 1/2 in. long. 24c
 57 PT 9957—70 pieces. 5/16 x 3/4 in. long. 24c
 57 PT 9958—75 pieces. 5/16 x 1/2 in. long. 24c
 57 PT 9959—70 pieces. 5/16 x 1/2 in. long. 24c
 57 PT 9960—65 pieces. 5/16 x 3/4 in. long. 24c
 57 PT 9961—60 pieces. 1/8 x 1/2 in. long. 24c
 57 PT 9962—50 pieces. 1/8 x 3/4 in. long. 24c
Nickel Plated Hexagon Nuts
 57 PT 9963—90 pieces. 5/16 x 1/4 in. diam. 24c
 57 PT 9964—80 pieces. 5/16 x 1/2 in. diam. 24c
 57 PT 9965—50 pieces. 1/8 x 3/4 in. diam. 24c
Shakeproof Lock Washers
 57 PT 9966—100 pieces. For 5/16 Screws. 24c
 57 PT 9967—90 pieces. For 1/8 Screws. 24c
 57 PT 9968—80 pieces. For 1/16 Screws. 24c

57 PT 9969—125 Plain Fiber Washers. 1/4 in. Diam. 1/4 in. Hole. 1/8 in. thickness. 24c
 57 PT 9970—100 Plain Fiber Washers. 3/8 in. Diam. 1/2 in. Hole 1/8 in. Thickness. 24c
 57 PT 9971—100 Shoulder Fiber Washers. 1/4 in. over all D. 3/8 in. Shoulder D. 1/2 in. Ht. 24c
 Overall D. 1/2 in. Shoulder D. 1/2 in. Ht. 24c
 57 PT 9974—75 Shoulder Fiber Washers. 3/8 in. Over all D. 1/2 in. Shoulder D. 1/2 in. Ht. 24c
 57 PT 9975—50 Shoulder Fiber Washers. 1/2 in. Over all D. 1/2 in. Shoulder D. 1/2 in. Ht. 24c
 57 PT 9971—50 Spade bolts. 3/8 in. long. 3/8 in. threaded No. 8 hole. 24c
 57 PT 9976—25 Rubber Grommets for 1/4 in. hole. 24c
 57 PT 9977—20 Rubber Grommets for 1/4 in. hole. 24c
 57 PT 9978—12 Rubber Grommets for 3/8 in. hole. 24c
 57 PT 9979—125 Flat lugs 1/4-in. No. 6 hole. 24c
 57 PT 9980—75 Flat lugs 1-in. No. 8 hole. 24c
 57 PT 9981—100 Spade lugs 3/4-in. No. 8 hole. 24c



All-Purpose Radio Hardware Assortment

Packed in a handy indestructible metal utility case. Metal case is finished in a handsome telephone black finish. Has 12 compartments that contain important necessary and expensive hardware needed by every serviceman, amateur, experimenter, set builder, etc. 25 Assorted Parker-Kalon self-tapping screws. 20 Rubber grommets (assorted). 25 Assorted Knob set screws. 100 Assorted lengths 1/2 machine screws. 50 Assorted lengths 3/4 machine screws. 25 Assorted lengths 1/2 machine screws. 75 Assorted lugs. 100 1/2 nuts. 50 3/4 nuts. 25 1/2 nuts. 100 Assorted 1/2, 3/4, 1/2 shakeproof and plain washers. 100 Assorted Rivets. 100 Assorted Eyelets. 50 Assorted Fibre washers. 25 Spade bolts.
 57 PT 9767—Shipping weight, 2 pounds... \$1.78

1000-Piece Assortment
 An ideal assortment of radio hardware commonly used by dealers, servicemen, amateurs, experimenters, etc. Contains 1000 pieces of assorted machine screws—wood screws—nuts—bolts—rivets—eyelets—lugs—lock washers—fibre washers—metal washers—bakelite washers—rubber grommets, etc.
 57 PT 9709—Shpg. wt., 1 lb. 10 oz. 97c

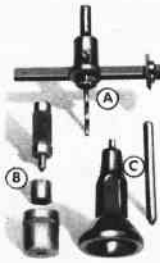
SWITCHES AND SET-BUILDERS' ITEMS

Improved Circle Cutter

(A) Has hexagon shank that fits either hand brace or electric drill. Center chuck takes drill or pilot pin. Cutting bar takes $\frac{3}{16}$ in. bit. Cuts circular holes in aluminum, steel, bakelite, rubber or wood from $\frac{3}{8}$ in. to 8 inches in diameter. An indispensable tool for the Experimenter and Set Builder. Shpg. wt., 1 lb. 8 oz.
57 PT 7357—Each. \$2.35

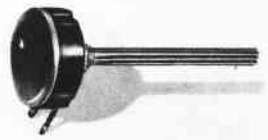
Self-Aligning Chassis Punches

(B) Require no centering hole; pin punch is sufficient. Special high grade steel properly hardened. Punches clean cut hole for condensers, sockets. Shipping weight, ea., 2 lbs. 8 oz.
57 PT 7358— $\frac{7}{8}$ in. \$1.67
57 PT 7359— $1\frac{1}{8}$ in. 1.67
57 PT 7360— $1\frac{1}{2}$ in. 1.67
57 PT 7361— $1\frac{3}{4}$ in. 1.67
57 PT 7362—Complete set of 4. Shpg. wt., 7 lbs. \$6.50



Centralab Volume Controls

Centralab controls have important design features not available in controls of any other make. The exclusive "wall type" resistor illustrated, provides uniform current distribution, for every current path has the same length... the inner circumference of the control case. Maximum power dissipation for size is thus assured. Centralab's exclusive non-rubbing contact guarantees long life and smooth rotation in the Standard Radiomh.



Centralab Number Without Switch	Centralab Number With Switch	Usual Circuit Location	Resistance Ohms
72-107	62-107	Voltage Divider	1000
70-205	52-205	Antenna, C-Bias of Two Tubes	10000
72-100	62-100	Antenna Shunt	10000
72-104	62-104	Voltage Divider	100000
72-121	62-121	Audio Grid or Tone	250000
72-105	62-105	Audio Grid or Tone	500000
72-140	62-140	Audio Grid or Tone	750000
72-116	62-116	Audio Grid or Tone	1 Meg.

57 PT 7450—Without switch. Give centralab number also. Shpg. wt., 5 oz. \$59c
57 PT 7451—With switch. Give centralab number also. Shpg. wt., 6 oz. \$88c

Rivet and Eyelet Punch

(C) Handles any size eyelet or rivet used in radio. Made of hardened steel. Does factory-like job. Hexagon body permits tool to be held in vise. A handy tool for any shop, laboratory or service man. Generous assortment of eyelets and rivets included.
57 PT 7363—Shipping weight, 1 pound 8 ounces. \$1.32

Ohmite Band Switch

For changing transmitter frequency. Substitutes a quick convenient turn of a knob for the inconvenience of coil changing. Provides complete front panel control. Low loss porcelain construction. Small in size. Handles 1 K.W. three contacts for 3-band operation. Two or more switches may be ganged. $\frac{1}{4}$ inch shaft. Mounting brackets and knob furnished. Shipping weight, 1 pound.
57 PT 8735—Each. \$1.78



Centralab Gang Switch

Insolantite insulated. Used in transmitters as crystal frequency selector, interstage inductance switch or antenna coupling switch. Four positions 90 degrees apart. Handles 100 watts up to 1000 volts D.C. Shipping weight, 12 ounces.

Catalog No.	Gangs	Poles	Price
57 PT 7452	1	1	\$1.00
57 PT 7453	2	2	1.59
57 PT 7454	3	3	2.29
57 PT 7455	4	4	2.88
57 PT 7456	5	5	3.59

57 PT 7461—Dial plate for above Switches. Shpg. wt., each, 2 oz. \$1.20

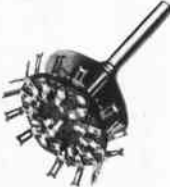
Knife Switches

Bakelite base. Nickel plated brass metal parts. Shipping weight, each, 8 ounces.
57 PT 7407—Single pole single throw. \$1.30c
57 PT 7408—Single Pole Double Throw. \$36c
57 PT 7409—Double Pole Single Throw. \$42c
57 PT 7410—Double Pole Double Throw. \$48c
57 PT 7411—Triple Pole Double Throw. \$71c



Centralab Rotary Switch

Very compact. Bakelite case. Rated 3 amps. at 125 volts. Shpg. wt., ea., 8 oz.
57 PT 7467—Single Pole Single Throw. \$29c
57 PT 7468—Double Pole Single Throw. \$35c



Centralab 23-Pole Switch

For test instruments and laboratory use. One common terminal, 23 positions. Double wiping low capacity contacts. Shorting type. Shaft $\frac{1}{4} \times 2\frac{1}{4}$ in. long. Bar knob furnished. Shpg. wt., ea., 8 oz.
57 PT 7459—Switch without plate. \$1.47
57 PT 7460—Plate No. 1 to 23. \$1.12



Heavy Duty Tube Plate Cap

A new style plate cap connector for 809, 866, T-20, T240, T55, 803, 838, 813, 250-T tubes. Has cooling fins for radiating heat. Will handle over 1 K.W. Connectors are $\frac{3}{8}$ inch flexible plated copper strips. Length overall, $3\frac{3}{4}$ inches.
57 PT 7416—Shpg. wt., 6 oz. \$59c



Insulated Grid Caps

Insulation made of special soft rubber. Spring bronze cap. For type 866 and similar tubes.
57 PT 7414—Shpg. wt., 4 oz. \$9c



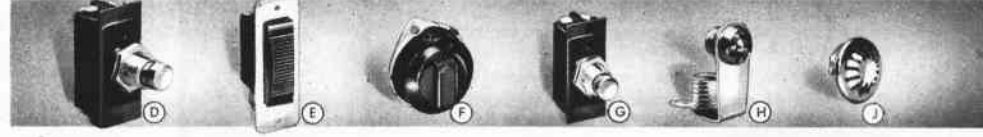
Standard Grid Caps

Spring action. Hot tinned finish. Shipping weight, each, 2 ounces.
57 PT 7412—For std. glass tubes. Ea. 2c
57 PT 7413—For std. metal tubes. Ea. 2c



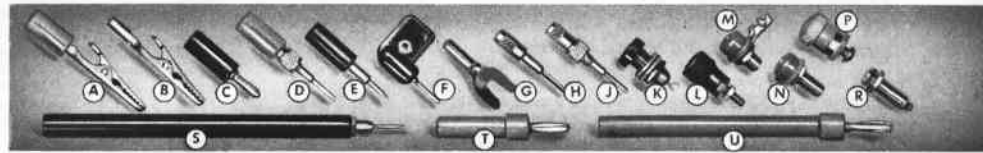
High Power Push Button Switch

(D) Designed as a safety switch for transmitters. Breaks primary circuit when rack door is opened. Double pole single throw. Capacity 12 amperes at 125 volts.
57 PT 7364—Shipping weight, 6 ounces. \$1.18
(E) Sliding Lever Switch. Has many applications in radio apparatus. More up-to-date than a toggle switch. Rated 3 amps. at 125 volts. Shipping weight, each, 4 ounces.
57 PT 7365—Single Pole Single Throw. Less Plate. \$53c
57 PT 7366—Double Pole Double Throw. Less Plate. \$73c
57 PT 7367—Plate to Match. Shpg. wt., 2 oz. 15c
(F) Tap Change Switch. For Matching Speaker impedances, selecting circuits and similar applications. 8 positions. White numerals 1 to 8.
57 PT 9789—Shpg. wt., 4 oz. Each. \$44c



Toggle Switches

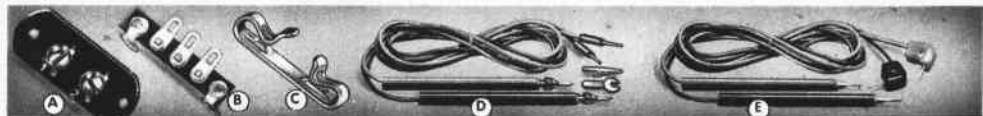
Rated 3 amps. at 125 volts. Nickel plated. Shipping weight, ea., 4 ounces.
57 PT 7369— $\frac{3}{8}$ In. Shank S.P.S.T. \$17c
57 PT 7370— $\frac{3}{8}$ In. Shank S.P.D.T. \$20c
57 PT 7371— $\frac{3}{8}$ In. Shank S.P.S.T. \$18c
57 PT 7372— $\frac{3}{8}$ In. Shank S.P.D.T. \$22c
57 PT 7373— $\frac{3}{8}$ In. Shank D.P.D.T. \$37c
(H) Panel Light. Red or green jewel (specify color wanted). Shipping weight, 6 oz. (No bulb.)
57 PT 8895—With bayonet socket. \$15c
57 PT 8896—With screw socket. \$10c
**(J) Panel Light—Has red color disk back of pierced grille. Diameter overall, 1 inch. Plugs into $\frac{3}{8}$ in. hole intended to be set opposite bulb behind panel. No bulb or bulb bracket included.
57 PT 8897—Shpg. wt., 4 oz. Each. \$9c**



NOTE: Shipping weight of following items is 2 ounces unless otherwise specified.

(A) Insulated alligator clip. Red or black. State color.
57 PT 7374—Each. \$7c
(B) Non insulated alligator clip. Length 2 in.
57 PT 7375—Each. \$4c
(C) Insulated Solderless Banana Plug. Red or black.
57 PT 7376—State color. Each. \$6c
(D) Insulated solderless plug. Fits phone tip jack.
57 PT 7377—Red or black. State color. \$6c
(E) Insulated Needle Point with banana plug receptacle.
57 PT 7383—Red or black. State color. \$6c
(F) Molded finger grip tip. Fits phone tip jack.
57 PT 7378—Red or black. State color. \$12c
(G) Spade Lug. Shipping weight for 10, 4 ounces.
57 PT 7379—Ten for \$18c
(H) Solderless plug with Slender Sleeve.
57 PT 7380—Each. \$3c
(J) Solderless Plug to fit phone tip jack.
57 PT 7381—Each. \$4c

(K) Insulated Tip Jack. Fits plugs D, E, F, H, J.
57 PT 7382—Red or black. State color. Ea. 6c
(L) Bakelite Binding Post with Jack, for banana plug. Takes plugs C, T and U.
57 PT 7384—Red or black. State color. Each. 7c
(M) Insulated Banana-type Jack with lug.
57 PT 7385—Red or black. State color. Ea. 6c
(N) Bakelite Banana plug jack for test equipment.
57 PT 7386—Red or black. State color. \$7c
(P) Insulated Binding Post. Bakelite.
57 PT 7387—Red or black. State color. Ea. 6c
(R) Nickel plated phone tip Jack.
57 PT 7388—Each. \$3c
(S) Insulated Test Prods. 7 inches long. Red or black. Shipping weight, each, 4 oz. State color.
57 PT 7389—For Phone Needle Tips. Ea. \$14c
57 PT 7390—With standard phone tip. Ea. \$14c
(T) Insulated Test prod. Solderless type split banana plug. $2\frac{1}{2}$ inches long. Red or black.
57 PT 7391—State color. \$12c
(U) Insulated Test prod. Same as (T) except 4 in. long. Red or black. State color.
57 PT 7392—Shipping weight, 4 oz. Each. \$14c



NOTE: Shipping weight of items A and B, 3 oz. each; others as specified.

(A) Screw terminal strips—Bakelite $\frac{3}{8}$ in. thick.
57 PT 7393—2 terminals. Each. \$9c
57 PT 7394—3 terminals. Each. \$12c
57 PT 7395—4 terminals. Each. \$15c
57 PT 7396—5 terminals. Each. \$19c
57 PT 7397—6 terminals. Each. \$23c
(B) Bakelite Lug Strips.
57 PT 7398—2 terminals. Each. \$3c
57 PT 7399—3 terminals. Each. \$3c
57 PT 7400—4 terminals. Each. \$4c
(C) Spring Clips. Nickel plated brass. Shipping weight of 12, 4 ounces.
57 PT 7401—Single 1 inch long. Per doz. \$10c
57 PT 7402—Double $1\frac{1}{2}$ inch long. Per doz. \$25c

(D) Standard Test Leads. Slender handles insulated for 5000 volts. Flexible rubber covered kinkless wire 50 inches long. Needle points color coded. Shipping weight, 8 ounces.
57 PT 7403—With Phone tips. \$35c
57 PT 7404—With spade terminals. \$35c
57 PT 7405—With alligator clips. \$41c

(E) DeLuxe Test Prod Set. With finger grip molded tips. Red and black fensline handles 5 inches long. Rubber covered flexible kinkless wire 65 inches long. Sharp pointed penetrating tips which screw into handles. All connections are properly soldered to provide low resistance connections. Color coded. Add this set to your Easy Payment order. Shipping weight, 8 ounces.
57 PT 7406. \$71c

NATIONAL SOCKETS

(A) NATIONAL Isolantite wafer socket for power pentodes such as RK28 and RCA-803. Complete with standoff insulators, as shown.

57 PT 9170—JX-100S—Shipping weight, 1 pound. \$2.18
57 PT 9171—JX-100—As above but without standoff insulators. Shipping weight, 12 ounces. \$1.80

NATIONAL Steatite 50-Watt Socket

(B) NATIONAL steatite low loss socket for 50 watts. Recommended for high frequencies and high voltages.
57 PT 9172—XC-50. Shipping weight, 1 lb. 4 oz. \$2.10

(C) NATIONAL 50-watt socket with conventional bayonet-lock metal shell. Isolantite base.
57 PT 9173—XM-50—Shipping weight, 1 pound. \$1.05

NATIONAL UX Base Socket

(D) NATIONAL UX base socket similar in construction to XM-50.
57 PT 9174—XM-10—Shipping weight, 12 ounces. 75c

(E) NATIONAL square Isolantite Coil Socket designed to fit NATIONAL 6-inch coils.
57 PT 9175—Shipping weight, 8 ounces. 45c
57 PT 9176—Wafer type 6-prong coil socket similar in appearance to (G). Shipping weight, 4 ounces. 36c

NATIONAL Acorn Copper Socket

(F) NATIONAL pentode Acorn tube socket. Square copper base with built-in by-pass condensers for stable high frequency operation.
57 PT 9177—XMA—Shipping weight, 8 ounces. \$1.20

NATIONAL Receiving Socket

(G) NATIONAL Isolantite receiving type socket. Shipping weight, each, 4 ounces.

57 PT 9178-4-prong. 36c 57 PT 9181-7-prong, small. 36c
57 PT 9179-5-prong. 36c 57 PT 9182-7-prong, large. 36c
57 PT 9180-6-prong. 36c 57 PT 9183-8-prong, octal. 36c

NATIONAL CIR Sockets

(H) New NATIONAL CIR Isolantite receiving type sockets. Contacts grip tube prong for its full length. Sockets for glass tubes are supplied with stand-off insulation that allow center mounting for bread board layouts. 8-prong sockets supplied with metal stand-offs. Shipping weight, each, 8 ounces.

57 PT 9184-4-prong. 24c 57 PT 9187-7-prong, small. 24c
57 PT 9186-5-prong. 24c 57 PT 9188-7-prong, large. 24c
57 PT 9186-6-prong. 24c 57 PT 9189-8-prong, octal. 24c

NATIONAL Isolantite Acorn Socket

(I) NATIONAL Isolantite Acorn tube socket. New design contacts provide for very short leads and current path practically independent of tube position.
57 PT 9191—XCA—Shipping weight, 8 ounces. 90c

HAMMARLUND Isolantite Wafer Sockets

Type S. Not illustrated. Octagonal shape. Very similar in appearance to (G). Glazed top and sides. Long leakage path between rust-proofed positive side gripping contacts. Guide groove makes insertion of tubes easier. Size, 2 1/4 inches long x 1 1/2 inches wide. Mounting centers, 1 1/2 inches. Shipping weight, each, 4 ounces.

57 PT 9194-4-prong. 36c 57 PT 9422-7-prong, large. 36c
57 PT 9420-5-prong. 36c 57 PT 9423-7-prong, small. 36c
57 PT 9421-6-prong. 36c 57 PT 9424-8-prong, octal. 45c

NATIONAL Victron Sheets

Victron is considered the best insulating material for high frequency currents. Its loss factor (0.2) is about one eighth that of "Low Loss" rubber. Its power factor is .06% to .08%. Ideal for mounting high frequency gear, as it is easily drilled or sawed. Its color is transparent amber.

57 PT 9261—Sheet 12 inches x 6 inches x 3/16-inch thick. Shipping weight, 2 pounds. \$3.60
57 PT 9262—Sheet 12 inches x 6 inches x 1/8-inch thick. Shipping weight, 1 pound 8 ounces. \$3.00
57 PT 9263—Sheet 6 inches x 3 inches x 3/16-inch thick. Shipping weight, 1 pound. 90c
57 PT 9264—Sheet 6 inches x 3 inches x 1/4-inch thick. Shipping weight, 8 ounces. 75c

Liquid 912

A rapid drying, non-hygroscopic coil impregnating resin product for amateurs, servicemen, and laboratory workers. No loss factor. Essentially, it is the liquid form of Amphenol 912, the world's finest insulator. Shipping weight, each, 4 ounces.

57 PT 9770—2 oz. bottle Liquid 912. 29c
57 PT 9771—2 oz. bottle thinner. 15c

Liquid Crystallin

Best grade. Air drying, wrinkle finish. For wood or metal.
57 PT 9714—2-ounce can gray. Shpg. wt., 6 oz. 24c
57 PT 9715—2-ounce can black. Shpg. wt., 6 oz. 18c
57 PT 9716—8-ounce can black. Shpg. wt., 1 lb. 59c

NATIONAL Coil Dope

A special R.F. lacquer of Victron base. Ideal for holding windings in place. Does not affect the properties of low loss coil forms. The loss factor (0.2) of this only one-ninetyth that of usual R.F. insulators.

57 PT 9049—Half pint can. Shipping weight, 12 oz. 90c



SOCKETS AND SHIELDS



Amphenol Tube Sockets

(A) Bakelite... Furnished with universal adapter plate. Shipping weight, each, 4 ounces.
57 PT 9772—4-prong. 7c
57 PT 9773—5-prong. 7c
57 PT 9774—6-prong. 7c
57 PT 9776—7-prong (small). 7c
57 PT 9776—7-prong (large). 7c
57 PT 9777—8-prong (octal). 9c

(B) Steatite.
57 PT 9778—4-prong. 24c
57 PT 9779—5-prong. 24c
57 PT 9780—6-prong. 24c
57 PT 9781—7-prong (small). 24c
57 PT 9782—7-prong (large). 29c
57 PT 9783—8-prong (octal). 24c

EBY Sockets

(C) One piece molded bakelite. For base board or sub panel mounting. 1 1/4 inch mounting centers. Shipping weight, each, 4 ounces.
57 PT 9784—4-prong. 18c
57 PT 9785—5-prong. 18c
57 PT 9786—6-prong. 24c
57 PT 9788—7-prong (large and small combined). 24c
57 PT 9789—8-prong (octal). 24c

NATIONAL Shield Cans

Best grade heavy aluminum. Shipping weight, each, 4 ounces.

(D) Plug-in base and shield. R39 base. Ideal for mounting condensers and coils when it is required that they

be shielded and removable. Size of can, 2x2 3/4x4 1/4 inches.

57 PT 9200—PB-10. 5-prong. 45c
57 PT 9201—PB-10. 6-prong. 45c
57 PT 9202—PB-10A. Base only 24c
Type HRO coil shield only. (No Base.)

57 PT 9203
Type B30 Coil Shield. Diam., 3 in., height, 3 3/4 in.

57 PT 9204
Type B30 Coil Shield with base.

57 PT 9206
Type J30 Coil Shield. Diam., 2 1/2 in., height, 3 3/4 in.

57 PT 9208
Type TS Shield with top cap and bottom mtg. plate.

57 PT 9209
Type T78 Shield for 57, 58, 77, 78 and similar tubes.

57 PT 9207
Type T58 Shield for 57, 58 and similar tubes.

57 PT 9208

HAMMARLUND Shields

(K) Type PTS Power tube shield. For use with tubes of the screen grid type.

57 PT 9822—2 1/4x3 in. high. Shipping weight, 4 ounces. 24c

57 PT 9823—Type PTS-H. 2 1/4x 2 1/4 in. high. Shpg. wt., 4 oz. 24c

(L) Type CS-3 Coil Shield. Diameter, 3 in., height, 3 1/2 in. Complete with base.

57 PT 9824—Shpg. wt., 4 oz. 30c

Steel Chassis Bases

Steel chassis bases for the construction of short wave sets, broadcast receivers, amplifiers and power packs. Easy to work. Formed on all sides. Not drilled or punched. See Page 29 for chassis punches.



Size Inches	Shipping Weight	Cadmium-Plated		Wrinkle Finish	
		Catalog No.	Each	Catalog No.	Each
7x 9x2	3 lbs.	57 PT 9717	\$0.54	57 PT 9733	\$0.54
7x11x2	3 lbs.	57 PT 9718	.58	57 PT 9734	.58
7x12x3	4 lbs.	57 PT 9719	.60	57 PT 9735	.60
7x13x2	4 lbs.	57 PT 9720	.62	57 PT 9736	.62
7x17x3	5 lbs.	57 PT 9721	.73	57 PT 9737	.73
7x23x3	6 lbs.	57 PT 9722	.77	57 PT 9738	.77
8x17x2	6 lbs.	57 PT 9723	.74	57 PT 9739	.74
8x17x3	6 lbs.	57 PT 9724	.98	57 PT 9740	.98
10x11x2 1/2	5 lbs.	57 PT 9725	.68	57 PT 9741	.68
10x12x3	4 lbs.	57 PT 9726	.68	57 PT 9742	.68
10x14x3	5 lbs.	57 PT 9727	.81	57 PT 9743	.81
10x17x3	5 lbs.	57 PT 9728	.85	57 PT 9744	.85
11x17x2	4 lbs.	57 PT 9729	1.19	57 PT 9745	1.19
11x17x3	5 lbs.	57 PT 9730	1.29	57 PT 9746	1.29
10x23x3	6 lbs.	57 PT 9731	1.08	57 PT 9747	1.08
13x17x3	6 lbs.	57 PT 9732	1.13	57 PT 9748	1.13



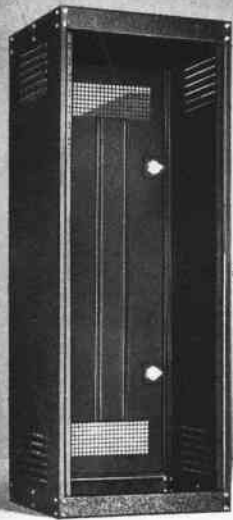
Heavy Duty Rack Bases

Made of 1/4 inch one-piece steel. Closed on all sides. Smooth gray enamel bases are made by NATIONAL. These bases are a little more expensive than the light duty bases listed above but the quality well justifies the difference. State finish wanted.

Size Inches	Shipping Weight	Gray (National)		Black or Cadmium	
		Catalog No.	Each	Catalog No.	Each
4x17x3	4 lbs.	57 PT 9210	\$1.50	.....	.....
6x17x3	4 lbs. 8 oz.	57 PT 9211	1.85	.....	.....
8x17x2	5 lbs. 12 oz.	.....	.....	57 PT 9900	\$1.59
8x17x3	6 lbs.	57 PT 9212	1.89	57 PT 9901	1.76
10x17x3	5 lbs. 8 oz.	57 PT 9213	2.10	.....	.....
11x17x2	7 lbs. 4 oz.	.....	.....	57 PT 9902	1.76
11x17x3	9 lbs.	.....	.....	57 PT 9903	1.91
12x17x3	7 lbs. 2 oz.	57 PT 9214	2.70	.....	.....
13x17x3	9 lbs. 12 oz.	.....	.....	57 PT 9904	2.26
13x17x4	11 lbs.	.....	.....	57 PT 9905	2.50

Merchandise shown on this and opposite page may be included with your Easy Payment Order. See Page 2.

PAR-METAL RACKS, PANELS, CABINETS



A



B



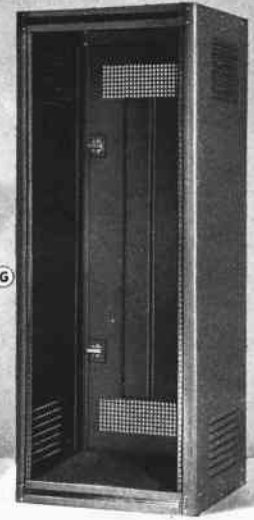
C



D



E



G

**You Can Buy on
EASY TERMS
If Your Order
Totals \$10 or More
See Page 2**

Standard Relay Rack

A Completely enclosed. For transmitters and amplifiers. Substantially constructed from 1/4 inch cold rolled steel. Panel mounting angles are of 1/4 inch steel, accurately drilled on universal centers for panels listed below. Tapped for 1/2 screws. Panels fit into recess so that no edges are exposed. Louvers in sides and screen sections in rear door provide ample ventilation. Rear door hung on loose joint hinges and closed by two flush snap switches. Furnished in either black or gray ripple finish. **State color.** Shipped unassembled. Size, 21 inches wide, 16 1/2 inches deep. Clear inside depth, 15 1/4 inches.

- 57 PTM 9906—42 inches high. Panel space 36 3/4 x 19 in. Shipping wt., 95 lbs. \$21.36
- 57 PTM 9907—66 1/2 inches high. Panel space 6 1/4 x 19 in. Shipping wt., 135 lbs. \$25.87
- 57 PTM 9908—82 1/2 inches high. Panel space 7 7/8 x 19 in. Shipping wt., 165 lbs. \$31.75

Type "A" Desk Panel Cabinet Racks

Ideal for small transmitters, P.A. Amplifiers, oscillators, test equipment and similar apparatus. Panel mounting holes are accurately drilled on universal centers for panels listed below. Tapped for 1/2 screws. May be used with any chassis up to 17x13 inches in size. Made of 1/4 inch cold rolled steel with welded joints. Louvers for ventilation. Piano type hinges. Panel mounting screws and washers furnished. Black ripple finish.

- 57 PT 99909—Single unit. With door on top only. Size, 8 3/4 x 19 x 13 1/2 in. deep. Panel space, 8 3/4 x 19 in. Shipping weight, 22 pounds. \$4.70
- 57 PT 99910—As above. Size, 12 1/4 x 19 x 13 1/2 in. deep. Panel space, 12 1/4 x 19 in. Shipping weight, 27 pounds. \$5.88
- 57 PT 99911—Double Unit with door on top and door on rear panel. Size, 17 1/2 x 19 x 13 1/2 in. deep. Panel space, 17 1/2 x 19 in. Shipping weight, 36 pounds. \$8.75
- 57 PTM 9912—Triple Unit with door on rear panel only. Size, 26 1/4 x 19 x 13 1/2 in. deep. Panel space, 26 1/4 x 19 in. Shipping weight, 47 pounds. *Not Mailable.* \$9.41
- 57 PTM 9913—Quadruple Unit. With door on rear panel only. Size, 35 x 19 x 13 1/2 in. deep. Panel space, 35 x 19 in. Shpg. wt., 55 lbs. \$11.10

Test Equipment and Amplifier Cabinets

D A useful design for housing oscillators, test equipment and portable transmitters. Front and back panels are removable. Finished in black ripple.

- 57 PT 9914—Size, 12x7 3/4 x 6 1/2 in. Shipping weight, 9 pounds. \$1.55
- 57 PT 9915—Size, 15x7 3/4 x 6 1/2 in. Shipping weight, 11 pounds. \$1.90
- 57 PT 9916—Chassis base for above. Size, 6 1/2 x 6 1/2 x 1 1/2 in. Shpg. wt., 5 lbs. \$28c

E DeLuxe Amplifier Foundation Chassis. Every desirable feature of design and construction is incorporated into these professional appearing units. Rounded corners. Screen cover finished in slate gray ripple enamel, black chassis. Cover is 6 in. deep in all sizes. Chassis depth, 3 in. **Chrome handles furnished.**

- 57 PT 9917—Size, 6x14 inches. Shipping weight, 10 pounds. Each. \$2.79
- 57 PT 9918—Size, 7x17 in. Shipping weight, 11 pounds. \$3.23
- 57 PT 9919—Size, 10x17 in. Shipping weight, 13 pounds. \$3.82

Standard Amplifier Chassis

Very similar in appearance to E above. Black wrinkle base, gray cover. Cover 6 inches deep, base 3 inches deep.

- 57 PT 9920—7x17 in. Shpg. wt., 11 lbs. \$2.20
- 57 PT 9921—10x17 in. Shpg. wt., 13 lbs. 2.65

DeLuxe Relay Rack

G For transmitters or P.A. systems. The vertical corners at front are rounded. Top and bottom are neatly trimmed with red striped chrome finished moldings. Substantially made from 1/4 inch cold rolled steel with mounting angles of 1/4 in. steel accurately drilled on universal centers for panels listed below. Tapped for 1/2 screws. Panels fit into recess; no edges exposed. Louvers in sides and screened openings in rear for ventilation. Mounting screws and washers furnished. Black or gray ripple finished. **State color.** Shipped unassembled. Size, 22 inches wide, 16 1/2 inches deep. Clear inside depth 15 1/4 inches.

- 57 PTM 9922—42 inches high. Panel space, 36 3/4 x 19 inches. Shpg. wt., 100 lbs. \$23.52
- 57 PTM 9923—66 1/2 inches high. Panel space, 6 1/4 x 19 inches. Shpg. wt., 150 lbs. \$30.87
- 57 PTM 9924—82 1/2 inches high. Panel space, 7 7/8 x 19 inches. Shpg. wt., 175 lbs. \$36.75

STANDARD Rack Panels

Uniformly slotted steel and aluminum panels to fit all relay racks listed on this page. Standard 19-inch lengths. Both steel and aluminum are of 1/4 inch material. Steel panels either black or gray ripple finish. **State color wanted.** Available in 6 most popular sizes to fill practically every requirement. Special sizes available on special order.



Size, in.	Steel (State Color)			Aluminum (Black only)		
	Catalog Number	Shpg. Wt.	Price Each	Catalog Number	Shpg. Wt.	Price Each
3 1/2 x 19	57 PT 9925	5 lbs.	\$5.00	57 PT 9931	1 lb.	\$1.23
5 1/4 x 19	57 PT 9926	7 lbs.	.62	57 PT 9932	2 lbs.	1.55
7 x 19	57 PT 9927	8 lbs.	.67	57 PT 9933	2 lbs.	1.85
8 3/4 x 19	57 PT 9928	9 lbs.	.82	57 PT 9934	3 lbs.	2.23
10 1/2 x 19	57 PT 9929	10 lbs.	1.00	57 PT 9935	3 lbs.	2.85
12 1/2 x 19	57 PT 9930	12 lbs.	1.16	57 PT 9936	4 lbs.	3.35

NATIONAL Cabinets

These high quality cabinets are in considerable demand for the construction of special equipment. Finished in black ripple. Prices include sub-bases and bottom covers. These cabinets, like every other item made by NATIONAL, are of the very highest quality. Made of heavy grade auto body steel stock.



Catalog No.	Symbol	Width—Height—Depth	Shpg. Wt.	Price
57 PT 9192	CHWR	13 1/2 x 7 x 7 1/2 Inches	8 lbs.	\$3.00
57 PT 9193	CFB7	11 1/2 x 8 x 12 Inches	9 lbs.	4.20
57 PT 9194	CSW-3	9 3/4 x 7 x 9 Inches	7 lbs.	3.30
57 PT 9195	C-NC-100	17 1/4 x 8 3/4 x 11 1/4 Inches	12 lbs.	5.10
57 PT 9196	C-HRO	16 3/4 x 8 3/4 x 10 Inches	11 lbs.	5.10
57 PT 9197	C-One Ten	11 x 7 x 7 1/2 Inches	9 lbs.	2.70
57 PT 9198	C-PSK	6 x 8 x 12 Inches	8 lbs.	3.60
57 PT 9199	C-SRR	7 1/2 x 7 x 7 1/2 Inches	7 lbs.	2.10

Chassis Brackets

Drilled to fit Par-Metal Chassis base shown at left (Page 30). Panels used must be at least 7 inches high. Made of 1/4 inch steel. Durable finished in black baked-on ripple enamel.

- 57 PT 9937—For 8-inch base. Shipping weight, 2 lbs. Per Pair. 52c
- 57 PT 9938—For 11-inch base. Shipping weight, 3 lbs. Per Pair. 75c
- 57 PT 9939—For 13-inch base. Shipping weight, 3 lbs. Per Pair. 95c

Steel Meter Panels

At the low price of these ready drilled meter panels it hardly pays to put yourself to the trouble of drilling your own; and you get a much neater job by using these. Made of 1/4 in. steel.

All are 5 1/4 inches high. Black or gray ripple finish. **State color wanted.**

Catalog Number	No. of Holes	Meter Size	Shpg. Wt.	Price Each
57 PT 9940	3	2 In.	6 lbs.	\$.95
57 PT 9941	5	2 In.	6 lbs.	1.38
57 PT 9942	3	3 In.	6 lbs.	.96
57 PT 9943	5	3 In.	6 lbs.	1.44

Bracket and Panel

For use with relay racks shown above. Chassis bases with holes drilled to fit these brackets shown on Page 30 (Par-Metal). Black or gray ripple finish. **State color.** Panels, 19 in. long. Each assembly takes either 2, 2 1/2, or 3-inch deep chassis base. Prices quoted include bracket but no chassis base.

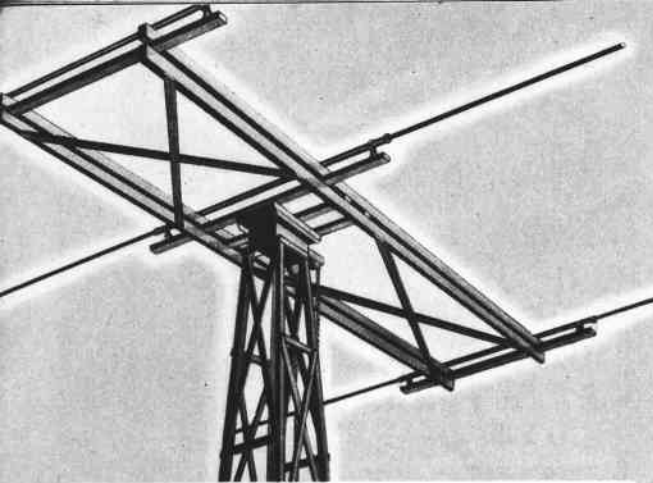
- 57 PT 9944—8 3/4 in. panel for 8x17 in. chassis. Shpg. wt., 12 lbs. \$1.45
- 57 PT 9945—8 3/4 in. panel for 11x17 in. chassis. Shpg. wt., 14 lbs. \$1.70
- 57 PT 9946—12 1/4 in. panel for 13x17 in. chassis. Shpg. wt., 16 lbs. \$2.21

Speaker Cabinets

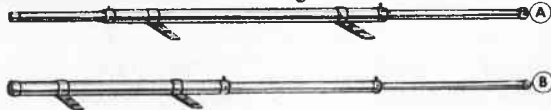
Made from sheet steel. Louvre back cover. Newest model. Rounded corners on front. Handle on top. Black ripple finish. No speaker. Speaker opening has new modern grille to protect speaker.

Catalog Number	Size, Inches		Shpg. Wt., Lbs.	Price Each
	Cabinet	For Speaker		
57PT 9947	10x10x6	6	8	\$2.21
57PT 9948	12x12x7	8	9	2.70
57PT 9949	14x14x8	10	15	3.63
57PT 9950	16x16x8	12	20	4.70

ANTENNAS-WIRES



PREMAX Rotary Beam Kits



Have new positive spring band locking clamp which eliminates set screws and wrenches. New instant adjustment for tuning without cutting or splicing and a bright rust-resistant cadmium finish. All rods adjustable from 6 feet to maximum and are tapered 1 inch to 3/4 inch.

4-Element Kit. For 10 and 20-meter work. Consists of a set of 4 218-M (B) corulite tubular steel elements and instructions for building several types of rotary beams, including 8-JK type bi-directional combination 10 and 20-meter beam, uni-directional, 20-Meter beam, and uni-directional 10-meter beam. Use 4-W Frame Kit.

57 PT 07625—Kit RB-4218. Shpg. wt., 15 pounds. \$14.65

3-Element 10-Meter Kit. Consists of three double end corulite elements, No. 418-M (A) and instructions. Designed for easy adaptation to various assemblies. Use frame Kit 4-W.

57 PT 07627—Kit RB3418. Shpg. wt., 10 lbs. \$10.58

2-Element 10-Meter Kit. Consists of 2 No. 418-M (A) corulite rods and instructions for building. Use wood frame kit 2-W.

57 PT 7629—Kit RB2418. Shpg. wt., 6 pounds. \$7.06

Frame Kits. Made of carefully selected lumber. Painted with 2 coats of green enamel. Drilled ready to bolt together. Necessary bolts, nuts and washers furnished.

57 PT 07632—Kit 4-W for 3-element beams. Shipping weight, 45 pounds. \$10.73

57 PT 07633—Kit WX. Contains additional supports needed in addition to 4-W Kit for 6-element beams. Shipping weight, 12 pounds. \$2.35

57 PT 07634—Kit 2-W for use with Kit RB 2418 (57 PT 7129) 2-element, 10-meter kit. Shpg. wt., 8 lbs. \$1.76

Premax Rotomount

Ⓒ Heavy gauge steel. Platform revolves on roller bearings. Will not rock or wobble. Equipped with stranded copper cable leads for vertical or horizontal pull. No ropes supplied. Revolves 360 degrees in either direction. Platform size 9x12 inches. Drilled for attachment of beam frame. Size overall 9x14x6 1/2 inches high. Duco enamel finish.

57 PT 07635—Type BM-10G. Shpg. wt., 35 lbs. \$13.23

Premax Motor Transmission Unit

Ⓓ Phosphor-Bronze Worm Gear and steel worm enclosed in steel housing for the above worm drive rotomount. Gear ratio 40 to 1 giving total ratio of 800 to 1. Belted to 1 1/4-inch motor pulley a ratio of 2000 to 1 is obtained—and ideal rotating speed for a 20-meter beam. Motor is not included. At least 1/2 H.P. is recommended.

57 PT 07637—Type 20-T. Shpg. wt., 10 lbs. \$14.70

Premax Worm Drive Rotomount

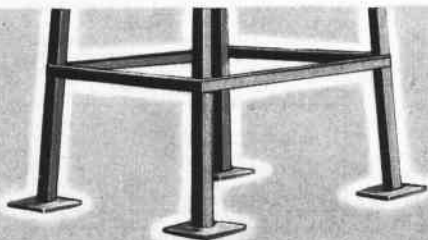
Ⓔ For hand power or electricity. If a motor is to be used the motor transmission unit (D) will be required. Gear ratio of 20 to 1. Ball bearing platforms. Self-locking. Has hole through center for lead-in.

57 PT 07636—Type BMH-20. Shpg. wt., 45 lbs. \$29.40

Premax Wood Tower

For Premax Rotary Beam Kits—10 feet high. Horizontal and cross bracing. Shipped unassembled. All bolts and washers included. Mailable.

57 PT 07638—WT-100. Shpg. wt., 40 lbs. \$13.43



SILVERTONE "Seven Seas" Noise Reducing Aerial

A \$5 value! Two special transformers, built into the circuit, filter out noise waves. Extremely high suppression of man-made static and great sensitivity on all wave lengths. If space is limited, can be strung up in an "L" shape. Full instructions.

Consists of 60 feet of 7/24 tinned copper wire; 50 ft. of weather-resistant two-conductor lead-in wire; two iron core noise-reducing transformers. Permanent connections are all soldered. Accessories include: two aerial insulators; three 6-in. lead-in insulators; one double window lead-in strip; 50 ft. of ground wire. For all radios except AC-DC sets.

57 PT 05523—Shipping weight, 5 pounds. \$2.95

SILVERTONE Bargain Aerial Kit

Our lowest price Aerial. For rural areas not bothered by man-made static, and not too far from radio stations. Consists of 60 feet of 7/25 tinned copper wire; 35 feet of rubber covered lead-in wire; two aerial insulators; one ground connector; one window lead-in strip; lead-in insulators; one Bakelite lightning arrester. For all Radios. Full Instructions.

57 PT 5575—Shipping weight, 2 pounds. \$5.9c

BELDEN Aerial Wire

There is no finer wire made than Belden. Enamel insulation is without question the purest and most durable that can be produced. Rubber insulated wires are covered with best grade pure, live gum, made to stand years of exposure to weather.



Rubber Covered Lead-In Wire

Catalog Number	Size and Kind	Coil, Feet	Shipping Weight	Price Per Coil
57 PT 9356	18 Str.	100	2 lbs.	36c
57 PT 9357	16 Str.	100	2 lbs. 8 oz.	46c
57 PT 9358	14 Str.	50	2 lbs.	39c

Heavy Duty A.C. Cord

Heavy duty cord. Get full voltage at your rig. Two conductor 16-ga. copper with paper serving, rubber insulation, layer of asbestos and jacket of braid. Shpg. wt., per 100 ft., 6 lbs.

57 PT 9359—Per foot. \$1.4c

Catalog Number	Size and Kind	Coil, Feet	Shipping Weight	Price Per Coil
Stranded and Solid Enameled Copper				
57 PT 9350	7-22 Str.	75	1 lb. 8 oz.	38c
57 PT 9351	7-22 Str.	100	2 lbs.	49c
57 PT 9352	12 Solid	100	2 lbs.	55c
57 PT 9353	14 Solid	100	1 lb. 8 oz.	38c
Bare Copper				
57 PT 9354	7-22 Str.	75	1 lb.	27c
57 PT 9355	7-22 Str.	100	2 lbs.	35c

BELDEN Hookup Wire

Double braid, push back. Waxed. Size 20 tinned. Available in following colors: Green, Blue, Yellow, Red and Black. State color wanted. 25-ft. spool. Shpg. wt., 8 oz.



57 PT 9361—Stranded. \$1.1c

57 PT 9360—Solid. \$1.1c

Filament Wire. No. 14. 41 strands No. 30. Cellulose Acetate push back. Basket weave. Tinned. State color. Black or red.

57 PT 9362—25-foot spool. \$1.1c

57 PT 9363—25-foot spool. \$1.1c

Shipping weight, 8 ounces. \$3.4c



BELDEN Microphone Cable

For crystal, dynamic or velocity microphones. Single conductor. Capacity per foot 26 mmf. Rubber jacket. 50 feet. Shpg. wt., 2 lbs.

57 PT 9364—Per foot. \$4c

Two Conductor P.M. Speakers Wire. Size 18 Cotton wrap. 1/4-in. rubber jacket.

57 PT 9365—100 ft. Shpg. wt., 5 lbs. \$2.06

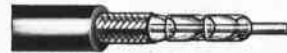


BELDEN Transmission Line

18 strands. Cotton wrap. Rubber covered. Color coded. Twisted pair. Overall cotton braid. Weatherproof.

57 PT 9363—75-ft. Coil. Shpg. wt., 2 lbs. \$1.10

Frequency	Surge Imped.	Power Factor	Capacity Per Ft.	DB Loss Per 100 Ft.
1500 KC	67.7 ohms	1.42%	33.5 mmf.	.357
10 MC	68.4 ohms	1.93%	32.5 mmf.	2.11
40 MC	68.9 ohms	2.02%	31.9 mmf.	6.25



Amphenol Coaxial Cable

Unequaled for radio and test instrument construction, antenna leads, public address work and any place where high frequencies must be carried without radiation or pickup with minimum loss. No. 14 conductor. Low loss leads. Weatherproof waxed braid.

57 PT 9768—Per foot. Shpg. wt., 1 oz. \$35c

BELDEN Magnet Wire

The finest quality magnet wire on the market. Soft drawn copper, uniformly insulated. Standard B and S gauge. Wound on metal spools. Continuous lengths.



Plain Enameled

Cat. No.	Size	Feet	Price
1/4-Lb. Spools. Shpg. wt., 1 lb.			
57 PT 9366	18	101	27c
57 PT 9367	20	160	29c
57 PT 9368	22	253	29c
57 PT 9369	24	402	30c
57 PT 9370	26	640	35c
57 PT 9371	28	1013	38c
57 PT 9372	30	1610	42c
1/4-Lb. Spools. Shpg. wt., 8 oz.			
57 PT 9373	32	1275	26c
57 PT 9374	34	2030	30c
57 PT 9375	36	3220	38c

Double Cotton

Cat. No.	Size	Feet	Price
1/4-Lb. Spools. Shpg. wt., 1 lb.			
57 PT 9376	18	96	33c
57 PT 9377	20	150	36c
57 PT 9378	22	235	38c
57 PT 9379	24	362	42c
1/4-Lb. Spools. Shpg. wt., 8 oz.			
57 PT 9380	26	560	27c
57 PT 9381	28	860	30c
57 PT 9382	30	1321	35c
57 PT 9383	32	1930	47c
57 PT 9384	34	2746	60c
57 PT 9385	36	4675	71c

Belden Litz Wire

The finest quality litz wire. For rewinding antenna primaries and for hand wound R.F. coils up to 30 megacycles. Has two wraps of tram silk. 100 ft. to spool. 7 strands No. 41.

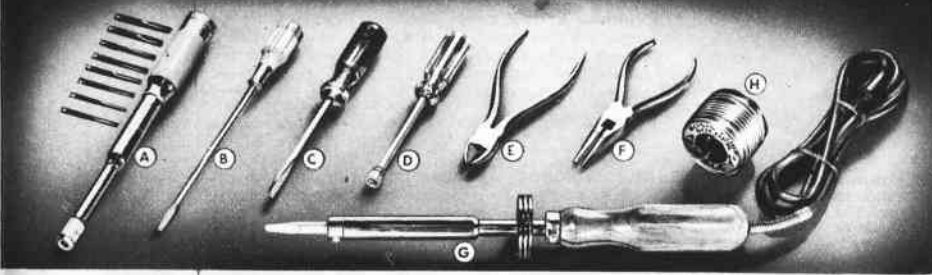
57 PT 9386—Per spool. Shpg. wt., 12 oz. 22c

Spaghetti Tubing

For insulating bus bar wire, condenser and resistor pig tails. Colors: Black, yellow, red or green. State color wanted.

57 PT 9387—Shpg. wt., 4 oz. Per 30-in. length. \$6c

-SERVICE TOOLS



Craftsmap Automatic Push Drill

(A) Chuck has hardened steel jaw. Heavily nickel plated. Knurled handle. 8 drill points (1/16 to 1/8 in.) in magazine-type handle. Length 10 inches. A \$2.25 value.
9 PT 4221—Shpg. wt., 12 oz. \$1.55

Long Blade Screw Driver

(B) Fine for radio work. Tempered blade. Hardwood handle. Length, blade, 6 1/2 inches.
9 PT 4113—Shpg. wt., 6 oz. Each. 10c

Shock Proof Socket Wrenches

(D) Socket wrenches with transparent amber shockproof handles. Blades of hardened tool steel. Sizes listed will handle all standard nut sizes used in radio work. Shpg. wt., 8 oz.
57 PT 7416—1/16 in. socket 35c
57 PT 7417—1/8 in. socket 35c
57 PT 7418—3/16 in. socket 35c
57 PT 7419—1/4 in. socket 35c
57 PT 7420—5/16 in. socket 35c
57 PT 7421—3/8 in. socket 35c
57 PT 7422—1/2 in. socket 35c
57 PT 7423—Complete set of above 7 sizes. Shipping weight, 2 lbs. 4 oz. \$2.20

Craftsman Diagonal Pliers

(E) Vanadium steel. Hand honed cutting jaws. Highly polished. State length.
9 PT 4506—6-inch. Shpg. wt., 6 oz. \$1.25
7-inch. Shpg. wt., 8 oz. 1.59

Craftsman Screw Drivers

(C) Super quality, shock-proof transparent amber color handles. Unbreakable! Square blade. Vanadium steel. Chromium plated.
9 PT 4148—State size wanted.
Blade 4 1/2 x 3/16 in. Shpg. wt., 4 oz. 37c
Blade 4 x 1/4 in. Shpg. wt., 5 oz. 45c
Blade 6 x 1/4 in. Shpg. wt., 6 oz. 55c
Blade 8 x 3/16 in. Shpg. wt., 10 oz. 75c
Blade 12 x 1/8 in. Shpg. wt., 12 oz. 89c

Craftsman Long Nose Pliers

(F) Drop forged from Vanadium steel. Polished slender pointed nose. Milled jaws. Length 6 inches.
9 PT 4499—Shipping weight, 6 oz. 98c

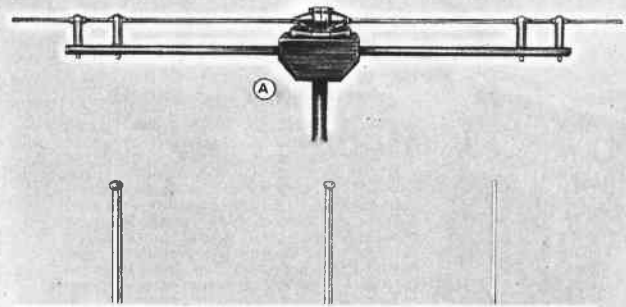
Old Reliable Rosin Core Solder

(H) Non-corrosive. Proper composition for radio work.
9 PT 8102—10 feet to spool.
Shipping weight, 6 oz. 16c
9 PT 8100—1-pound spool.
Shipping weight, 1 lb. 6 oz. 49c

Craftsman Soldering Iron

(G) Just the tool for intricate radio soldering! Adjustable 3/8-in. solid copper tip is 3 inches long. 2-year guaranteed 75-watt element is wound on hollow core. Handle kept cool by baffle plates. Chromium finish. Rubber covered cord and plug. For any 110-120-volt current. Approved by Underwriters.
9 PT 5411—Shpg. wt., 1 lb. 8 oz. \$2.19

VERTICAL RADIATORS AND TELEVISION ANTENNA



Brach Television Antenna

(A) Adjustable rotary beam type, designed for simple and quick installation on any rooftop. Provides maximum television reception and minimum interference. Supplied complete, consisting of: clear Washington Cedar cross-arms and 2-section mast; teleceptor rods; climate-sealed teleceptor coupler assembled to 75 ft. of low-loss transmission line; porcelain insulators; mounting clamps; hardware, and full instructions.
57 PT 7645—Shipping weight, 9 pounds 8 ounces. \$5.58

Premax Vertical Radiator, No. VR-136, consists of a 6-section mast, No. 136-M, and a specially designed Lapp insulator, No. 136-P, which has a tested compression rating up to 10,000 pounds. The VR-136 Radiator is adjustable from about 7 ft. to 34 ft. and is suitable for 1/4-wave on 10 or 20 or 40 meters; 1/2-wave on 10 or 20 meters, or can be loaded for any wave length. Diameter of mast at base 1 1/2", graduating to 1/2" at top. Made of high tensile copper-nickel steel, bright cadmium plated. Each unit comes complete with instructions.
57 PT 07621—VR-136 Mast and insulator complete. Shipping weight, 29 pounds. \$16.61
57 PT 07620—Mast Only (No. 136-M). Shpg. wt., 22 lbs. 8.82

Premax Heavy Duty Insulator

(B) No. 136-P, as included with Premax Vertical Radiator, No. VR-136. The total height is 7 in. with 5 in. between the feet. The heavy wet-process brown-glaze porcelain cones are held in compression between hot galvanized malleable iron castings which form the base support itself. The top mounting will fit tubular masts of 1 1/4 in. in diameter.
57 PT 07622—Shipping weight, 7 pounds. \$7.94

Premax Vertical Radiator

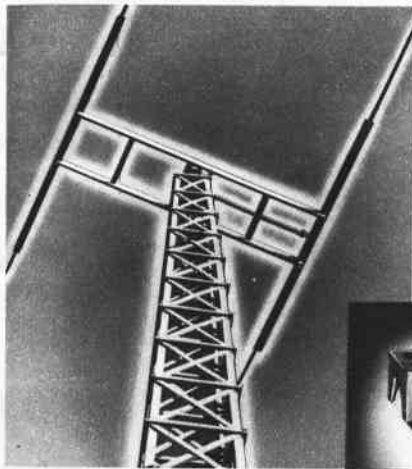
(C) No. VR-318, consists of a 3-section mast, No. 318-M, and a specially designed insulator of brown-glaze porcelain mounted on a special galvanized post and base flange. Though entirely adequate for this 10-meter vertical, this type of insulator is not recommended for heavier installations. This 10-meter unit is adjustable from about 6-feet to 17-feet, and may be used as 1/4-wave on 10 or 29 meters, or 1/2-wave on 5 or 10 meters—it being necessary only to adjust the telescoping sections to the required heights. Diameter of mast at base 3/4 in. graduating to 1/2 in. at top. Made of high tensile, copper-nickel steel, bright cadmium plated. Shipped complete with erecting and feeding instructions.
57 PT 07624—VR 318 Mast and Insulator Complete. Shipping weight, 12 pounds. \$7.35
57 PT 07623—Mast Only (No. 318-M). Shpg. wt., 8 lbs. 4.41

Premax Light Type Insulator No. 318P

(C) Is a specially designed insulator of lighter construction than the Heavy Duty Type. The porcelain is constructed to secure the proper insulation for lighter verticals, and is of wet-process brown-glaze in which are cast a top mounting and foot of heavy malleable iron, hot-galvanized. This is a very serviceable insulator which may be used in arrays where the masts do not exceed 18-foot heights. This insulator is standard equipment with Premax Vertical Radiator, No. VR-318. Top post is 3/4 in. diameter.
57 PT 7819—Shipping weight, 4 pounds. \$2.94

Vertical Receiving Aerial

(D) A new improved radio aerial that is efficient, non-directional, and simple to erect. The ideal aerial to use where space is limited. Attractive slender appearance. Very effective on short-waves. Quieter than a horizontal wire. Universal mounting block and bracket permits quick and easy installation on horizontal, vertical or slanting surfaces. Consists of a 12-foot (3 section) Duralumin rod with base designed for mounting at various angles, 40-ft. weatherproof lead-in, 25-foot ground wire, one 7-inch stand-off insulator, two porcelain nail knobs, also one lead-in strip, one lightning arrester, one ground clamp, 10 feet ground wire. Instructions.
57 PT 05593—Shipping weight, 5 pounds. \$2.49



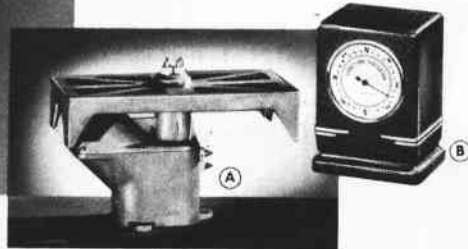
AMPLEX Rotary Beam Antenna

The AMPLEX ANTENNA is designed to give the amateur operator an antenna to meet the most rigid specifications and to eliminate the objectionable features heretofore commonly encountered. Each component of the AMPLEX is specially designed as an integral part of the mechanism and the certain principles necessary in the manufacture of a product of the highest quality have been carried throughout.

Heavy bronze and steel gears are of special design, accurately ground, insuring long life and quiet operation. Synchronized direction indicator (B) is optional.

The worm construction provides an extremely low gear reduction, ratio of 1800 to 1, and at the same time provides a positive lock when the antenna is stationary. The entire gear train is mounted on a heavy sub-frame cast from close grain gray iron and set in the oil reservoir in the base of the main housing. A light non-congealing oil provides

- Mechanism completely protected from dust and weather.
- Powerful 110 volt, 60 cycle A.C. motor with high starting torque.
- Gear reduction assembly runs in oil.
- Oilite thrust bearing.
- Alsimag "196" insulators.
- Direction indicator timer an integral part of main unit.
- Non-reversible, 360-degree rotation.
- Positive feeder coupling system entirely enclosed.
- Rotating speed 3/4 R.P.M.

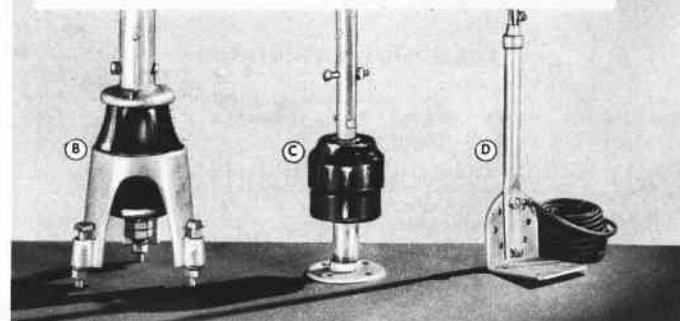


constant lubrication. The main shaft bearing is made of oil impregnated bronze and requires no lubrication. When the antenna is installed no further service is required. The main housing and rotating plates are made of aluminum alloy. Elements are of heavy reeded steel tubing, copper plated. Supporting framework of red cypress. Tower not included. Directional indicator extra.

57 PT 07640—10-meter antenna complete with framework. 2-element radiators, main drive unit, (A) rotating plate, insulators, nuts and screws. Shpg. wt., 60 lbs. \$54.50

57 PTM 7641—20-meter antenna complete with above enumerated components. Shipping weight, 80 pounds. \$59.50

(B) 57 PT 7642—Amplex direction indicator for either of above antennas. Shipping weight, 5 pounds. \$15.00



THE A·R·R·L LIBRARY



Amateur Handbook

\$1.00 This is the acknowledged standard manual of Amateur communication. Tells the things which are needed for a comprehensive understanding of amateur radio. Gives suggestions on how to learn the code. Explains traffic handling procedure and good operating practices. Covers fundamentals of electricity and radio and carries reader step by step through the design, construction and operation of all modern amateur apparatus. No one who aspires to become a licensed Radio Amateur can well get along without this great book. We supply the latest edition.

57 PT 8168—Postpaid in U.S.A. . . . \$1.00

Amateurs' License Manual

A necessity for the beginner—equally indispensable for the already licensed amateur. Going after your first ham "ticket"? You need the Manual for its instructions on where to apply, how to go about it in the right way—and, most important of all, for the nearly 200 typical license exam questions and answers. All the "dope" on every phase of amateur licensing procedure, and the complete text of the new regulations.

57 PT 8169—Postpaid in U.S.A. . . . 25c

How to Become a Radio Amateur

Features equipment which, although simple in construction, conforms in every detail to present practices. The apparatus described is of a practical type capable of giving long and satisfactory service—while at the same time it can be built at a minimum of expense. Complete operating instructions and references to sources of detailed information on licensing procedure are given. 27 pages of well illustrated text.

57 PT 8170—Postpaid in U.S.A. . . . 25c

Building an Amateur Radiotelephone Transmitter

Written for the man who has a class C or class B license. A companion book to "How to Become a Radio Amateur." Contains simple description of good design for 'phone. Description of inexpensive low-power transmitter and modulator, with complete operating instructions plus antenna information of particular interest in 160 and 10-meter operation. Tells what a new or inexperienced ham should know before attempting to use 'phone. Standard QST size and format.

57 PT 8171—Postpaid in U.S.A. . . . 25c

Hints & Kinks

Amateurs are noted for their ingenuity in overcoming by clever means the minor and major obstacles they meet in pursuit of their chosen hobby. An amateur must be resourceful and a good tinkerer. He must be able to make a small amount of money do a great deal for him. He must frequently be able to utilize the contents of the junk box rather than buy new equipment. Hints & Kinks is a compilation of hundreds of good ideas which amateurs have found helpful.

57 PT 8172—Postpaid in U.S.A. . . . 50c

The A.R.R.L. Antenna Book

A comprehensive manual of amateur antenna design and construction, by the headquarters staff of the American Radio Relay League. Sixteen chapters, profusely illustrated. Both the theory and the practice of all types of antennas used by the amateur, from simple doublets to multi-element rotaries, including long wires, rhomboids, vees, phased systems, u.b.f. systems, etc. Feed systems and their adjustment. Construction of masts, lines and rotating mechanisms. The most comprehensive and reliable information ever published on the subject. Over 100 pages, in "QST" format.

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A.R.R.L. Logbook

The law requires that Amateurs maintain a log. This is one of the best. Spiral bound. Has 39 log pages, 39 note pages. "Q" Signals, graph paper, message number sheet.

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Lightning Calculators

Radio Calculator. Type A—Resembles a circular slide rule. Solves problems involving frequency inductance, capacity, coils, condensers. Shipping weight, 4 ounces.

57 PT 8175—Not postpaid. Each. . . . \$1.00

Ohms Law Calculator. Type B—Solves problems involving current, resistance, voltage, and power. Direct reading. Shipping weight, 4 ounces.

57 PT 8176—Not postpaid. Each. . . . \$1.00



RADIO

Rider's Manual

Volume X. 1650 pages. The latest developments in television facsimile wireless record players are all found in this new book. 64 pages of technical explanation of the theory of the newest television facsimile wireless record players, etc. Index covering entire 10 manuals. Weight unpacked, 11 lbs. Size 9x11 1/2 inches

57 PT 8150—Postpaid in U.S.A. . . . \$9.80

Volume IX. Covers 1938 and 1939 models announced up to October 1938. 1640 pages—over 100 manufacturers represented. 64 pages of "How It Works" explaining the more complicated aspects of the new sets. 140-page index. Loose leaf pages. Stiff Fabrikooid cover. Size, 9x11 1/2 inches. Cumulative index Volumes 1 to 9.

57 PT 8151—Postpaid in U.S.A. . . . \$9.80

Volume VIII. Covers 1937 and 1938 models announced up to November 1937. Over 1600 pages. No duplication of contents of other volumes. Data on new intercommunicators, electronic musical devices, and P.A. apparatus. Stiff Fabrikooid covers. Size, 9x11 1/2 inches.

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Volume VI. Data on sets produced up to October 1935—the start of the metal tube era—1,240 pages. Schematics and complete voltage data.

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Volume V. Sets manufactured up to October 1934—and older sets, too—are covered in this volume—1,200 pages. Covers 946 different sets.

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Volume IV. In this volume will be found information on receivers manufactured up to March, 1934—1,060 pages.

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Volume II. Data on sets manufactured between early 1931 and the middle of 1932—800 pages. Valuable point-to-point data.

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An authentic, thorough, completely illustrated book of exclusive inside information on 450 models of active Silvertone Radios—Covers all Silvertone models, 1928 to 1937. Complete parts list with list prices and numbered schematics enables you to quickly select any required replacement. Alignment procedure. Instruction for measurement of sensitivity, selectivity, and image ratio. AVC action analysis. I.F. Repeat. Speaker repair procedure. Tube interchangeability and a wealth of other valuable information. Order this great service manual today. Size, 9x11x2 1/4 inches. Thick, stiff buckram cover. No Active Radio Serviceman should be without this data.

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The Radio Amateur Call Book

An indispensable reference book for every ham shack. Lists over 70,000 amateurs of all countries. Gives schedules of time, weather, and press reports from principal short wave stations throughout the world. Lists and interprets international abbreviations of Q, R, and T signals.

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Amateur Course. Covers Elementary Electricity—The Vacuum Tube—Amplifiers—Transmitters—Amplitude Modulation—Power Supplies—Antenna and Feeders, Regeneration—Circuits—Construction—Learning Code. Over 200 illustrations—144 pages.

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How to Become an Amateur Radio Operator. Covering System of Sending and Receiving—Definitions of Radio Terms—Laws of Electric Circuits—Descriptions of Receivers Used by Amateurs—Amateur Transmitters—Specifications for Construction—Regulations that apply to Operators—Appendix Which Contains International "Q" Signals—Conversion Tables. 150 illustrations, 72 pages. Covers all you will be required to know to get your "ticket."

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How to Build and Operate Short-Wave Receivers. Contains a wealth of information. Dozens of short-wave sets are described—actual photographs of sets built—hookups and diagrams aplenty. 150 illustrations—72 pages. Contains data found in no other book.

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Techniques of Recording. Home recording is an interesting and fascinating activity. With a good working knowledge of its technique and suitable equipment, highly satisfactory records can be inexpensively produced from any source of music and speech. This easy-to-understand book gives you information required in non-technical language. Contains separate chapters on various components of complete home recording setup. Profusely illustrated. 43 pages. Size, 7x10 1/2 in.

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BOOKS

Official Radio Service Manual

Volume VII. Newest of GERNSBACK MANUALS, contains schematic diagrams and service data on 1936-37 and early '38 receivers. 1,800 pages of material which radio men use every day. Wiring diagrams of over 1,200 different manufactured sets. Over 3,000 different illustrations. Bound in hard, loose-leaf covers—mechanism permits pages to be removed and replaced. Size—9x12 inches.

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1936 Official Radio Service Manual

Contains 1,200 pages (over 2,500 illustrations) packed with service data of 1935-36-37 sets. Diagrams of over 1,500 receivers. Alignment procedure included with diagrams. Operating voltages for over 80% of sets are recorded. 9x12 inches; hard cover, loose-leaf binder.

57 PT 8178—Postpaid in U.S.A. \$6.86

1935 Manual

A radio service guide of over 1,000 pages with more than 3,000 illustrations—contains schematic diagrams of 1934-35 receivers. Features many old sets never previously described, early all-wave and short wave sets and auto radios. Size—9x12 inches; flexible, loose-leaf covers.

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Over 400 pages—over 2,000 illustrations. The schematic diagrams cover 1933-34 receivers. Features voltage readings, I.F. transformer values in superhets. A master index includes diagrams published in previous MANUALS. Size 9x12 inches; flexible, loose-leaf covers.

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Girardi's Radio Physics Course

The newest edition. Enlarged and revised. Covers every radio subject, P. A. photo-electric cells, television and sound motion pictures. 972 pages—508 illustrations—856 self-review questions. A radio book which is a leader in the field, because it gives a remarkably clear, complete and easily understood course in radio, sound and electricity; a book that leading radio schools throughout the world have chosen as one of the most thorough, most instructive, and most interesting radio books ever written. Explains in easy-to-understand language all of the essential facts about both electricity and radio from simple fundamentals to the most intricate applications. Hard covers. Size, 9 1/2 x 7 in.

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Modern Radio Servicing

One of the greatest texts ever published on radio service work. A complete course on the most up-to-date methods of locating and correcting troubles in radio receivers. Everything practical, and easy to understand. Fully explains use of test instruments. 706 illus. 1300 pages.

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The "Radio" Handbook

Completely new and greatly enlarged edition of the well known amateur reference book, which was formerly known as "Jones Radio Handbook." Contains valuable information not elsewhere available on the latest in short wave transmitters, receivers, and accessories—includes chapters on television and television equipment for amateurs. Chapters on service and test equipment, antenna data, and tube characteristics. Constructional articles galore. Hundreds of diagrams and illustrations. 500 pages. 1940 Edition.

57 PT 8190—Postpaid in U.S.A. \$1.50

Amateur Newcomer's Handbook

To comprehend the intricacies of radio and to understand its advanced general and specialized handbooks, the radio amateur newcomer needs a stepping stone.

Written in easy-to-understand language, the "Radio Amateur Newcomer's Handbook" is such a stepping stone. It starts at the beginning and takes you step by step through the process of mastering the principles, learning the code, passing the license examination, as well as helping you to build your first simple, effective equipment. Contains a comprehensive set of typical questions such as applicants for a general amateur license are required to answer. Thorough, yet concise answers are also given. Will save much time in qualifying for your "ticket."

Radio law and regulations pertaining to amateurs are covered with simplified interpretations.

57 PT 8191—Postpaid in U.S.A. 35c

The "Radio" Antenna Handbook

Those who break records learned long ago that the antenna is the all-important factor, more important by far than the receiver used or the transmitter's power. A million watts won't get far without an antenna, but with a good antenna it is possible to transmit over long distances with a fraction of a watt. The best factory-built "superhet" won't "drag in" much without an antenna, but with a good antenna it is possible to hear the world on a one-tube set.

Profusely illustrated; features include many diagrams, tables of dimensions for all frequencies (no calculations necessary), information on all practical arrays and directive antennas, noise reducing receiving antennas, and feeders of all types. Several practical multi-band antennas are also described.

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Servicing Superheterodynes

To be able to analyze the different portions of the circuit quickly and find trouble without loss of time necessitates a thorough knowledge of circuit theory. In this text Rider has analyzed each portion of the superheterodyne circuit. Along with this theory goes an easily-understood explanation of different troubles that occur in the various parts and how these troubles can be recognized and corrected. Hard cover.

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The Cathode-Ray Tube at Work

The cathode-ray tube oscillograph is the most universally used testing instrument in the radio servicing field. The progressive serviceman must be thoroughly familiar not only with the theory underlying the cathode-ray tube, but also with its functioning in the oscillograph. Half of the book is devoted to the applications of the cathode-ray oscillograph to servicing problems. Unretouched oscillograms illustrate the text. 336 pages. Over 450 illustrations.

57 PT 8145—Postpaid in U.S.A. \$2.45

Hammarlund S-W Manual

Written for the amateur, experimenter and short wave listener. Contains short wave station list. Easy-to-understand construction articles, short wave receivers, preselectors, converters, power supplies, transmitters, buffers, and amplifiers. Profusely illustrated. 32 pages. Paper binding. Size 6x9 inches.

57 PT 8194—Postpaid in U.S.A. 10c

Raytheon Handbook

A big 71 page book which thoroughly covers the application of Amateur transmitting tubes, gives correct design data for numerous transmitter circuits. Every Ham should have a copy.

57 PT 8195—Postpaid in U.S.A. 50c

Include Needed Books in Your Easy Payment Order . . . See Page 2



Short Wave Coil Data Book. The difference between a good and a poor radio set is usually found in the construction of coils. Coil winding information is important, and in the new coil book all the latest "dope" appears. Every experimenter needs this book. Over 50 illustrations—16 pages. Instructions on how to wind your own coils and save money.

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Short Wave Beginner's Book. Gives information on time conversion tables—aerial—noise elimination—radio tubes—coil winding—short waves—fundamentals of electricity—symbols—schematic diagrams—amplifiers for short wave receivers—code—etc. 75 illustrations—40 pages. This book solves many problems for the short-wave beginner.

57 PT 8188—Postpaid in U.S.A. 25c

Frequency Controls with Quartz Crystals. Covers the subject thoroughly. Table of contents: Theoretical Considerations, Anti-Resonance, Resonance, Temperature, Vibration, Holders, Power, Activity, Cleaning, Oscillators, Standards, The Multivibrator. Illustrated. 30 pages. Size 6 1/4 x 9 1/2 inches. You get data in this book that is not in print elsewhere.

57 PT 8189—Postpaid in U.S.A. 10c

**Mutual Conductance
Tube Testers**

\$71.87
Cash

On Easy Terms
Only \$7 Down

True Dynamic Mutual Conductance circuit. Filament Voltages are available from 1 to 110 volts. Provisions are made for gas tests, shorts, and leakage tests. Continuity test for ballast tubes. Sockets for all types now in use.

Ranges of the Volt-Ohm-Milliammeter D.C. Volts 0-10-50-250-500-1000 at 1000 ohms per volt. D.C. Milliampers 0-10-50-250; Resistance 2 to 500 ohms, 300,000 ohms, 1.5 and 3 megohms. A.C. Volts 0-10-50-250-500-1000 at 400 ohms per volt. A special decibel chart permits readings against volts—10 to 42 decibels. The front-illuminated RED DOT guaranteed indicating instrument has two-color "GOOD-BAD" scale. Attractive all-metal case. Removable cover. Case size is 15 1/4 x 11 1/2 x 6 1/2 in. high when closed. Operates on 60-cycle A.C. 110-120 volts. Shpg. wt., each set, 30 lbs. See Page 2 for Easy Terms.

- 57 PT 08300—Model 1616. Cash Price. \$71.87
- Model 1615 Tube Tester as above without Volt-Ohm-Milliammeter section.
- 57 PT 08301—Model 1615. \$62.07

**Emission Type
Tube Testers**

\$48.51
Cash

On Easy Terms
Only \$3 Down

Individual Switching of terminals insures non-obsolence. Filament voltages from 1 to 110 inclusive. New chart lists 250 types. Approved RMA emission circuit. Direct reading 3-color "GOOD-BAD" scale.

The sockets include all types. Neon short tests. Tests separate plates on diodes and rectifiers. Ballast tubes are tested for continuity. RED DOT Lifetime guaranteed meter ranges are: D.C. Volts 0-10-50-250-500-1000 at 1000 ohms per volt; D.C. Milliampers 0-1-10-50-250; Low Ohms, shunt type circuit, .2 to 500; series type circuit 0 to 300,000 ohms, 1.5 and 3 megohms. A.C. Volts 0-10-50-250-500-1000 at 400 ohms per volt. Front illumination. Attractive all-metal case size, 15 1/4 x 11 1/2 x 6 1/2 in. Removable cover. For 110-volt 60-cycle A.C. Shipping weight, 30 pounds.

- 57 PT 08302—Model 1611. Cash Price. \$48.51

Model 1610

Model 1610 Tube Tester only without Volt-Ohm-Milliammeter section. Shipping wt., 30 lbs.

- 57 PT 08303. \$38.22

**Six Range
Signal Generators**

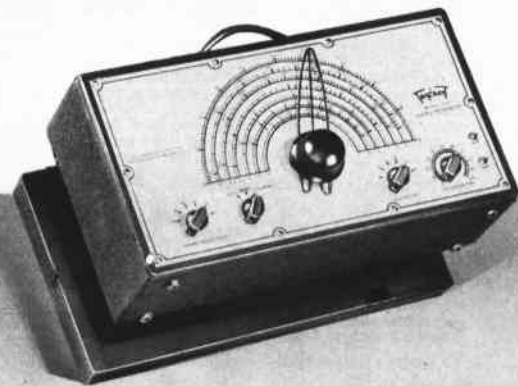
\$44.10
And Up
Cash

On Easy Terms
Only \$5 Down

Model 1630 is an outstanding Signal Generator for extreme accuracy. Triple-shielding eliminates the most negligible leaks. Covers 100 Kc. to 30 Mc. in six ranges. Unusually large dial with widely spaced divisions (direct vernier type from 100 Kc. to 30 Mc.) has total scale length of 52 1/4 in. Each coil is individually calibrated and tracked for linearity over the entire range. A continuously variable attenuator of the pad type offers steps from zero output to full output. For 110-volt 60-cycle A.C. operation. Metal case, size, 14 1/2 x 7 1/2 x 4 1/2 inches. A snap-on metal cover. See Page 2 for Easy Terms.

- 57 PT 08304—Model 1630. Complete with cover and accessories. Shipping weight, 30 lbs. Cash Price. \$44.10

- 57 PT 08305—Model 1631. Same as Model 1630, but incorporates electronic frequency modulation from 5 Kc. to 40 Kc. Either CW, 400 cycle internal or external modulation. Shipping weight, 20 lbs. See Page 2 for Easy Terms. \$53.90



TRIPLETT RED
TAKE MONTHS TO PAY •



**Big Meter—Long Scale
Tube Testers**

\$29.24

Counter Model

This new Tube Tester has a large 6-inch scale RED DOT Lifetime guaranteed Measuring instrument. You have assurance against future obsolescence because filament Voltages are provided in twenty steps, from 1 Volt to 110 Volts and all transformer connections are made for use on future tubes with voltages between these ranges. With this tester any one can make accurate tests with the greatest speed and full customer confidence.

The Model 1612 has a fully balanced RMA circuit and leakage test for Cathode and Heater and inner elements, with short tests between any two elements, check for open filaments, and any two elements, hot leakage check, separate section tests of multi-section tubes, separate plate test of full-wave rectifiers.

Illuminated speed-roll chart. Streamlined, heavy seamless steel case. Size is 15 1/4 x 11 1/2 x 6 1/2 inches. For 110-volt 60-cycle A.C.

- 57 PT 08306—Model 1612 Counter Type. \$29.24
- 57 PT 08307—Model 1613 Portable as illustrated above, but has a detachable cover with attached handle. Case size with cover—15 1/4 x 11 1/2 x 6 1/2 in. Shipping weight, 30 lbs. \$34.14
- Model 1613. \$34.14

**Laboratory
Condenser Bridge**

\$88.20
Cash

\$8 Down

Model 1640 checks the capacity, at 60 cycles, of all condensers—paper, electrolytic or mica—from .00025 to 250 microfarads. Also provides tests for shorts, opens, leakage and breakdown. Two three-inch RED • DOT Lifetime Guaranteed indicating instruments are incorporated. One has a GOOD-BAD reading scale for leakage of electrolytics from 2 to 250 mfd., based on .2 Ma. per mfd. at rated voltage. Control permits other ratings as well as direct readings in milliamperes. For condenser leakage measurements the voltmeter and milliammeter are in the circuit at the same time. Direct current for checking leakages is available up to 600 volts variable. The newly developed circuit of this Tester measures the actual capacity of a condenser at any stage it may present, from a leakage standpoint. Tester operates from 110-volt 60-cycle A.C.

The bridge has four resistive arms. By moving these resistors in unison it is possible to maintain a resistance balance and at the same time vary the ratio of the capacities under test. Sturdy metal case, 14 1/2 x 8 1/2 x 7 1/2 inches, has lustrous black suede enamel finish. Leather strap handle. Rubber feet on two sides of case for convenience. The etched panel color is silver and red on black. Allow 10 days for shipment. See Page 2 for Easy Payment Terms.

- 57 PT 8308F—Model 1640, Complete with Accessories. Shpg. wt., 40 lbs. Cash Price. \$88.20

**Push-Button
Vibrator Tester**

\$39.04
Cash

\$4 Down

- New, Improved, Tests all standard 6-Volt Vibrators.
- Easy to operate. Roll chart has 107 key settings.
- Flexible push-button switching.

A new Vibrator Tester for checking all 6-volt Vibrators. Features the "Red Dot" Lifetime Guaranteed Triplett Meter. Obsolescence-proof push-button feature eliminates difficulties experienced in keeping other types up to the minute. It conclusively checks all standard makes of six-volt vibrators as used in automotive and home battery radio receivers. Red Dot Lifetime Guaranteed instrument has three scales: 0-10 volts to show input voltage to vibrator for start or running tests. . . . A two-zone, two-color merit scale used in conjunction with the load rheostat shows vibrator condition as GOOD or BAD. . . . 0-100 scale permits inter-comparison of vibrator output under standardized input conditions. Has tip jack facilities for oscilloscope connections. Like provisions have been made for connecting external buffer condensers if desired. Case 14 1/2 x 7 1/2 x 4 1/2 in., black suede electro enamel finish. Leather strap handle is a convenience for portability. Etched panel. Snap-on metal cover. Rubber feet on bottom and back of case. For 110-volt 60-cycle A.C. See Page 2 for Easy Payment Terms.

- 57 PT 08329—Model 1671 complete with cover and accessories. Shpg. wt., 35 lbs. Cash. \$39.04

See Page 2 for Easy Payment Plan
Page 36

**Oak Cased
Tube Testers**

\$5848 Terms
Cash \$6 Down

Model 1511 is the same as Model 1616 described on opposite page but is in a quartered oak case with selector switch controls. Dynamic mutual conductance circuit. Volt-ohm-milliammeter as used in Model 1616. Rotating chart enables a quick selection of instructions. Case is 15 1/4 x 11 1/4 x 7 1/2 inches. Antique bronze etched panel. Illuminated instrument. See Page 2 for Easy Terms.

57 PT 08309—Model 1511. Shpg. wt., 30 lbs. Cash Price..... \$58.48
57 PT 08310—Model 1510. Dynamic Mutual Conductance Tube Tester only. Same as Model 1511, less Volt-Ohm-Milliammeter. Shipping wt., 30 lbs..... \$48.68

**Volt-Ohm
Milliammeters**

\$3055 Terms
Cash \$4 Down

Model 1200-E. Red Dot Instrument reads D.C.; 10-50-250-500-1000 volts at 25,000 ohms per volt; 0-50 microamperes; 1-10-50-250 milliamperes; low ohms, backup circuit; 1/4 to 1000; 40,000 ohms, 4 and 40 megohms; A.C. 10-50-250-500-1000 volts. Contains 22 1/2 and 1 1/2 volt batteries. Case size, 7 1/2 x 6 1/2 x 5 1/2 in. Shpg. wt., each set, 10 lbs.
57 PT 8311—Cash Price \$30.55

Model 1200-A

Same as 1200-E but reads as follows: D.C. 10-50-250-500-1000 volts at 2000 ohms per Volt; 1-10-50-250 M.A. low ohms, backup circuit, 1/2 to 500; 1500 ohms, 1 1/2 and 3 megohms. A.C. 10-50-250-500-1000 volts.
57 PT 8312..... \$23.35

Model 1200-C

Model 1200-C, same as 1200-A, but with 5000 ohms per volt D.C. suitable for AVC checking; 250 microamperes, and 7 1/2 meg-ohms scales.
57 PT 8314..... \$26.29

**Portable
Tube Tester**

\$2156 Terms
Cash \$2.50 Down

This most popular tester uses the approved RMA circuit. It contains the RED DOT Lifetime guaranteed measuring instrument, and also a separate line voltage control meter. A most unique, as well as the most simple and practical tube chart yet devised is provided with the tester. Housed in a snappy appearing case with modernistic etched panel in three colors. It is a standard unit uniform in size with other models of the 1200 series and contains all the sockets to test present-day tubes. Fits cases listed lower right corner this page. Pilot Lamps, Ballast tubes, Television Tubes and Gasous Rectifiers. Filament voltages ranging from 1 to 110 volts. Model 1213 Tube Tester in black baked-on enamel suede finish case. Snap-on cover. For 110-volt 60-cycle A.C. Shpg. wt., 12 lbs. See Page 2 for Easy Terms.

57PT8315—Cash Price \$21.56

**Portable
Signal Generator**

\$2924 Terms
Cash \$3 Down

Triple shielded! Improved attenuation—Zero for all practical purposes. Large dial opening—180°—Improves readability. Six Bands: 115 Kc. to 30.5 Mc. Total scale length over 50 inches. Line filter—Filters RF between oscillator and the line. Six trimmer calibrated coils—For accuracy well within servicing requirements on all bands. 400 cycle audio note obtained from panel jacks. Sturdy metal unit size case—7 1/2 x 6 1/2 x 5 1/2 in. Elastic strap inside snap-on cover holds accessories and instructions. Attached strap handle

57 PT 08316—Model 1232-A A.C. operated. Complete with accessories. Shipping weight, 18 pounds.
Cash Price..... \$29.24

Model 1231-A—Battery operated. Complete with batteries and accessories.

57PT08317—Shipping weight, 15 pounds..... \$26.95

**RED • DOT
GUARANTEE**

The meters used in Triplett and Readrite testers now carry a Factory Lifetime guarantee against defects of material and workmanship.

**Free Point
Tester**

For servicing sets using metal, glass-metal or glass tubes. Has five sockets—with standard RMA markings. Panel also includes eight automatic switch type and ten single action jacks. Makes all series and parallel meter connections through the set sockets to all parts of the circuit. Automatic in operation. Used in conjunction with any Triplett Volt-Ohm-Milliammeter. Shipping weight, 8 pounds.

57 PT 08318—1220-A Unit. Cash Price..... \$12.58



DOT TEST EQUIPMENT

• SEE PAGE 2 FOR EASY TERMS



**Newest Triplett
Portable Laboratory**

\$4099 Cash
\$5 Down

Many servicemen prefer the extreme compactness of the Model 1181-B Portable Laboratory, which was first offered a few years ago, and which like other Triplett Red Dot instruments has been kept up-to-date in engineering features. Includes Models 1125-A Volt-Ohm-Milliammeter (eight A.C.-D.C. voltage ranges; five A.C.-D.C. Milliamperer ranges; and low and high ohm ranges) for point-to-point analysis and as output meter. 1151 Signal generator (110 Kc. to 18 Mc.) for aligning and balancing radio sets and 1166-B. Free Point Tester for free point and standard analysis tests. (The three units also may be obtained separately. Complete information upon request.) Case size, 16 1/2 x 7 1/2 x 4 1/2 in. Shipping weight, 17 lbs.
57 PT 08319—Cash Price..... \$40.99

**The Set Tester
That Has Everything!**

\$4884 Cash
\$5 Down

A New Sensational Set Tester. D.C. Volts—0-10-50-250-500-1000-2500 at 25,000 ohms per volt. A.C. volts—0-10-50-250-500-1000-2500 at 1000 ohms per volt. Direct current—0-50-Microamperes; 0-1-10-50-250-500 Milliamperes; 0-1-2-20 Amperes. Resistance—0-500 Low Ohms, shunt type circuit; 0-20,000 and 0-200,000 Ohms, 2 and 20 Megohms, series type circuit. Condenser Tester—Ranges for capacity checking, .001 to 30 mfd. Electrolytic leakage test. Free Point Tester—Makes all series and parallel meter connections through seven sockets. Decibel Meter—Special chart provides Decibel readings against volts from minus 20 to plus 55. Large Modernistic indicating instrument with RED DOT Lifetime Guarantee against defects. Exclusive resistance measurements circuit (Patented). There is but one Zero adjustment for all resistance ranges. Plug-in rectifier—Simplifies replacement in case of accidental damage. Rectifier incorporates a new copper-oxide element which is pre-calibrated to a factory standard. Heavy steel case with black suede baked enamel finish. Size 14 1/2 x 7 1/2 x 4 1/2 in. Leather strap handle. Snap on metal cover. For 110-volt 60-cycle A.C. See Page 2 for Easy Terms.
57 PT 08320—Model 1604, Complete with all accessories. Shpg. wt., 26 lbs. Cash Price..... \$48.84

**Triplett "MASTER UNIT"
Test Sets and Cases**

\$9034 Cash
Model 1206

A complete servicing laboratory in one case for bench or portable use. Includes Models 1200-A Volt-Ohm-Milliammeter, 1213 Tube Tester 1220-B Free Point Tester and 1231A, Signal Generator. Shipping weight, each set, 45 pounds. See Page 2 for Easy Terms.
57 PT 08321—Model 1206. Cash Price..... \$90.34
57 PT 8322—Same as Model 1206, but has Model 1232A Signal Generator \$92.63
57 PT 8324—Same as Model 1206 but has Model 1200-E instead of Model 1200-A. volt-ohm milliammeter \$99.81
Combinations of any Instruments Available. Write for Prices.

Master Carrying Case

Black artificial leather covered cases for Triplett Master Units. Built-in compartment for accessories. (See Model 1206 above.)
57 PT 8325—1201 Case (1 Unit). Shipping weight, 5 pounds..... \$3.92
57 PT 8326—1202 Case (2 Units). Shipping weight, 7 pounds..... 4.57
57 PT 8327—1203 Case (3 Units). Wt., 8 lbs.... 5.22
57 PT 8328—1204 Case (4 Units). Wt., 8 lbs... 5.88

All merchandise in this catalog sent from Chicago, but YOU PAY TRANSPORTATION CHARGES ONLY FROM SEARS NEAREST MAIL ORDER HOUSE. SEE PAGE 2.

**MODEL 432-A
Tube Tester**

\$17.49 \$2.50 Down
Cash See Page 2

Flexible switching arrangement in 19 steps from 1 to 110 filament volts. Has sockets for Loctals, Single Ends, Bantam Jr., Gaseous Rectifiers, Ballast, all regular types and the new high voltage series 117Z6, etc. Separate plate tests on diodes and rectifiers. Neon short test immediately indicates the slightest shorts and rectifier leakages. Uses Red Dot Triplett Lifetime Guaranteed Meter.

Triplett precision instrument with GOOD-BAD 3-color scale. Separate line voltage meter. Black artificial leather case has handle and removable cover. Size, 9x8½x7 inches. Up-to-date charts are furnished to registered owners as new tubes appear. A.C. operated—110-volts, 60 cycles. See Page 2 for Easy Terms.
57 PT 08867—Model 432-A (Artificial Leather Case). Shipping weight, 18 lbs. Cash. \$17.49
Model 432-A In Oak Case
57 PT 08868—Model 432-A in quarter sawed golden oak case. Shpg. wt., 19 lbs. \$21.17

**MODEL 540 D.C.
Oscillator**

\$19.11 \$2.50 Down
Cash See Page 2

(A) This All-Wave Direct Reading D.C. Signal Generator has new plug-in coils peaked with trimmer condensers, and individually calibrated to exceptionally low tolerances. Has five frequency bands from 110 to 20,000 Kc.—all fundamentals.

Greater accuracy is assured with the short grid wire connections and the absence of all switch contacts. Shielded for static and magnetic fields. Attenuation and stability are outstanding features. Strong signals—both modulated and unmodulated are provided. Three 1½-volt unicells, 45 volts of B battery and two type '30 tubes are included with the necessary leads and accessories. Furnished in "40" Series case, 5¼x7¾x4½ inches. Black wrinkle baked enamel finish. Leather strap handle. Coils and accessories included. Shpg. wt., 11 lbs. 57 PT 08869—Cash Price.....\$19.11

**MODEL 840
Oscilloscope**

\$11.17 \$2 Down
Cash See Page 2

(B) The price of this 'scope is sure to be a pleasant surprise to you. No ham station need now be without this needed accessory. This foundation oscilloscope has built-in 60-cycle sweep. For essential visual measurements of the amateur broadcast station. Also a practical foundation unit for those who wish to add external sweep and amplifiers for specific test purposes. With proper external additions this basic oscilloscope offers facilities for the study of countless circuit problems. Vertical and horizontal deflector plates. Intensity, focus and sweep controls. For 110-v., 60-cy. A.C. Shpg. wt., 12 lbs.

57 PT 08870—Model 840—(less tubes.) Cash...\$11.17
57 PT 8887—No. 913 Cathode Ray Tube. Shpg. wt., 1 lb. 8 oz. \$4.00
57 PT 8888—No. 84 Rectifier Tube. Shipping weight, 8 ounces.....\$4.00

**MODEL 740
Milliammeter**

\$19.11 \$2.50 Down
Cash See Page 2

(C) Has 3-inch square Triplett precision instrument with scale readings: 0-10-50-250-500-1000 A.C. and D.C. volts at 1000 ohms per volt; (D.C. Accuracy 2%; A.C. 5%); 0-1-10-50-250 D.C. milliamperes; low ohms, 0-300; high ohms to 250,000 at 1½ volts. The ohm-meter rheostat is capable of taking care of 13½ volts additional for resistance readings up to 2½ megohms. Batteries may be added externally permitting the higher readings in 250,000 ohms steps. Measures low ohms with 25 ohms in center of scale, giving good meter deflection down to ½ ohm. Low loss switch contacts. Long battery life is assured by low current draw not exceeding 1 milliamper. Red Dot Triplett Lifetime Guaranteed Meter. Compartment with cover for test prods and tools. Shipping weight, 9 pounds.
57 PT 08871—Cash \$19.11

**MODEL 641
Free Point Tester**

\$10.73 \$2 Down
Cash See Page 2

(D) This device will greatly simplify and speed up radio servicing by enabling you to make all voltage and current readings directly from the tube sockets of the radio under test. Meter is required. Generally used with Model 740 Volt-Ohm-Milliammeter, shown at left. Has five sockets with standard R.M.A. markings for servicing sets using any type tubes. Panel also includes eight automatic switch type and ten single action jacks. Extra connections can be made when necessary, at very slight cost.

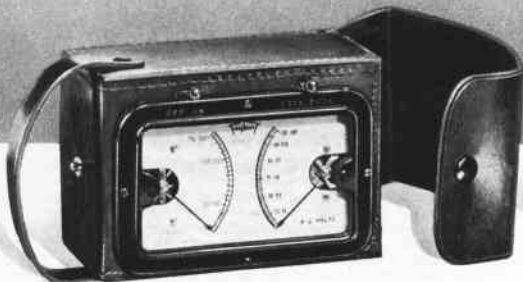
All series and parallel instrument connections are made through the set sockets to any part of the circuit. Shipping weight, 8 lbs.
57 PT 08872—Cash. \$10.73

See Page 2
for
Easy Payment
Terms



THE NEW READRITE

**EQUIP YOURSELF
NOW—PAY LATER—
TERMS ON PAGE 2**



TRIPLETT Appliance Tester

\$18.94
Cash

\$2.50 Down
See Page 2

Designed for the electrician and refrigerator serviceman. Tester provides quick and accurate means of testing power consumption of radios, refrigerators, fractional horsepower motors and household appliances under running conditions.

Has Red Dot Lifetime Guaranteed wattmeter and voltmeter—twin instrument style. Reads line voltage and wattage simultaneously. Voltmeter ranges—150 and 300. Direct watt-meter readings—1500 watts at 220 volts; 750 watts at 110 volts. Current rating is 7.5 amps. Push button is incorporated to protect wattmeter during starting period. One cord plugs into wall socket. The other is for connecting the appliance to the tester. Case is leather, 3½x5¼x2¼ inches. There is space inside the case for cords.
57 PT 08330—Model 2000. Shipping weight, 7 pounds. Cash.....\$18.94



Handy READRITE Combinations

Series "40" Testers also are furnished in combinations of two units in handy portable cases. With these units you are assured of the ultimate in portable test instruments and at the same time cut your instruments cost per call more than half. These testers incorporate the latest engineering developments in keeping with the high quality standards demanded today by the radio serviceman. All Readrite-Ranger models are precision built, have laboratory accuracy, are extremely durable, compact and consistently low in price. Has 3-inch Triplett Lifetime Guaranteed Indicating Instruments.

Combination models are housed in sturdy metal cases with attractive black baked enamel finish. Size is 11¼x7¾x4¼-in. Panels are modernistic silver and black. Convenient built-in compartments with friction fitting covers, to hold accessories. Strong leather strap handles for convenience in carrying. See Page 2 for Easy Payment Terms.

Model 540-740 Combination

57 PT 08873—Model 540-740 Signal Generator and Volt-Ohm-Milliammeter. Shipping weight, 19 pounds.....\$36.75

Model 641-740 Combinations

57 PT 08874—Model 641-740-Free Point Tester and Volt-Ohm-Milliammeter. Shipping weight, 20 pounds.....\$28.35

**MODEL 710-A
Set Tester**

\$16¹⁷ \$2 Down
Cash See Page 2

This three meter Set Tester is used to check all parts of radio tube circuits by plugging directly into the radio socket.

D.C. voltmeter scale reads 20-60-300-600; D.C. milliammeter scale 15-150, and A.C. voltmeter scale 10-140-700. A special positive contact selector switch connects all D.C. circuits to the D.C. voltmeter. Panel jacks are provided to make individual range connections for the three meters.

Furnished with silver and black panel in attractive black artificial leather covered case. Case dimensions when closed, 11 inches x 8½ inches x 4 inches. Shipping weight, 10 pounds.

57 PT 08855—Model 710-A... \$16.17

MODEL 712-A

Model 712-A is the same as Model 710-A, but has a Triplett Model 223, 2-inch, D.C. Voltmeter having 1,000 ohms resistance per volt, and scale reading 15-60-300-600. Approximate shipping weight, 11 pounds.

57 PT 08856—Model 712-A... \$21.76
See Next Column for Loctal Adapter Socket and Plug.

**MODEL 720-A
Set Tester**

\$14⁷⁰ \$2 Down
Cash See Page 2

A handy and efficient radio set analyzer. Measures resistance, capacity and continuity and will check the voltage of any tube circuit. Point-to-Point tests are made by plugging into the receiving set socket. Tester socket terminals arranged to RMA standards, making it unnecessary to remove chassis from cabinet when localizing defects. Rotation of tube elements does not affect tests. Has two meters—D.C. scale reading 15-150-300-600 volts, 15-150 milliamperes; A.C. scale reading 10-25-150-750 volts. Black artificial leather covered case, 11 inches x 8 inches x 4 inches when closed. Shpg. wt., 10 lbs.

57 PT 08857—Model 720-A.
Cash Price... \$14.70

MODEL 730-A

Model 730-A is the same as Model 720-A, but has Triplett Model 223 D.C. voltmeter with scale reading 15-150-300-600 volts at 1,000 ohms per volt. 57 PT 08858—Model 730-A... \$18.23

Loctal Adapters for 710A, 712A, 720A, 730A. Shpg. wt., each, 8 oz.
57 PT 8853—Socket Adapter... 73c
57 PT 8854—Plug Adapter... \$1.18

**MODEL 557
Signal Generator**

\$18⁵² \$2.50 Down
Cash See Page 2

This popular signal generator is meeting every requirement of thousands of busy servicemen. Individually calibrated plug-in type coils, setting a new standard of obtaining laboratory accuracy at low cost, are used with Model 557 Read-rite-Ranger All-Wave Direct Reading Signal Generator. Five frequency bands from 110 to 20,000 KC, all fundamentals. Accuracy guaranteed within all servicing requirements. Completely shielded for static and magnetic fields. Strong signals, both modulated and unmodulated. Attenuation and stability are outstanding features.

Supplied in attractive black artificial leather case. Silver color and black panel. When closed case measures 12 in. x 6½ in. x 5¼ in. Shpg. wt., 12 lbs.

57PT08859—Model 557. Cash \$18.52

57PT8860F—Model 554-A—Same as Model 557 but not Direct Reading. Calibrated graphs included for accuracies under 1% on any band. Shpg. wt., 12 lbs. (Allow 10 days for shipment)... \$14.11

**MODEL 739
Milliammeter**

\$9⁷⁰ Complete With
Accessories

Model 739 Pocket Volt-Ohm-Milliammeter... zero adjustment... Triplett three-inch meter. Ranges A.C.—D.C. Volts 0-15-150-750-1500 (D.C. at 1000 ohms per volt); D.C. Milliamperes 0-1½-15-150; Resistance, Low ohms, 0-500, shunt type circuit with 25 ohms at center scale; 0-500,000 ohms, series type circuit. External batteries may be used for higher resistance measurements. Molded case, 3¼x5½x2¼ in. All accessories including test leads, alligator clips, battery and instructions included. Shpg. wt., 5 lbs.

57 PT 8861—Model 739... \$9.70

Model 738. Same as above except without A.C. Voltage ranges.

57 PT 8862—Shpg. wt., 5 lbs... \$7.35

Model 612. Ranges A.C.—D.C. Volts 0-15-150-450 (60 ohms per volt): A.C.—D.C. Milliamperes 0-15; Resistance 0-20,000 and 0-100,000 ohms; Capacitance ranges .01 to 20 mfd. Current supply is from either A.C. or D.C. source by means of cord and plug. No batteries needed. Complete with leads.

57 PT 8863—Shpg. wt., 5 lbs... \$7.79



I N S T R U M E N T S



\$26³¹ Cash

\$3 Down... \$4 A Month
See Page 2 for Easy Terms

Tube and Set Tester

This Tube Tester Volt-Ohm-Milliammeter combination gives the serviceman everything he could get from separate units, plus the advantage and convenience of having both instruments combined in a single case. An outstanding quality model at a price within the reach of everyone. Lifetime Red Dot Triplett meter.

Has Model 432-A Tube Tester that accurately tests all receiving type tubes not in general use. (See opposite page). The Volt-Ohm-Milliammeter section is a separate unit with range selector, switch, ohmmeter zero adjuster and jacks and Precision 3-inch indicating instrument with a sensitivity of one mil as described in Model 432-A. Volt-Ohm-Milliammeter ranges are: A.C.—D.C. Volts 0-10-50-250-500-2500 (D.C. at 1000 ohms per volt); D.C. Milliamperes 0-1-10-100; Resistance .5 to 500 with 25 ohms at center scale; 0-100,000 ohms and 1½ megohms. Ohmmeter is battery operated.

The circuit is favored by servicemen who demand more accuracy than obtained from ordinary ohmmeter power supply circuits. The case is black artificial leather, with handle, 12½x8½x7 in. Panels are silver color and black. Batteries not included. Shipping weight, 20 pounds.

57 PT 08864—Model 432-A-742. Cash Price... \$26.31

If you prefer, you may buy on Sears Easy Payment Terms. For complete details, See Page 2.

\$279
MODEL 511

\$221
MODEL 510

Pocket Meters

Model 511. These handy pocket-size instruments are just what you have always wanted. The complete units, including test leads, are priced at less than you would expect to pay for the meters alone. Portable meters are always handy to have around. At these prices you should have one for each service bench position. Model 511 has a square Readrite meter with full open dial for reading 0-30-300 D.C. Volts and 0-10,000 ohms. Case is black wood, nicely finished, 2¼x2¼x2 in. Attached leads for making connections and switching. Furnished complete with self-contained three-volt battery. Shipping weight, 5 pounds.

57 PT 8865—Model 511... \$2.79

Model 510 Volt-Ohmmeter, same as the above, but with the following ranges; 0-300 D.C. Volts: 0-10,000 ohms.

57 PT 8866—Complete with Battery... \$2.21

504 Tube and Set Tester

\$64.63
Cash

On Easy Terms
Only \$6 Down

Includes complete tube testing facilities of SUPREME 503 Tube Tester (see description below). Also includes 31 ranges and functions with **GUARANTEED ACCURACY** of 2% on D.C. and 3% on A.C. measurements. 7 D.C. voltage ranges from 0.1 volt to 2500 volts (0/5/25/100/250/500/1000/2500). 1000 ohms per volt sensitivity for D.C. measurements. 5 A.C. voltage ranges from 0.1 volt to 1,000 volts (0/5/10/50/250/1000). 7 Direct Current ranges from 10 microamperes to 10 amperes (0/500 micro amps/2.5/10/50/250 mils/1/10 amps). Five output ranges of 0/5/10/50/250/1000 volts. Wide range ohm and megohmmeter offers 5 ranges from 0.1 ohm first scale division (for voice coil checking) up to 20 megs (0/200/2M/20M/2 Meg./20 Meg.).

Measures all paper and mica condensers on 20 meg. resistance range of meter. All electrolytic capacitors including high voltage filter types and low voltage—high capacity bypass types checked At Correct Working Voltage! Seven voltages—450, 300, 250, 200, 100, 50 and 25 volts! 40 settings given on roller chart for EVERY capacity and working voltage. Readings on "Good Capacitor—Bad Capacitor" meter scale. The 2,500 D.C. volt range and the 10 D.C. ampere range are terminated in heavy binding posts. For 110-volt 60-cycle A.C. See Page 2 for Easy Terms.

57 PT 08840—Shipping weight, 19 pounds. Cash Price \$64.63

592 Set Tester

\$40.18
Cash

On Easy Terms
Only \$5 Down

Contains 8 direct current ranges from 1 micro-ampere to 14 amps—0/70/700 micro-amperes; 7/35/140/350 MA; 1.4/14 amps. 7 D.C. and A.C. voltage ranges at 25,000 ohms per volt (on D.C.) from 0.1 to 1400 volts—0/3.5/7/35/140/350/700/1400 volts. 7 D.C. voltage ranges at 1000 ohms per volt from 0.1 to 1400 volts—0/3.5/7/35/140/350/700/1400 volts.

NOTE DOUBLE METER SENSITIVITY — not available on any other instrument. 6 Resistance ranges from ¼ ohm to 50 megohms with completely self-contained battery supply. 0/500/5M/50M/500M/5 megs/50 megs. 7 output ranges from 0.1 to 1400 output volts 0/3.5/7/35/140/350/700/1400 with internal condenser for alignment work. 5 Decibel measuring ranges from -10 to +46 D.B., -10/+6, 0/+16, +10/+26, +20/+36, +30/+46 D.B. 50-meg resistance range allows very accurate leakage check of all electrostatic (paper and mica) condensers. Copper-oxide rectifier carries standard RMA GUARANTEE. D.B. (decibel) conversion chart furnished so D.B. readings can also be taken on any line of known impedance. D.B. readings direct for 500-ohm line. One set of pin jacks serves 46 ranges. 14 amp range on separate binding posts. 40 microampere meter movement. "Good-Bad" scale for external tube tester use. For 110 volts 60-cycle A.C. Shipping weight, 9 pounds.

57 PT 08841—Cash Price \$40.18

592-593 Analyzer

\$56.20
Cash

Terms
\$5 Down

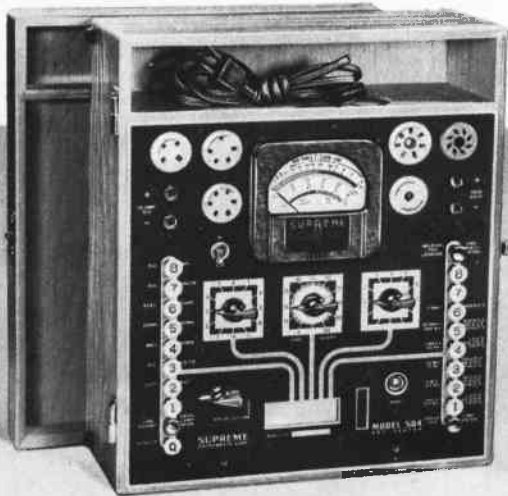
Most servicemen want their analyzer unit and set tester meter unit in one case to be ready for instant use. Here is the answer to that demand. The new SUPREME 593 Push-button Analyzer circuit uses no twin jacks or jumpers. Makes voltage resistance and current tests by merely pushing two buttons. No unsoldering of wires to measure current. 6 sockets including local. Rapid—easy—positive operation.

Supreme 593 Analyzer in portable oak carrying case complete with analyzer cable, plug and all accessories. See Page 2 for Sears Easy Terms. Shpg. wt., 6 lbs.

57 PT 8842.....\$16.17

SUPREME 592-593 in single combination case as illustrated. Shipping weight, 16 pounds.

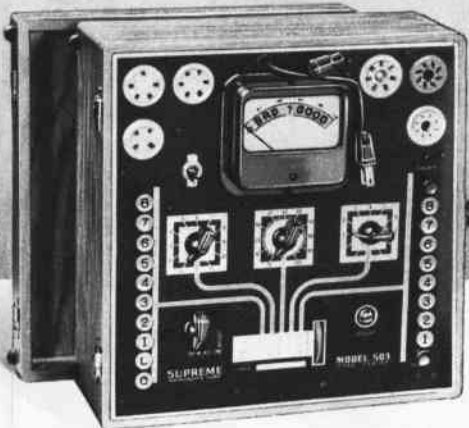
57PT08843—Cash Price \$56.20



See Page 2
for Sears
Easy Payment
Plan



NEW SUPREME TEST



503 Tube Tester

\$44.05
Cash

Terms: \$5 Down

SUPREME 503 Tube Tester eliminates obsolescence because FILAMENT RETURN SELECTOR circuit automatically, correctly connects every new or old type tube. It has 23 taps from 1.5 volts to FULL LINE VOLTAGE and correctly checks all receiving tubes such as localts, octals, non-octals, television video amplifiers, single-ended spray shield, bantam, plain glass, "M", "G", "MG", "GT," gas rectifiers, magic eyes, pilot lamps and ballast tubes. "Good—?—Bad" English reading scale. Speedy operation. Rotary two-color chart. Just follow the arrows. Only six sockets for all tubes. SUPREME 503 Tube Tester gives 7-way tube test for (1) shorts between any two elements (2) positive visual check for open filaments (3) standard 200,000 ohm sensitivity "hot" leakage check between cathode and filament (4) new, 2,000,000 ohm high sensitivity "hot" leakage check between any two other elements (5) bonafide and separate open element test of any element (6) quality test of complete tube (7) separate tube section test of multi-section tubes and separate plate test of full wave rectifiers. For 110-volt, 60-cycle A.C. See Page 2 for Easy Terms. 57 PT 08844—Shipping weight, 16 lbs. Cash Price.... \$44.05

Page 40



571 Signal Generator

\$36.75
Cash

Terms: \$4 Down

The SUPREME 571 Signal Generator produces 6 types of signals—all hum-free—(1) Straight C.W., (2) 400-cycle, 30% standard audio modulated R.F., (3) 400-cycle 75% high level audio modulated R.F., (4) External Audio Modulated R.F., (5) External frequency modulated R.F., (6) 400-cycle fixed audio note. This signal generator has 5 R.F. ranges from 65KC to 20.5MC on fundamentals and to over 60MC on harmonics. Only 2 basic scales. It uses an electron coupled oscillator circuit with air-dielectric condensers and iron core coils resulting in a guaranteed accuracy of within ½ of 1%! Practically free from frequency drift. Dual ratio dial. Illuminated scale. Two modulation levels (30% and 75%) 400-cycle note has no frequency change from one type signal to another. 0.1 volt R.F. output on all bands. Every refinement and operating convenience now demanded by the busy Serviceman. For 110-volt, 60-cycle A.C. Shpg. wt., 19 lbs. For Easy Terms See Page 2.

57 PT 08846—Cash Price \$36.75



THE BEST COSTS
BUT A FEW DOLLARS
EACH MONTH AT
SEARS... See Page 2

542 Multi-Meter

\$15.97
Cash

Terms
\$2 Down

A regular little pocket laboratory with a case only 3x5¼x2 inches. 4 D.C. mill ranges (with first scale division 5 micro-amperes) of 0/0.3/6/30/150; 4 D.C. volt ranges (with first scale division 0/1 volt) of 0/6/150/300/1500; 4 ohms ranges (with 1 ohm first scale division and 25 ohms center scale) of 0/2000/20,000/200,000/2 meg; 4 A.C. volt ranges (with first scale division 0.1 volt) of 0/6/30/150/600; 4 output ranges of 0/6/30/150/600; 4 decibel ranges of -6/+10, +8/+24, +22/+38, +34/+50.

Full size 3-inch square meter with a rugged, accurate 200-microampere movement and a knife edged pointer. This movement has a sensitivity of 5000 ohms per volt! All ohmmeter ranges, including the megohm range, are operated by batteries furnished with the instrument and contained within its durable black moulded bakelite case. Shipping weight, 2 pounds.

57 PT 8846—Cash Price.....\$15.97

561 A. F. and R. F. Metered Oscillator

\$76⁹⁰
Cash

On Easy Terms
Only \$7 Down

A signal generator you can do everything with. Six types of signal outputs—(1) Variable audio from 15 to 15,000 cycles, (2) Unmodulated R.F. from 65KC to 20.5MC on fundamentals and over 60MC on harmonics, (3) Variable audio modulated R.F. over same range, (4) Frequency Modulated R.F. (5) Means for external audio modulation of R.F. (6) Means for varying the percentage of audio modulation from 0 to 75%. A.F. Oscillator has range from 15 to 15,000 cycles on 6-inch illuminated dial. Push button selection of 4 output impedances (50, 600, 5000, 50,000 ohms) Output center-tapped for push-pull inputs. Less than 5% harmonic distortion over entire range. Power output 150 milliwatts—open circuit voltage 35 volts. Output fully controllable. R.F. oscillator coverage from 65KC to 20.5MC—five bands (65/205KC, 205/650KC, 650/2050KC, 2050/6500KC and 6.5/20.5MC). Harmonics to above 60MC. Ranges are push-button selected and only two scales used for all bands.

Large, illuminated 6-inch dial, shadow type indicator. Dual ratio tuning mechanism. Electron coupled oscillator uses air-dielectric trimmers and iron-core inductors allowing factory calibration at both ends of each band—within 1/2 of 1% accuracy guaranteed! Push-button attenuator of ladder type employing fine adjustment control. Continuously variable from 1/2 microvolt to 100,000 microvolts. Additional high level jack for badly mis-aligned receivers. Metered output uses built-in vacuum tube voltmeter which controls level in actual microvolts. R.F. and A.P. sections available separately or variable audio can modulate R.F. oscillator. Percentage of modulation control allows control from 0 to 75% of modulated signal read directly on meter. Built-in Frequency Modulator using SUPREME'S famous "Lock-center synchronize" circuit. For 110-volt 60-cycle A.C. Shipping weight, 25 pounds.

57 PT 08847—Cash Price..... \$76.90



See
Page
2
For
Easy
Terms

560 Vedolyzer

\$126⁹⁰
Cash

Terms: \$10 Down

The VEDOLYZER is a new and different testing instrument using a natural testing system. It traces the RADIO SIGNAL through every stage and you SEE the ACTUAL SIGNAL on the screen of the VEDOLYZER! Thus, you see where the signal begins to distort and how much! You see presence or absence of correct signal. You check for correct I.F. and oscillator frequency. You check actual operating voltages without disturbing the receiver's circuit. You check A.V.C., R.F., A.F.C. signal grid and D.C. grid voltages—all with the set under actual operating conditions. You check for location, amount and frequency of hum. You check for intermittent reception in any part of the set.

The VEDOLYZER contains (1) a frequency compensated wide-range amplifier from 20 cycles to 4.5 megacycles, which includes A.F., I.F. broadcast and television video frequencies, (2) a Radio Frequency Oscilloscope for viewing R.F., I.F. and A.F. wave forms, modulated envelopes, modulation factor, all types of distortion and amount of amplification, (3) a built-in vacuum tube volt-ohmmeter with 7 D.C. voltage ranges to 6,000 volts (0/2/6/20/60/200/600/6000), 7 A.C. voltage ranges to 3000 volts (0/3/9/30/90/300/900/3000), 8 R.F. voltage ranges to 90 volts (0/0.03/0.09/0.3/0.9/3.0/9.0/30/90), 7 ohm and megohm ranges from 1/2 ohm to 1000 megohms (0/1M/10M/100M/1 meg/10 meg/100 meg/1000 meg.) Uses decimal type, easy reading meter scale, (4) a wave analyzer and frequency meter for measuring both frequency and amplitude of both fundamentals and harmonics, (5) an internal sinusoidal line supply frequency sweep, (6) an internal linear sweep from 5 to over 30,000 cycles, (7) multiple probe input for checking more than one stage at a time for intermittents. Two separate input jacks for low input (80 D.B. gain) and high input (45 D.B. gain). Works into either internal scope or both scope and internal vacuum tube voltmeter. All voltages read directly in microvolts! Internal R.F. scope. Linear sweep, horizontal amplifications and synchronization result in easily locked R.F. waves. For 110-volt 60-cycle A.C. Shipping weight, 36 pounds.

57 PT 08848—Cash Price..... \$126.90

PAY A LITTLE
EACH MONTH
FROM INCOME
... See Page 2



EQUIPMENT



582A Signal Generator

\$65⁶⁰
Cash

Terms: \$6 Down

Supreme 582A Signal Generator and Frequency Modulator is ideal for Visual alignment works in combination with SUPREME 546 Cathode Ray Oscilloscope. Gives five types of output: (1) unmodulated R.F., (2) 400 cycles audio modulated R.F. (3) frequency modulated R.F. (4) fixed 400 cycle audio frequency (5) external audio modulation. 5 R.F. ranges from 70KC to 15MC on fundamentals above 60 NC on harmonics. Can be used without scope for alignment peaking with regular output meter. Frequency modulation is SUPREME'S "Lock-Center-Synchronize" circuit. Permeability tuned iron core inductors, air dielectric trimmers, silver plated capacitors and electron coupled circuit insure utmost accuracy and stability. For 110-volt 60-cycle A.C. Shpg. wt., 33 lbs. Cash Price..... \$65.60



Oscilloscope

\$58⁷⁵
Cash

Terms
\$6 Down

SUPREME 546 Cathode Ray Oscilloscope uses a 3-inch high vacuum cathode ray tube. All controls are on front of panel. Controls: Horizontal spot adjust, Vertical spot adjust, Horizontal gain, Vertical gain, Snap lock Synchronizer, linear time base frequency (coarse), intensity, spot focus. Ideal for use with SUPREME 582A or 561 Signal Generators for Visual Alignment work. Complete instructions. For 110-volt, 60-cycle A.C. Shipping weight, 24 lbs. Easy to own on Sears Easy Terms.

57 PT 08851—Cash Price \$58.75

562 Audolyzer

\$76⁹³
Cash

On Easy Terms

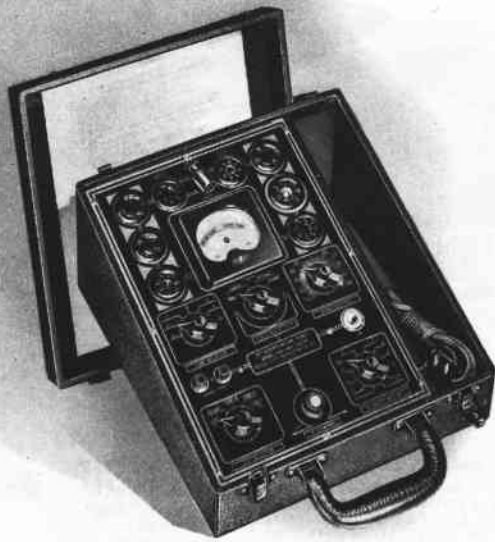
\$7 Down
\$7 A Month

See Page 2



This is a quick, easy, inexpensive test instrument for DYNAMIC TESTING of every radio receiver using the Signal Tracing method. Easy to operate. You always HEAR the demodulated signal instead of watching a meter or magic eye. You can find the dead portion of any receiver by connecting your modulated signal generator to the receiver and touching the SUPREME AUDOLYZER'S probe first to the antenna post, then the grid of the R.F. tube, the R.F. tube plate, etc., right back through the complete receiver. You will hear a signal in the AUDOLYZER'S speaker (which has a volume control) until you hit the dead stage. You can use the AUDOLYZER'S vacuum tube volt meter to measure all D.C. voltages without disturbing receiver's normal operations. 7 D.C. voltage ranges of 0/1/3/10/30/100/300/1000 at 15 megs input. Meter is center-reading type with "plus" and "minus" readings to each side of center eliminating reversing test leads for polarity changes. Next, you can check receiver's oscillator. If oscillator cuts out or is weak when receiver dial is rotated, AUDOLYZER meter immediately indicates it. To determine unknown frequency of oscillator, I.F., or R.F. signal, use tuning portion of SUPREME AUDOLYZER and AUDOLYZER'S V.T.V.M. as frequency meter.

For receiver's oscillator place probe on oscillator output and tune AUDOLYZER for greatest meter swing. Read frequency on AUDOLYZER'S direct-reading dial. For R.F. determination, connect your signal generator to receiver's input and place AUDOLYZER probe on output of R.F. stage under test. Adjust signal generator and AUDOLYZER to same frequency. Adjust receiver trimmer until receiver dial reads correctly. To determine actual signal fed to I.F. stages connect AUDOLYZER probe to first Det. output, feed a signal into receiver and adjust AUDOLYZER dial until you get maximum swing of its meter needle. Read actual I.F. signal's frequency on AUDOLYZER. Relative gain or loss of signal strength in any stage, tube or transformer can be determined. You can check A.V.C. circuits for correct applied voltage under actual operating conditions. You can adjust A.V.C. circuits. Distortion is easily noted by ear. For 110-volt 60-cycle A.C. Shipping weight, 30 pounds. Cash Price..... \$76.93



New Dynoptimum Test Tube Checkers

Many dealers and servicemen prefer a tube tester suitable for either counter or portable use. Model 308P is one that fills the bill completely. Tests all types of receiving tubes now in use, including loctal tubes. Enclosed in a handy and attractive artificial leather covered carrying case, size 11 1/4 x 12 x 7 inches. Model 308C (not illustrated) has identically the same panel and tube-testing facilities, differing only from the 308P in style of case which is made of attractively finished hardwood. Has sloping panel, no cover. Tests 35-45-50-70 up to 100-volt tubes and all metal, M.G. glass, OZ4, cold cathode rectifiers, octal, loctal and single end tubes. Tests made under R.M.A. specified plate voltages co-relative test. Tests all ballast tubes. Separate ballast tube chart included. Hot interelement short and leakage test between ALL INDIVIDUAL ELEMENTS. Hot cathode leakage test. High sensitivity neon indication. Noise tests—provides for audible test of noisy tubes. Individual tests of each section of full wave rectifiers, duo diodes and all-multi-purpose tubes. Accurate calibration checked against our laboratory standard mutual conductance instrument. Spare socket provides for future tubes with new base arrangements. Adjustable for all line voltage 105-135 with line voltage indication directly on meter. 2-inch square D'Arsonval meter, 2% accuracy. Direct reading. Simple, easy operation. Fine quality throughout, attractive appearance. A complete and efficient tube tester that costs so little that even the smallest tube business justifies the investment.

\$1857
Cash
Model 308P

On Easy Terms
Only \$2.50 Down

57 PT 08822—Model 308P. Combination Portable and Counter Model for 110-Volt 60-cycle A.C. Shipping weight 13 pounds. Cash Price..... \$18.57
57 PT 08823—Model 308C. Counter Model for 110-Volt 60-cycle A.C. Shipping weight, 11 pounds. Cash Price..... \$16.61

MASTER De Luxe Tube and Multitester

The finest tube and set tester in the Radio City Products line is now brought up to date to take care of all the latest type tubes including the 35, 45, 50, 70 and up to 100-volt filaments, metal, MG, glass, OZ4, cold cathode rectifiers, octals, loctals, and single ended tubes. A strictly high quality tester at an amazingly low price.

All tubes tested under load conditions of R.M.A. with separate function and component tests. Large, rectangular, easy reading 4 1/2-inch D'Arsonval meter with sensitive movement of 2000 ohms per volt. Double floating filaments—free reference selection permits any two terminals to be used as filaments; a valuable insurance against obsolescence.

Tests all elements for opens—leakage shorts while tube is hot, between any two elements with neon indication up to 400,000 ohms. HUM TEST—the ultimate cathode leakage test. Noise test for each element—jack provided for phone or amplifier.

Tests all types of metal, glass M.G., spray shield tubes and cold cathode rectifiers, OZ4—new 1.5 volt series, including loctals.

Smooth continuously variable line voltage control with accurate indication on the large meter. Double line fuse protection instantly replaceable.

Flexible free point system provides for future—space available for new types of sockets if necessary—spare voltage taps and circuits are provided to guard against obsolescence.

A comprehensive Multitester is also included with 32 ranges and functions. Five A.C. Voltage Ranges 0-5-25-125-500-1250. Five D.C. Voltage ranges 0-5-25-125-500-1250. A precision instrument that contains almost a complete service shop of test equipment.

57 PT 08824—Model 321 for 105-130-Volt 50-60-Cycle A.C. Shipping weight, 32 pounds. Cash Price..... \$48.51

\$4851
Cash
\$5 Down



DEPENDABLE

TESTING EQUIPMENT



Electronic Multitester

\$1857
Cash Terms
\$2.50 Down

Model 660S, extremely sensitive 12 range vacuum tube D.C. voltmeter-ohmmeter—for operation on 106 to 130-volt measurements of voltages from 0.1 volt to 6000 volts. Resistance measurements extend from 0.1 ohm to 1,000,000,000 ohms.

A maximum of 7 1/2 volts is applied in the ohmmeter circuit so that there is no exposure to high voltage when testing high megohm resistors.

The sensitivity on all ranges is so high as to provide practically no load of any kind on the most delicate circuits. The input resistance is 200,000,000 ohms on all ranges except 6 volts where it is 40,000,000 ohms. Consequently, the applications of the 660S to any circuit will not change the characteristics of that circuit.

Handsome sloping front panel in solid walnut hand rubbed case. Tubes and batteries used contained in case. Size 10 1/4 x 7 1/4 x 5 3/4 inches.

57 PT 08825—Complete with test leads. Shpg. wt., 7 lbs. Cash Price... \$18.57



MODEL 702 Signal Generator

\$2249
Cash Terms
\$3 Down

All-wave, continuously variable for 95 K.C. to 92 M.C. Five bands on fundamentals 95 KC to 23 MC.

Modulated or unmodulated output. Thirty per cent modulation at 400 cycles, sine wave from self-contained, 400-cycle circuit. This 400-cycle supply is also available for separate external use, 6-volt maximum. Provision is also made for applying an external source of modulation. Can be used with outside sweep circuit and wobulator.

Excellent shielding provided by special lead coated steel used in case and chassis. Separate shielding of coil assembly, attenuator and RF circuits.

Attenuation in approximate micro-volt calibration by means of five steps ladder attenuator. Range from 1 microvolt to 1/2 volt. Permits relative sensitivity measurements in receivers, etc.

Automatic shorting of all coils not in use prevents dead spots, etc. Size, 8x11 3/4 x 5 inches.

57 PT 08826—Shipping weight, 14 lbs. Cash Price..... \$22.49



MODEL 504C Master Analyst

\$1465
Cash Terms
\$2 Down

The Analyst is an improved unique push-button circuit selector—making possible greater speed, safety and flexibility for analyzing symptoms at socket terminals in radio sets and P.A. installations. Two or more buttons can be pushed at the same time without danger of "shorting." Any button can be left locked in depressed position. Permits both current and voltage measurements in the same circuit at the same time. Speeds up service work because prods to tester do not have to be changed. No necessity for turning through various intermediary position as in rotary selector switches. Eliminates necessity for additional "meter read" and "reverse" buttons required on other instruments. Meter polarity reversed by simply changing polarity of circuit buttons pressed for voltage measurements. 10-wire analyzer cable including spare leads for future requirements. Complete with plug and adapters.

57 PT 08827—Shipping weight, 4 lbs. Cash Price..... \$14.65



MODEL 456 Trouble Tracer

\$779
6x3x2 1/2 Inch Size

A pocket size A.C.—D.C. volt-ohm-milliammeter, and DB meter in attractive hardwood case. D'Arsonval meter—accuracy guaranteed within 2%. Special ohmmeter shorting switch—no fusing around with leads or jumpers. Movement is 1 milliammeter or 1000 ohms per volt. Self contained batteries for all ohmmeter ranges. D.C. Volts 0-5-50-500-1000. A.C. volts 0-5-50-500-1000. D.C. milliamp 0-1-10 ohms 0-5000-500,000. D.B. -12 to +8/8-28/28-48/34-54. Size 6 inches x 3 inches x 2 1/4 inches.

57 PT 8828—Shpg. wt., 3 lbs... \$7.79

Everything in This Catalog Sold on EASY TERMS See Page 2

**MODEL 311 De Luxe
Tube Testers**

This is the most popular counter type tube tester in the Radio City Line. The direct reading ohmmeter and capacity features are especially desirable for making quick tests at the tube counter. A fine instrument using a 4 1/2-inch rectangular meter with a scale length of approximately 4 3/4 inches. Dial has 4 easy-reading long scales, multi-colored for direct reading tests of tubes, resistors and condensers, and miniature lamps. Tests every type of receiving tube made today—including local and cold cathode rectifiers and other tubes which cannot be tested on other tube testers. Tests all ballast tubes, pilot lights, Christmas tree lights, etc.

Provides for future—superflexibility of circuit design, spare circuits, spare taps on transformer will permit testing of many new types of tubes that have not yet appeared on the market. Testing circuit and methods are the very latest and improved according to R.M.A. specifications. The accuracy, method and circuit used is identical to that of other tube testers selling up to double the price of this instrument. Individual tests of each function of multipurpose tubes and of each plate of diodes and power rectifiers. Filaments are full floating—any two terminals of every socket are available for any voltage filament supply.

Direct Reading Ohmmeter with self contained power supply is included. There are two ranges, 0/10,000 and 0/1,000,000 ohms, the Direct Reading Capacity Meter having two separate direct reading scales with ranges .001/4 and .4/16.0 mfd. Condenser leakage tests with neon indication. Size 10x15x7 inches.

57 PT 08820—Model 311. Counter type. For 105-130-volt, 50-60-cycle A.C. Shipping weight, 22 lbs. Cash Price..... \$28.37

57 PT 08821—In combination portable-counter case. For 105-130-volt 50-60-cycle A.C. Shpg. wt., 16 lbs. Cash Price..... \$28.37



\$28.37
Cash
\$3 Down



**MODEL 432
Trouble Shooter**

\$5.83
5 1/2 x 3 x 2
Inch Size

Here is one of the lowest price testers on the market, yet quality has not been sacrificed to achieve economy. It will answer every requirement of many Radio Servicemen. Size, 5 1/2 x 3 x 2 inches.

Multi-scale D'Arsonval meter 0-1 mil, accurate within 2%. Has individual low ohm scale as on costlier instruments.

D.C. Volts 0-5/0-50/0-500/0-1000 at 1000-ohm per volt sensitivity. D.C. Milliampers 0-1/0-10. Ohms 0-500/0-50,000/0-500,000. Self contained batteries for all ohmmeter ranges. Test probes not required for balancing ohmmeter ranges. Meter has zero adjust. (necessary on all volt-ohm-milliammeter) in addition to circuit zero adjust. Low range has each of first 5 divisions reading as low as 0.2 ohm. Housed in attractive case covered in durable black artificial leather. See Page 2 for Easy Terms.

57 PT 08830—Model 432. Shipping weight, 4 pounds..... \$5.83

**MODELS 801 and 801A
Tube and Set Testers**

Here is a truly fine instrument that provides the background for a radio service business. It combines a modern tube tester with comprehensive, accurate set tester at a price that could not be possible in two individual testers, 12x12 1/2 x 6 in.

Has 4 1/2-inch meter with Alnico magnets and sapphire jewels. Includes decibel measurements and condenser leakage tests. Power supply is self contained. Supplied complete with tube, battery and test leads. Tube tester section tests all new and old tubes and provides for all heater or filament voltages up to full line voltage. Tests all ballast tubes. Tests are standard R.M.A. at specified plate voltages and loads. Hot interelement short and leakage tests on each individual element. Individual tests at each section of multi-purpose tubes, full wave rectifiers, duo, diodes, etc. Line voltage regulation from 103 to 135 volts with smooth, continuous control and direct indication on meter. Noise test shows up tubes having noise or hum and which would otherwise test as good tubes. Multitester provides Four Range D.C. voltmeter 0/10/50/500/1000 at 1000 ohms per volt sensitivity. Four Ranges A.C. voltmeter 0/10/50/500/1000. Four Range D.C. milliammeter 0/1/10/100/1000. D.C. Ammeter 0/10/ Four Range Ohmmeter 0/500/5000/1,000,000/10,000,000. Low ohm range has center of scale at 5 ohms and each of the first ten divisions read 0.1 ohm. Four Range D.B. Meter -8 +15/15 to 29/29 to 49/32 to 55 decibels. Four Range output meter—same as A.C. volts. For 110-volt 60-cycle A.C. See Page 2 for Terms.



\$37.14
Cash
Complete

On Easy Terms
Only \$4 Down
See Page 2

57 PT 08835—Model 801A as illustrated. Shipping weight, 18 pounds. Cash Price..... \$37.14

57 PT 08829—Model 801. Same as 801A except without Model 503 plug-in analyzer unit in cover. Shipping weight, 17 pounds..... \$27.39



**MASTER DELUXE
TESTING EQUIPMENT**

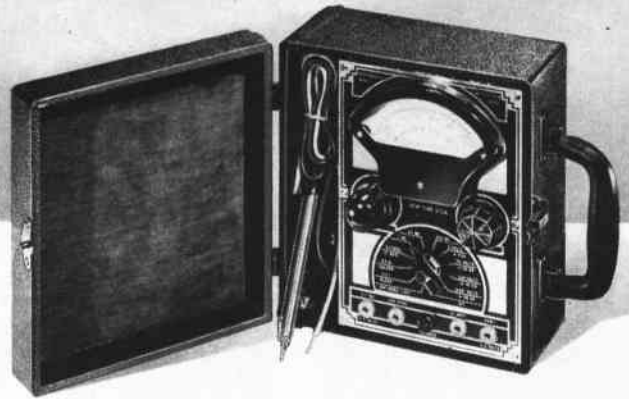


**MODEL 411
Supertester**

\$17.39
Cash
On Easy Terms
Only \$2.50 Down

This new instrument speeds up service work by combining all important meters for accurate quick analyses in one small case; contains the equivalent of 33 individual meters in one. Also the best all round tester for the Radio Amateur. Low and very high A.C. and D.C. ranges. Ideal for electricians and engineers.

Some of the unusual features of this instrument are: 5-stage, high AC-DC voltage range to 5,000 volts. High voltage not applied to selector switch nor to general test circuits. New design all bakelite body jacks are used. 3 stage, high AC-DC current range to 25 amps. 3-inch square meter with movement of 200 microamperes or 5,000 ohms per volt. DC Volts 0/10/100/250/1000/5000. DC Amps 0/1/10/25. DC Milliamps 0/10/100. DC Microamps 0-200. Center of scale, on low ohmmeter range, only 5 ohms with each of first ten divisions measuring 0.1 ohm. 3-stage easy reading, high ohmmeter range up to 4,000,000 ohms. AC Volts 0/10/100/250/1000/5000. AC Amps 0/2.5/5/25. AC Milliamps 0/500. db meter from -10 to +69 in 5 stages. Output meter same as AC volts. Natural wood case 7 1/2 inches x 5 1/2 inches x 3 1/2 in. 57 PT 08831—Model 411. Without cover. Shipping weight, 4 pounds..... \$15.92 57 PT 08832—Model 411P as above except with cover. Shpg. wt., 5 lbs. Cash Price..... \$17.39



**MODEL 409 AP
Multitester**

\$19.06
Cash
On Easy Terms
Only \$2.50 Down

Compare the specifications of this accurately calibrated instrument with others which embrace all of its many fine features. Most certainly there isn't a better value to be had anywhere. It is provided with a sturdily constructed case covered with durable black artificial leather which insures years of wear. A removable cover protects the instrument when not in use. Long Multiple Scales on 5-inch Fan Type D'Arsonval Meter. Accurate to within 2%. Sensitivity 2000 ohms per volt. Each of the first ten divisions reads 0.05 ohm. High range ohmmeter gives wide spread readings at 10 megohms. Self contained power supply. Supplied with test prods, complete. Size: 5 1/2 x 8 3/4 x 3 in. Artificial leather covered case.

A.C. and D.C. Volts—0-5/0-50/0-500/0-1000. D.C. micro-amps—0-500. D.C. Milliamps—0-5/0-50/0-500. D.C. amperes—0-10. Output meter—same as A.C. voltmeter. Ohms—0-100/0-7500/0-75,000/0-10 megohms. D.B.—Minus 12 to plus 54. For 105-130 volts. Shpg. wt., 8 lbs. See Page 2 for Easy Terms.

57 PT 08833—Model 409AP. Cash Price..... \$19.06

Save On Transportation Costs

All Items In This Catalog Are Shipped From Chicago, BUT YOU PAY TRANSPORTATION CHARGES ONLY FROM SEARS NEAREST MAIL ORDER HOUSE. See Page 2.

RCA TESTING EQUIPMENT

Push-Button Counter and Portable Tube Testers

- 1 Operates with one finger. Buttons released or retained automatically as required for testing.
- 2 Shows the line voltage up to instant of actual test. Not necessary to set line voltage before inserting tube in socket.
- 3 Tests every standard type of receiving tube, including ballast tubes. Provides for battery tubes.
- 4 Tests voltage drop on all types of Gas Tubes, such as OA4-G, OZA-G, 874, and others.
- 5 Tests four-prong and octal-base ballast tubes for noise and opens.
- 6 Tests Magic Eye Tubes for brilliance and sensitivity.
- 7 Tests according to RMA standard.
- 8 Spare switch section and socket minimizes obsolescence.
- 9 Easily read figures on roll chart. Large type with guide lines indicate proper buttons to be pressed.
- 10 Line voltage adjustment for 100-125-volt line.

RCA offers a highly efficient tube tester that incorporates the experience of the world's largest radio tube manufacturer. It is ruggedly designed, easily stands the most severe service, and is priced at a figure every one can afford. This tester literally has everything—provision for heaters up to 120 volts, two spare sockets, additional space on roller chart for 100 new types—everything has been included to make it as nearly obsolescence-proof as possible. Not only does it test practically every radio tube, but a socket has been included for checking miniature lamps. (Xmas tree and flashlight bulbs.) Built-in socket provides for all Loktal and bantam types. Furnished with all of these new features plus the basic easy-testing features that have made the RCA Radio Tube Tester popular. Size 13¼x5¼x8 in. deep. For 110-volt 60-cycle A.C. See Page 2 for Easy Terms.

57 PT 09414—Counter Model. Shipping weight 16 pounds. . . . \$37.95
57 PT 09415—Portable Model. Shipping weight 18 pounds. . . . 39.95

Buy the Modern Way . . . A Few Dollars Down, a Few Dollars a Month, on Sears Easy Payment Plan



2-Inch Cathode Ray Oscilloscope

\$49.95 Cash Terms: \$5 Down See Page 2

A new easily read, tilt-mounted screen is an important feature of this new popular-priced RCA Cathode Ray Oscilloscope. Using the new RCA-902 2-inch tube, this unit provides every important feature needed in a modern Cathode Ray Oscilloscope. All controls, including centering controls, are located on the front panel for handy operation. High gain amplifiers for both vertical and horizontal deflection insure high sensitivity—.5 volts (RMS) per inch of deflection.

Other features include built-in saw-tooth oscillator, an attractive sturdy cabinet finished in gray wrinkle lacquer with a strong snap type handle.

Specifications: Sensitivity 0.5 volts (RMS) for full-scale deflection. (With amplifier.) Amplifier Range and Gain . . . Flat 20—15,000 cycles, gain 50. Timing Axis (Horizontal Sweep) . . . 30—10,000 cycles. Operation . . . All controls on front panel—complete with calibration screen. Input Power Consumption . . . 30 watts. Dimensions . . . Length, 13¾ inches; height, 9¼ inches, depth, 7¾ inches. Special snap handle. Finish . . . Gray wrinkle lacquer with nickel trimming. Reversed etched nickel-silver panel—large, soft rubber feet. Shipping weight, 17 lbs.

57PT 09410—Cash Price . . . \$49.95



A-C Operated Test Oscillator

\$29.95 Cash Terms: \$3 Down See Page 2

Again RCA sets the pace in test oscillators for servicing the most complex of receivers. With this new instrument, you may offer your customers a service that is impossible with less modern instruments. The 6-inch giant dial, over 50 inches in length, insures an easily read setting, the high frequency range alone covering 10 inches. RCA all-metal tubes give stability to circuit design and eliminate the need for tube shielding. Complete A-C operation and fuse protection are other important features. Leakage is less than one microvolt at frequencies below 1,500 K.C. R.F. output is variable from 2 microvolts to 1 volt.

Specifications: Voltage . . . 110-120 volts. Frequency . . . 50-60 cycles. Power Consumption . . . 30 watts. Fuse Protection . . . 1 Ampere. R-F Frequency Range (6 bands—Fundamental Frequency) . . . 100-30,000 kc. Audio Modulation Frequency (8 volts available for testing) . . . 400 cycles. R-F Output—Low . . . 0.01 volts max.—Medium 0.25 volts max.—High 1.0 volts max.—Minimum 2 Microvolts. Output Impedances 10, 750 and 4000 ohms. Tubes: RCA-5W4 Rectifier, RCA-6C5 Audio Oscillator, RCA-6K8 R-F Oscillator. Calibration Accuracy . . . 2%. Frequency Modulator Jack. Provided for use with Sweep Condenser for visual I.F. alignment. Dimensions . . . 13¾ in. x 9¼ in. x 6½ in. Finish . . . Blue-Gray wrinkle lacquer with lithographed panel. Special Snap Handle—large, soft rubber feet. Shpg. wt., 15 lbs.

57 PT 09411—Cash Price . . . \$29.95



Beat Frequency Audio Oscillator

\$49.95 Cash Terms: \$5 Down See Page 2

Audio oscillators are becoming more and more necessary for the proper servicing of modern, highly complicated receiver circuits. Here is your chance to bring your equipment up to date. The RCA Beat Frequency Audio Oscillator is an instrument that should be in the shop of every service engineer. It gives a variable frequency source of alternating current voltage from 30 to 15,000 cycles—more than the range of the finest radio receivers now built. Excellent for testing loudspeakers, P. A. systems, for locating cabinet rattles, and for running fidelity curves on radio receivers. It has many other important service applications.

Provides choice of 3 output impedances through medium of tapped output transformer. Has large 8¾ inch dial over approximately 160 degrees for accurate setting. Attractive gray wrinkle finish with special snap handle. Check the specifications and see what RCA offers in this fine new instrument. **Specifications:** Power Rating . . . 110-120 V., 50-60 Cycles, 35 watts. Fuse Protection . . . 1.0 ampere. Output Frequency . . . 30-15,000 cycles. 1 db from 30 to 10,000 cycles down 2 db (at 15,000 cycles). Output Voltage—Open circuit . . . 37.5 volts—5000 ohm load . . . 25 volts—500 ohm load . . . 7.5 volts—250 ohm load . . . 5.2 volts. Power Output . . . 125 milliwatts. Hum Level—60 db below maximum output. Distortion . . . less than 5% rms over entire range. Dimensions . . . 9½ in. x 13¼ in. x 6½ in. Shpg. wt., 19 lbs.

57 PT 09412—Cash Price . . . \$49.95



1-Inch Cathode Ray Oscilloscope

\$39.95 Cash Terms: \$4 Down See Page 2

Many servicemen are buying 1-inch scopes because they are less expensive to maintain than the larger ones, yet they do the job. You can easily align receivers visually (when used with test oscillator and modulator), check distortion and hum, see exactly what you are doing, when you own this modern instrument—and all this at a price you can afford to pay.

This Model 151 Oscilloscope is of traditional RCA quality, is built to give long and faithful service and is a necessity for servicing the complex radio receivers of today. Check the specifications and see what outstanding performance the Model 151 offers to the progressive service engineer. In addition to radio servicing, this is a general purpose oscilloscope, finding many invaluable applications in radio transmitter, sound equipment, industrial, and educational fields.

Specifications: Sensitivity 1.75 volts (RMS) for full scale deflection. Amplifier . . . Flat 20—15,000 cycles, gain 50. Timing Axis . . . 30—10,000 cycles. Power Supply . . . 110 volts 50-60 cycles. Input Power . . . 30 watts. Size . . . Length 13¾ inches, Height 9¼ inches, Depth 7¾ inches. Finish, Gray wrinkle lacquer with nickel trimming. Reversed etched, nickel-silver panel, snap handle and large soft rubber feet. Shipping weight, 25 pounds.

57 PT 09413—Cash Price . . . \$39.95

We Can Supply Any RCA Test Instrument in Current Production. Write Our Personal Service Dept. Chicago, for Quotations.

PRECISION APPARATUS CO.

RADIO TEST EQUIPMENT



The most perplexing issue confronting the radio service engineer is the choice of tube testing equipment that will definitely and unflinchingly solve all tube test problems with constant accuracy and reliability.

With this thought foremost in mind, "PRECISION" engineers have conducted a great deal of research with the engineering divisions of leading tube manufacturers. They were firmly convinced that the resultant tube tester design MUST definitely be based on two all-important characteristics of a radio tube: 1. Dynamic Mutual Conductance. 2. Cathode Structure or Emission.

The "PRECISION" Dynamic Mutual Conductance Tube Test Circuit, incorporated in all "PRECISION" Dynamic Electronometers has been designed upon those findings. Various case styles listed below.

Precision Dynamic Electronometer

\$5287
Cash

Terms:
\$5 Down
See Page 2

A complete service laboratory incorporating "Dynamic Mutual Conductance" tube tester. The tube test circuit accommodates all filament voltage requirements from 1.4 through 120 volts.

Tests all new Loktals, Bantam Octals, Single Ended Television Amplifiers, Bantam Junior pocket radio and hearing aid tubes regardless of arrangement of filament or any other element pin positions. The Volt-Ohm-Decibel-Milliammeter circuit provides 33 ranges for: A.C. and D.C. voltage measurements to 3000 volts. D.C. current measurements to 12 amperes. Resistance measurements to 10 megohms. Decibel readings to +64DB. Output readings to 3000 volts.

57 PT 08386—920P—Walnut finish case. Size 12x13x6 inches. Complete with battery and test leads. Shpg. wt., 20 lbs.

Cash Price \$52.87

Counter Type

\$5287
Cash

Terms:
\$5 Down
See Page 2

920C—Counter type, black ripple finish on heavy gauge steel. Size 16 x 12 x 8 in. Slopes to 3 inches at front. Complete with instructions, battery and test leads. Shipping weight, 21 pounds.

57PT 08387—Cash Price \$52.87

Open Type

\$4895
Cash

Terms:
\$5 Down
See Page 2

920MCP—Open type metal case portable; black ripple finish. Size 12 x 10½ x 6 inches. Complete with instructions, battery and test leads. Shipping weight, 20 pounds.

57PT 08388—Cash Price \$48.95

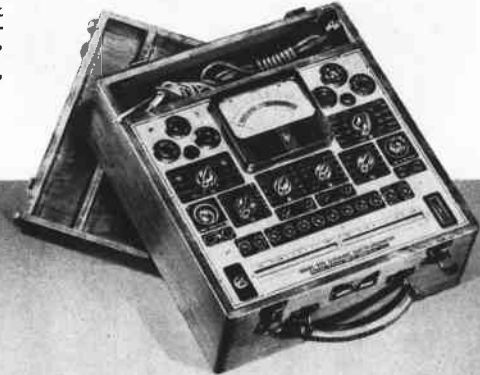
Rack and Panel Type

\$5287
Cash

Terms:
\$5 Down
See Page 2

920PM—Combination of 920MCP inserted in black ripple finish steel panel (12¼ x 19 in.) with back dust cover 6 inches deep. Unit removable from front for portable use. Suitable for standard relay rack. Shipping weight, 26 pounds.

57 PT 08389—Cash Price \$52.87



AC-DC Multi-Range Tester

\$1759
Cash

Terms:
\$2.50 Down
See Page 2

Automatic push button type. In the Series 870, "PRECISION" engineers have developed an advanced and highly practical improvement in a compact and complete AC-DC multi-range tester.

Six DC Voltage Ranges at 1000 ohms per volt: 2% accuracy 0-6; 0-30; 0-300; 0-600; 0-1200; 0-3000 volts. Five AC Voltage Ranges at 500 ohms per volt: 3% accuracy 0-12; 0-60; 0-600; 0-1200; 0-3000 volts.

Five DC Current Ranges: 2% accuracy 0-1.2; 0-12; 0-120; 0-600; 0-1200 milliamperes. Three Resistance Ranges: 0-5000 ohms (20 ohms at center of scale) 0-500,000 ohms. Above two ranges powered by self-contained battery 0-5 megohms (powered by external battery.) Five Decibel Ranges: 10 to +64DB. Five Output Meter Indications: 0-12; 0-60; 0-600; 0-1200; 0-3000 volts AC. DC Current Measurements of leakage in electrolytic condensers. Qualitative Paper Condenser Tests. Large size 3 inch double jeweled D'Arsonval type meter. Wire wound shunts 1% accuracy. Matched metallized multipliers 1% accuracy. Housed in Walnut finished hardwood case with carrying handle. Size, 7x4½x3 in. Shipping weight, 4 pounds.

57 PT 08390—Cash Price.... \$17.59

Volt-Ohm-Decibel-Milliammeter

\$2249
Cash

Terms:
\$3 Down
See Page 2

The series 844 provides complete facilities for obtaining all measurement requirements for Service, Amateur, Laboratory, Television and Industrial use. Employs the large Precision 4½ inch square type meter, incorporating easy reading scales and large numerals. The base sensitivity of the meter movement, 400 microamperes, permits overlapping resistance ranges up to and including 10 megohms, and A.C.-D.C. voltage ranges at a sensitivity of 1000 ohms per volt to 6000 volts. Although nominally priced, the same well known "PRECISION" quality and standard of accuracy prevails as incorporated in higher priced "PRECISION" test equipment. A glance at the specifications list will reveal the more than adequate ranges incorporated and the high grade materials employed for lasting satisfaction and accuracy.

Specifications: Six A.C. and D.C. voltage ranges at 1000 ohms per volt: 0-12; 0-60; 0-300; 0-600; 0-1200; 0-6000 volts. SIX D.C. Current ranges: 0-1.2; 0-12; 0-60; 0-300; 0-1200 MA; and 0-12 Amperes. Four resistance ranges: 0-400; 0-100,000; 0-1 Meg.; and 0-10 Megs. Provisions for Mounting Ohmmeter Batteries (4½ and 45 volts) on inside of case. Six decibel ranges from -12 to +70DB. SIX OUTPUT RANGES: 0-12; 0-60; 0-300; 0-600; 0-1200; 0-6000 volts.

57 PT 08391—844L—Housed in walnut finished hardwood case with carrying handle. Compact in size 7 x 8 x 4 in. Shpg. wt., 6 lbs. Cash Price (Less Batteries and test leads)..... \$22.49

E-200 Signal Generator

\$3523
Cash

Terms:
\$4 Down
See Page 2

This excellent instrument does away with the expedient of aligning AVC receivers with the volume control set at maximum and signal generator adjusted to deliver minimum signal output (to avoid broad resonance curve) and aligns receivers under NORMAL conditions. It supplies its own AVC voltage, controllable with a directly calibrated AVC voltage substitution system. This voltage is independently adjusted to coincide with the ACTUAL A.V.C. VOLTAGE developed by the receiver under normal average conditions of reception and accordingly assures accurate and efficient tuned circuit adjustments. Provides full frequency coverage from 110 KC to 72 M.C. in six bands. Large full vision 6 inch dial chrome finished with deeply etched numerals and scales. Ball bearing planetary drive. Stable electron-coupled oscillator circuit. Coaxial output cable. 400 cycle sine wave oscillator independently controlled. Calibrated R.F. attenuation. Variable modulation control, calibrated to provide 0 to 100% modulated R.F. signal. This feature more than triples signal utility and audibility. Each instrument is individually calibrated against laboratory standards and furnished with hand calibrations of commonly used IF and RF line up points to better than ½% accuracy. For 110-volt, 60-cycle AC. 57 PT 08393—E-200—Housed in black ripple, heavy gauge steel case with carrying handle. Size 12 x 10½ x 6 inches. Complete with tubes and Coaxial output cable. Ready for operation. Shpg. wt., 19 lbs..... \$35.23

Mutual Conductance Tube Tester

\$3327
Cash

Terms:
\$4 Down
See Page 2

Tests all tubes including gaseous rectifiers and ballast types for both mutual conductance and cathode structure. Accommodates all Filament voltages from 1.4 to 120 volts. Automatic push button system. Dual free point filament terminal. Visible filament continuity tests. Specific individual loads and voltages applied to respective elements. Varying AC signal applied to control grids. Meter reads in plate circuit; indications entirely dependent on control action (transconductance) of each of intervening elements. Meter indication instantly shows up any tube having an open element. Hot cathode leakage test. Hot interelement short tests made simple. Noise test pin jacks incorporated for earphone or amplifier connection. Pilot light tests for all miniature type lamps. Built-in tube chart. New charts furnished from time to time at no charge. Micro-line adjustment. Pilot light (on-off) indicator. Fused line plug. Telephone cabled wiring. Individual calibrating controls.

57 PT 08359—910P—Hardwood portable type carrying case with removable cover and tool compartment. Walnut finish. Size, 12x13x6 in. Shpg. wt., 18 lbs. Cash Price..... \$33.27

57 PT 08361—910C—In counter type case. (See 57 PT 08387 above.) Shipping weight, 19 lbs..... \$33.27

We can furnish any instrument in current production by Precision Instrument Co. Write our Personal Service Dept. Chicago, for quotations.

HICKOK INSTRUMENTS



MODEL 180 Signal Generator

\$5704 \$5 Down
Cash See Page 2

(A) Nine output selections: (1) Frequency modulated R.F. (2) Amplitude modulated R.F. (3) Unmodulated R.F. (4) 100 KC. modulated 100 KC. to 15000 KC. (5) 100 KC. unmodulated, 100 KC. to 15000 KC. (6) 1000 KC. modulated, 1000 KC. to 100 Megacycles. (7) 1000 KC. unmodulated, 1000 KC. to 100 Megacycles. (8) 100 to 10,000 cycles variable audio. (9) 400 cycles Fixed audio. Power level meter; from -10 to +38 in 3 ranges. Six Fundamental ranges 100 KC. to 30 MC. on 100-inch direct reading scale. Output voltages 1 to 100,000 microvolts. Two negative resistance audio oscillators. Output voltage variable 0 to 1 volt. For 110 volt 60 cycle AC. Shpg. wt., 26 lbs.
57 PT 08360—Cash
Price..... \$57.04

MODEL 4922 Milliammeter

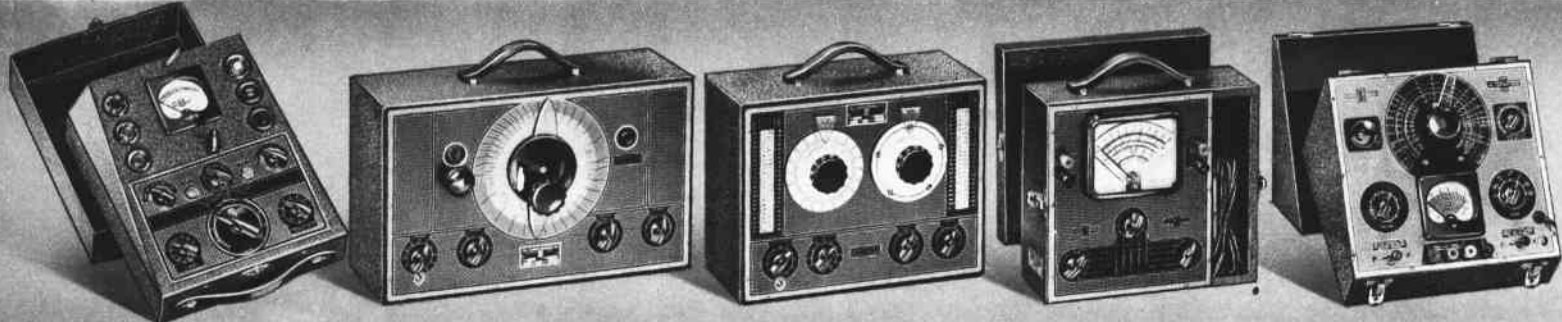
\$3763 \$4 Down
Cash See Page 2

(B) The finest instrument of its type available. A service instrument DeLuxe! Nine-inch X-Ray type meter with giant scales and big figures for easy readability. AC and DC volts 0-10-50-250-500-2500. D.C. Microamperes 0-500 D.C. Milliampers 0-5-50-500. Resistance 0-30-10,000 ohms, 0-1-10 Megohms. Decibels -10 to +15. Blocking condenser provided for output readings on A.C. meter. Guaranteed accuracy within 3%. External shunt for 5 and 50 ampere readings listed below. Particularly useful in the servicing of auto sets. Shpg. wt., 17 lbs.
57 PT 08362
Cash Price..... \$37.63
57 PT 8363—Two range 0-5-50 ampere shunt. Shipping weight, 3 pounds.
Price..... \$5.59

MODEL 530 Tube Tester

\$5527 \$5 Down
Cash See Page 2

(C) Hickok tube testers are the only service instruments available that read Dynamic Mutual Conductance directly in Microhms. Also has English reading "GOOD-DOUBTFUL-REPLACE" markings. Tests all tubes now in use including ballasts and bantams up to and including 117 volt filament types. Checks for gas content on meter. Detects both shorts and opens. Shorts tests made Hot or Cold. Ninety-four unused switch positions for future use. Sensitive test for noisy tubes. New roll chart greatly enlarged and amplified. Large square meter with illuminated dial. For 110 volt 60 cycle A.C. Shpg. wt., 22 lbs.
57 PT 08364—Model 530P—Portable type. Cash... \$56.27
57 PT 08365—Model 530C—Counter type. Cash... \$56.27



New C-B 225 Tube Tester

Fastest and most accurate test of actual operating merit of tubes, as developed by triple factors of emission, mutual conductance and power output. Tests all tubes, including 117-volt types. Separate test for each element of diodes, including rectifiers. Point-to-point neon glow check of all elements for leakage and shorts, with hot cathode. Ballast tube test includes pilot light taps. Spare switch positions to insure against obsolescence. For 110-volt, 60-cycle A.C.
57 PT 08366
Shpg. wt., 18 lbs.
Price..... \$46.55

C-B 110 Signal Generator

Attenuation and freedom from strays. Range—100 kc. to 31 mc., all on fundamentals in five bands, with exclusive rotor-inductor switching. Accuracy—Guaranteed 1/2%. Exclusive Verni-Vider dial reads direct to 1/10%. Drift—held to 1/10% under all conditions. R-F. Output—From less than 1/2% microvolt to .1 volt on all bands. Waveform—Pure sinusoidal. Attenuation—(down to 1/2 microvolt or better) so accurate as to provide a reliable standard for gain measurements. Smooth and accurate, through vernier-regulated 4-step control. Strays—Undetectable by adjacent set with 1/4-microvolt sensitivity. Output—Unmodulated r-f, 400-cycle 30% internally modulated r-f, 400-cycle audio. For 110-volt, 60-cycle AC. See Page 2 for Terms.
57 PT 08367—Shipping weight, 26 lbs..... \$48.51

C-B 0CX Signal Generator

Hand calibration to ten or more points on each of five bands guarantees 1/2% accuracy. Range—100 kc. to 30 mc. on fundamentals. Drift—held to 1/10%. R-F Output—From less than 1/2 microvolt to .1 volt, on all bands. Waveform—Pure sinusoidal. Attenuation—Dual, continually variable, non-inductive. Strays—Amazingly low. Output—Unmodulated r-f, 400-cycle 30% internally modulated r-f, 400-cycle audio. For 110-volt, 60-cycle A.C. See Page 2 for Terms. Shpg. wt., 21 lbs.
57 PT 08368
Price..... \$33.81

C-B 185 Unimeter

Incorporates 31 ranges, adjusted to five positions. Green and black scales. A.C. values linear above 1/2 volt. Single knob adjusts both ohm and capacity ranges. Low ohms (0-100) cover 1/4 scale, read to 1/4 ohm. D.C. Volts 0-5-20-100-500-1000. A.C. Volts—0-8-32-180-800-1600. Output A.C.—Same. D.C. Mills.—0-5-10-100—Short Pos. Ohms —0-4000-40, 000-4 megs. With ext. battery, 0-20 megs. D-B—15 +59. Mfds.—.0005-1.10, line powered. Henries—1-140-14,000.
57 PT 08369
Shpg. wt., 12 lbs.
Price..... \$28.91

C-B 230 Bridge

New direct-reading on Leakage-per-Mf. scale. Measures capacity and leakage-and-insulation resistance. No flash counting. Applies up to 550 volts for polarizing electrolytics and for breakdown test during capacity measurement. Range—2 mmt.-200 mf. Ohms—2 ohms to 20 megs. Henries—with ext. standards. Leak.-and-ins. Res.—0-2500 megs. Elect. P.F.—0-50%. Paper P.F.—0-5%. Trans. Turns Ratios—0-100. For 110-volt, 60-cycle A.C.
57 PT 08370
Shpg. wt., 15 lbs.
Price..... \$36.75

THE CHANALYST AND VOLTOHMYST

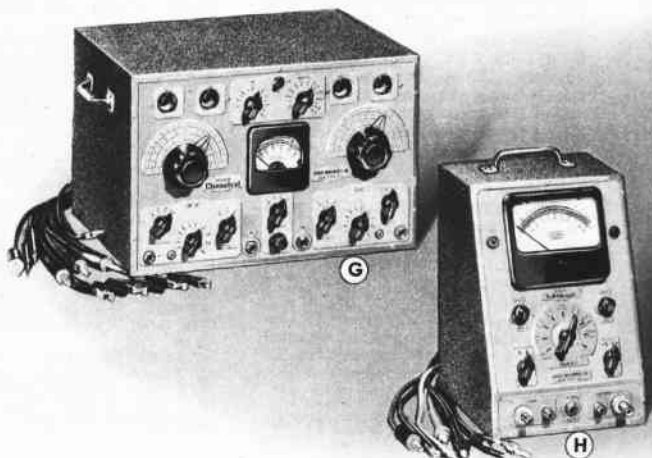
(G) THE RIDER CHANALYST opens a new era in the analysis of receiver troubles. It is based upon an entirely new, easier method of attack, enabling the application of the same systematic diagnosis to all receivers—yesterday's, today's and tomorrow's. Tuned radio frequency or superheterodyne receivers with all special circuits are diagnosed with equal facility. The speed with which troubles can be positively identified is startling. . . . Tests can now be made with the Chanalyst that have been impossible heretofore and these new tests are so all-revealing and so quickly made that your daily output of serviced receivers will be increased beyond belief. Traces signal through R.F. and I.F. stages. Output to headphone or Oscillograph. Checks frequency output of oscillator in superheterodynes. Ranges 600 to 1700 KC.; 1650 to 4950 KC and 4,800 to 15,000 KC. Checks gain or loss of signal through audio stages. Indicates power consumption in watts of receiver. Four range electronic voltmeter employing tube and meter. Ranges: -5 to 0 to +5; -25 to 0 to +25; -100 to 0 to +100; and -500 to 0 to +500. For 110-volt, 60-cycle AC.
57 PT 08371—Chanalyst. Complete with tubes, four test leads and complete instructions. Shipping weight, 30 lbs.
Cash Price..... \$107.50

(H) RIDER VOLTOHMYST. A radically new Electronic D-C Voltmeter-Ohmmeter with extremely wide ranges. 10 billion to one is the ratio of the resistance range of the RCA Rider VoltOhmyst. This is wide enough to take care of the servicing and engineering requirements of today and tomorrow. Designed for use on Television, radio receivers, transmitters, aircraft radio, power, sound, facsimile and other similar types of engineering work.

The Rider VoltOhmyst measures 0.05 to 5000 volts d-c—0.1 ohm to 1,000,000,000 ohms with a greater convenience than any other existing instrument. The VoltOhmyst has one scale—one zero adjustment. You just put the proper probe on the point to be measured and the scale shows the voltage or resistance without any adjustments.

The RCA Rider VoltOhmyst is accurate—3% accuracy on the Ohmmeter, 2% on the Voltmeter. And the input resistance of the Voltmeter is higher than all others—16,000,000 ohms up to 500 volts and 160,000,000 ohms from 500 to 5000 volts. Shipping weight, 13 pounds. If you prefer you may buy on Sears Convenient Easy Payment Plan. See Page 2 for details.
57 PT 08372—Price..... \$57.50

See Page 2 for
Easy Terms



WESTON TESTERS

MODEL 777 Tubechecker

\$49.50 \$5 Down
Cash See Page 2

Ⓒ Tests all tubes, including Loctal, ballast (at 300 volts) and gas-filled rectifiers OZ3 and OZ4. Has filament voltages up to 120. All tubes tested under proper R.M.A. load conditions. Individual tests on all elements except those which are internally interconnected. Tests for noise, shorts and cathode leakage. Has separate scale on meter for testing 1.5, 6, 45, and 90-volt dry batteries. Both scales are English reading; "Good—Doubtful—Bad." Natural finish hardwood case. For 110-volt, 60-cycle A.C. Shipping weight, 15 pounds.

57 PT 08373—Portable Model. Cash Price. \$49.50
57 PT 08374—Counter Model. \$64.75

MODEL 772 Type 2 Analyzer

\$49.50 \$5 Down
Cash See Page 2

Ⓔ A new all-purpose analyzer. Has 20,000 ohm-per-volt sensitivity. D-C voltage ranges. 4 1/4-inch, 50 micro-ampere instrument. A-C readings on single arc scale. Overall accuracy on A-C ranges is within 3%. Diode currents accurately measured.

Ideal for condenser leakage tests—maximum voltage on any range being 15 volts. Volts A.C. and D.C.: 0/2.5/10/50/250/1,000. D.C. current: 0/1/1/10/50/250 Ma. and 0/1/10 Amp. Decibels: -14 to +2, -2 to +14, 12 to 28, 26 to 42, 38 to 54. Resistance 0/3/000/30,000 ohms. 0/3/30 megohms. Shipping weight, 11 pounds.

57 PT 08375
Cash Price. \$49.50

MODEL 776 Oscillator

\$65.25 \$6 Down
Cash See Page 2

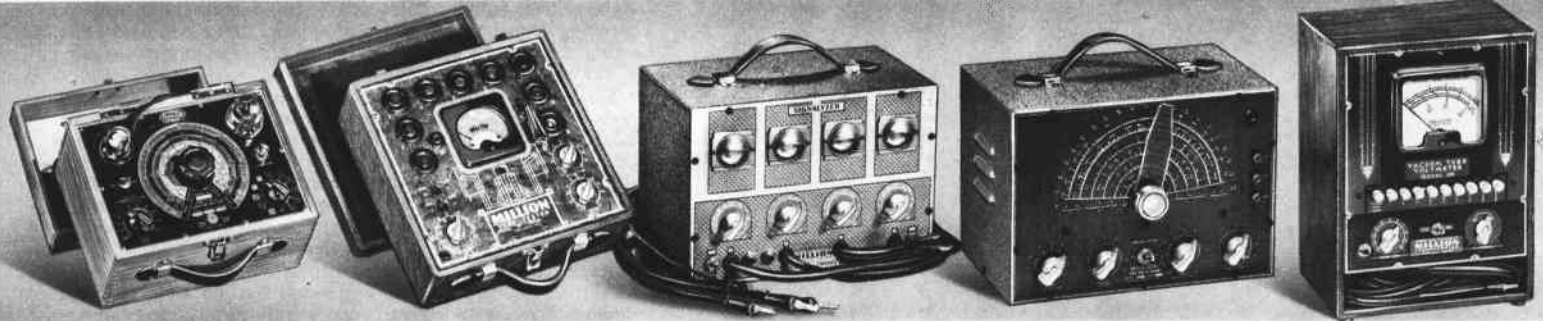
Ⓕ Features constant signal at all frequencies. Direct reading, hand drawn dial provides "curve" accuracy. No reference curves, no compensation for drift are required for this permanently accurate oscillator. Guaranteed accuracy: 1/2% on broadcast band, 1% on short waves. Freedom from drift and feedback. Stable operation. Designed for use with Oscillograph or Wobbulator. R.F. output 50 K.C. to 33 M.C. in 6 ranges. Built-in 400 cycle oscillator for audio modulation at 50%. Double shielded circuits. Dual speed dial with free wheeling. For 110-volt, 60-cycle A.C.

57 PT 08376—Shpg. wt., 17 lbs. Cash Price. . \$65.25



Any Item in this Catalog is Available on Easy Terms See Page 2

We can supply—on special order—any Weston instrument in current production not listed on this page



Solar CB Analyzer

This Analyzer and Resistance Bridge marks a long advance from elaborate Wien Bridge Setups and accomplishes the same end. Easy to operate. It measures capacity from .00001 to 70 mfd. Power Factor. Resistance up to 2 megohms, insulation resistance, and detects defective condensers. It is also a continuity meter and visual bridge balance. All readings direct and independent of line voltage variations. No headphones or meters are required. For 110-volt, 60-cycle A.C. Requires 1-6E5 and 1-1V tube. 57 PT 08377—Shipping weight, 9 pounds. Price. \$18.82

MILLION Tube Tester

Model DF tube tester offers an exceptionally wide application of tests—covering all types of tubes including the latest metal and glass types. An oversize D'Arsonval meter provides an instant "GOOD-BAD" reading. Tests for shorts and leaks up to two megohms HOT. Filament switch covers from 1.4 to 110 volts with spare taps.

Simplicity of operation is secured through efficiency of the circuit design and utmost accuracy is secured by the fine components. For 110-volt, 60-cycle A.C.

57 PT 08378—Shipping weight, 13 pounds. Price. \$16.95

MILLION Signalyzer

Four electronic "eye" signal analyzers in one. Each "eye" has an amplifier stage preceding it for high sensitivity. This provides visual evidence of the signal from the service oscillator through the receiver at every step from the antenna grid to the loud speaker. With your present oscillator and the SIGNALYZER you can thoroughly check any receiver. Provides a practical easily operated method for checking intermittent or "dead" sets. A co-axial cable input for difficult oscillator checks. For 110-volt, 60-cycle A.C.

57PT08379—Shipping weight, 12 lbs. \$37.50

MILLION Oscillator

The model OD is a modern, precisely engineered device capable of producing an artificial signal that can be varied in amplitude from a few microvolts to approximately 20,000 microvolts. Uses Separate coils individually trimmed.

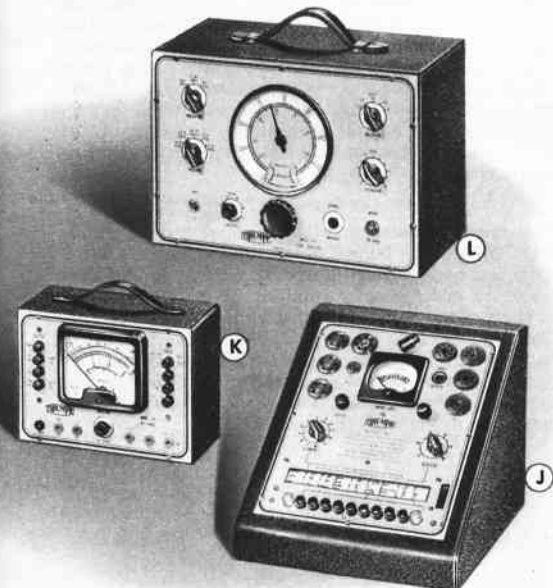
The common fault in the average oscillator, frequency modulation, has been eliminated in the OD by attenuating an RF amplifier. The RF amplifier is also the modulated stage; makes possible the use of the RF and audio outputs simultaneously or separately. For 110-volt, 60-cycle A.C.

57 PT 08380—Shpg. wt., 10 lbs. . . . \$19.95

MILLION V. T. Volt Meter

A SCIENTIFICALLY designed Vacuum Tube Voltmeter with portable multi-meter convenience. Measures any type of voltage. Values of DC, RF, or AF. Potential determinations are simple and conveniently made without disturbing the circuit under test. Half wave type, in a fixed-bias arrangement. Attractive walnut finished case. Size 12 x 9 inches x 6 inches. Meter readings up to 3000 volts on 9 scales are provided—all with push button selection. Operates on 110-volt, 60-Cycle AC. Buy on Easy Terms if you wish: See Page 2. 57PT08381—Shipping weight, 7 pounds. Price. \$28.95

THE LATEST TRIUMPH TESTERS



Ⓖ The Model 440 is truly the most modern tube tester available today. It accurately tests every type of radio receiver tube now in use in addition to a large number of tubes used in television reception. Facilities for testing tubes having 35, 50, 75, 85 and 117 volt filaments are incorporated in this instrument. No tubes have been overlooked. The latest releases of all new tubes are included in the Model 440 tube index. Loktals, bantam juniors, ballast tubes, cathode ray tubes, pilot lights, gas rectifiers, magic tuning eyes and numerous other types used in special applications. Every tube can be tested on a Triumph Model 440. For 110-volt 60-cycle A.C.

57 PT 08382—Counter model. Shipping weight, 16 lbs. Price. \$32.29

57 PT 08383—Portable Model. Shipping weight, 14 pounds. \$32.29

Ⓗ MODEL 330 Multi-range meter. Specifications: D.C. Volts: 0-3, 15, 150, 600 and 3,000 volts. Current: 0-0.6 ma., 6 ma., 60 ma., 300 ma., and 15 amperes direct current. A.C. Volts: 0-3, 15, 150, 600 and 3,000 volts. Output Volts: 0-3, 15, 150, and 600 volts through a d.c. isolating condenser. Ohms: 0 to 10 megohms in 4 overlapping ranges, mid-scale readings of 25, 250, 2,500, 25,000 ohms. Self-contained battery on all ranges to 1 Meg. 10 Meg. range requires 15 v. ext. Decibels: Minus 20 to plus 64 db. in 5 ranges calibrated for 500 ohm transmission lines. Decibels: Minus 20 to plus 50 db. in 4 ranges with isolating condenser for d.c. lines. Meter: 400 micro-amp, 4 1/2 inches with two-color mirror backed scale and 8 speed buttons. Shpg. wt., 7 lbs.

57 PT 08384. \$19.45

Ⓓ The new Triumph Model 130 Signal Generator anticipates your immediate future requirements in radio and television service. Its range of 100 k.c. to 96 m.c. includes all frequencies encountered in radio service work plus the television video amplifier frequencies! It has the five characteristics which are the ultimate requirement of a good signal generator: 1, Accuracy of 1/2 of 1 percent and a dial which is so easy to read that the element of human error becomes negligible; 2, Direct Reading Linear Output Attenuator and Multiplier; 3, Controlled percentage of modulation calibrated on the panel; 4, Pure sine wave, 400 cycle audio variable from 0 to 2 1/2 volts; 5, Maximum attenuation on all frequencies. Steatite sockets and condenser insulation minimizes losses at high frequencies. For 110-volt, 60-cycle A.C.

57 PT 08385—Shipping weight, 22 pounds. Price. \$29.35

See Page 2 for Easy Terms



SILVERTONE

**NEW HIGH QUALITY
IN PUBLIC ADDRESS
EQUIPMENT PRICED
TO FIT ANY PURSE**

The latest triumph of this electrical age. Electricity has given us cheap power to light our houses, toast our bread, sweep our floors, and bring us news and music via our radios. Now by means of the public address system, it is bringing new benefits to practically every walk of life.

Public Address Systems at Work

In Churches. The installation of sound equipment is looked upon with favor by a rapidly increasing number of pastors and congregations. It immediately fulfills two definite functions—by improving hearing conditions it lessens the strain upon the hearing mechanism of the parishioner—it also improves speaking conditions for the pastor.

In Schools. Too frequently a combination of poor auditorium acoustics and childish voices seriously curtail the enjoyment of school plays and entertainments. Sound equipment is the most economical and most dependable aid to comfortable hearing in auditoriums and gymnasiums. Parent-Teacher Associations are glad to co-operate when the situation is called to their attention and a single entertainment usually raises enough money to cover the moderate cost of an Auditorium System.

Transportation Terminals. Airports, Bus Stations, as well as Railroad Depots, are installing sound distribution systems to announce arrivals and departures; to inform passengers of delayed arrivals, as well as to locate patrons.

Expositions and Amusement Parks find sound systems of vital importance to a well-conducted enterprise. A centrally controlled system with outlying speakers throughout the grounds permits the park management to inform the patrons of special shows and events, to locate missing children, etc.

In Dance Orchestras they have long been recognized as a necessity. Any band which lacks this touch of modernity gets little consideration from either patron or employer.

Irresistible Values

It is for these and hundreds of similar applications that we invite your careful consideration of Silvertone Public Address Equipment. We are confident that we are offering the best values in such apparatus ever offered by any reputable source.

Simplicity of Operation

The rapidly growing use of sound equipment by individuals and organizations without access to technical knowledge of such equipment has made it necessary for our engineers to develop apparatus which can be used by the most inexperienced with complete success. The instructions we furnish with each system are written in such understandable language and are so complete that no one need have the slightest hesitancy concerning his or her ability to obtain professional results immediately. All connecting wires are fitted with polarized plugs which will fit only into the correct sockets. Controls are plainly marked and fused circuits provide full protection against permanent damage through improper use.

Easy to Order

Perhaps you have felt some uncertainty about buying Public Address equipment without benefit of on-location, expert advice. Much material has been written purporting to guide the inexperienced about to make such a purchase. Not only is it bewildering; it is often the worst kind of misinformation—complicating an otherwise elementary procedure. But if you will acquaint yourself with the few very simple fundamentals we point out on the following page, we assure you that you will find a Silvertone public address system is as easy to buy and as easy to use as your radio or your telephone.

A FEW DOLLARS DOWN

Page 48

SOUND SYSTEMS . . .

**A SIZE FOR EVERY PURPOSE
CHURCHES . . . SCHOOLS . . . CLUBS . .
ORCHESTRAS . . BALLROOMS . . ATHLETIC
FIELDS . . POLITICAL GATHERINGS**

Here is about all you have to know to intelligently select and successfully use Silvertone Public Address equipment: A *microphone* is a device which converts sound waves into electrical currents. A public address *amplifier* is an electrical circuit employing radio tubes and transformers to magnify by millions of times these feeble microphone currents, and having volume controls with which to vary the extent of this amplification. A *loud speaker* is a device equipped with a vibrating cone or diaphragm actuated by electrical impulses fed to it by an amplifier. This vibrating cone or diaphragm thus converts electrical impulses into disturbances in the air which are intelligible to the ear as Sound. Essentially a public address system consists of one or more microphones, an amplifier and one or more loud speakers. An electrical phonograph turntable and pickup is also generally included.

Microphones

Whether or not you will need more than one microphone will depend upon how many voices you intend to employ and the area over which these persons will be distributed. The output (or sensitivity) of all microphones diminishes with the increase in distance between source of sound and microphone. It is obvious therefore that a large choir or a dramatic production on a large stage could not be satisfactorily picked up with a single microphone. On the other hand, a lecturer would need only one.

Types of Microphones

We have available three types of microphones: Velocity, Dynamic and Crystal. Don't worry about ordering just the proper type. They are all quite satisfactory for day in and day out use. It is well, however, that you know something of their various characteristics. Velocity Microphones are termed "Bi-directional," because they are sensitive to sound waves approaching them from front or rear. They are more satisfactory, therefore, for use in relatively small enclosures where walls, floor, and ceiling are apt to reflect sound back into the microphone from the sides and cause a high pitched howl known technically as "feedback." Crystal and Dynamic Microphones are less-directional. For all practical purposes they respond with good sensitivity to sounds approaching from a wide front angle. They are better therefore for picking up the voices of large groups where feedback is not a problem. Crystal Microphones are slightly better for the higher frequencies which predominate in speech, though frequency response is good enough in any modern microphone to satisfy all ordinary requirements.

Amplifier Recommended for Average Installations

No. of Seats Indoors	Room Size, Cubic Ft.	No. of Seats, Outdoors	Outdoor Area to be Reached	Recommended Amplifier
500—1000	90,000	200—600	30,000 sq. ft.	14-watt
1000—2000	200,000	600—1500	60,000 sq. ft.	18-watt
2000—3000	400,000	1500—2500	90,000 sq. ft.	22-watt
3000—5000	500,000	2500—3500	140,000 sq. ft.	35-watt
5000—7000	850,000	4500—5500	250,000 sq. ft.	70-watt

The Amplifier

There are but two fundamental considerations upon which to base your choice of an amplifier: (1) The number of microphones it must accommodate; and (2) the power it must provide for driving its loud speakers. While varying acoustical conditions as well as noise level will influence coverage somewhat, the table given below will furnish a fairly reliable guide to the power in Watts ordinarily required for satisfactory results. In case of doubt get the larger amplifier.

Concerning the Number of Tubes

Unless one is a technician he must rely pretty much on the integrity of those he is dealing with. This is especially true when he attempts to use the number of tubes contained in an amplifier as a yardstick of its performance. More tubes than are actually required to fulfill the various circuit functions of the amplifier are sometimes used in order to create an impression of special merit. On the other hand, needed tubes are sometimes omitted from the circuit for reasons of economy. Two and three microphones, for instance, can be fed into a single tube but good engineering practice calls for a separate input tube for each channel.

Speakers and Baffles

For rooms seating 500 people or less one permanent magnet dynamic speaker with 7 to 9 Watts of power will generally be satisfactory. For auditoriums seating 1000 people two such speakers with 14 to 18 Watts of power will be required. For larger auditoriums seating up to 3000 people, 35 Watts of power will give excellent results and two or three speakers will be needed. (Some idea of the audibility of speakers when using various amounts of power can be gleaned from the home radio when turned on full blast. The average 1939 10-tube A.C. radio will deliver a maximum of about 6 Watts.) In all cases where it might otherwise be necessary to overload a speaker or speakers in order to obtain required coverage, it is recommended that an additional speaker be used so as to keep the volume level below the point where distortion is introduced. Moreover, to avoid a concentration of sound in one portion of the room and such low volume that intelligibility is bad in another, it is better practice to place several speakers about the space, operating each at somewhat lower volume than would be satisfactory were only one used—this gives even volume distribution throughout the entire space.

All speakers require some sort of baffle or horn. Baffles distribute the sound over somewhat wider areas while horns, having a narrower beam, provide greater carrying power.



BUYS THE BEST! MONTHS TO PAY

STORAGE BATTERY



SILVERTONE 20-WATT UNIVERSAL PUBLIC ADDRESS SYSTEM

The success of radio advertising has proved beyond doubt that people react favorably to auditory appeal. If, therefore, you have something to sell to the public—be it merchandise, service, policy or creed—don't overlook or undervalue the tremendous possibilities of this complete public address system which can be used anywhere—even in a moving automobile!

It operates equally well from regular 110-volt, 60-cycle A.C. or an ordinary 6 volt automobile battery. It delivers 20 watts of pure, distortionless power to its two giant 12-inch speakers and renders voices intelligible and music enjoyable for at least a city block. It will cover indoor gatherings of 2000 people.

When operating from a 6 volt storage battery, this amplifier draws 18 amperes when phonograph is still, or 21 amperes when phonograph is running. Therefore the average automobile generator will keep the battery charged when same is being used in a moving car. Even if no charging is done during operation, about 7 hours service can be had from a fully charged 150 ampere hour battery.

It combines amplifier and phonograph in one compact unit—all steel enclosed and as easy to move about as a suitcase. There are no circuit changes to make when switching from battery to A.C. operation—no power pack to install. All you need do is plug it into the outlet and it's ready for immediate operation. Since it is entirely independent of power lines—if they are not within reach—this system is ideal for evangelists, political campaigners, carnivals and road shows, as well as sound truck operators. Because it will operate on A.C. wherever A.C. is available it is doubly desirable for those who talk or entertain indoors as well as outdoors. To political campaigners this unit is especially recommended. It provides enough power for all ordinary requirements, is simple to operate, and easy to move about. **Specifications:** 6 tube, 20-watt amplifier, with inputs and volume controls for 1 crystal, velocity, or dynamic microphone, and phonograph tone control. Battery-saving stand-by switch which reduces battery drain during intermissions but keeps tube filaments at operating temperature ready for instant service. Phonograph has crystal pickup and 10-inch turntable. Handsome steel carrying case completely encloses unit when it is not in use. Snap clasps permit cover to be easily removed. Two-tone gray

\$47⁵⁰

Cash

57 PT 08920

\$5 Down... See Page 2

wrinkle baked-on enamel finish. Ruby bull's-eye on front panel. Microphone and speaker equipment optional.

Price List

57 PT 08920—20-watt amplifier-phonograph unit and tubes less all other accessories. Shipping weight, 49 pounds. Cash price.....\$47.50

57 PTM 8919—20-watt system including amplifier, phonograph unit, tubes, choice of crystal (C) velocity (D) or dynamic microphone (E) with 25 foot cable, microphone handle, 2-Jensen PM12C speakers with 25-foot cables. Shipping weight, 67 pounds.....\$73.95

57 PT 08918—As above except with 2 square steel speaker baffles (B) in addition. Shipping weight, 121 pounds.....\$88.95

57 PTM 8917—20-watt system same as 57 PTM 8919 except with 2 Jensen PM12B speakers (A) instead of 2 Jensen PM12C speakers. (Substituting these speakers for PM12C speakers is the equivalent of increasing the power output of the amplifier by 250%. Shipping weight, 77 pounds.....\$87.50

57 PTM 8916—As above except with 2 square steel speaker baffles (B) in addition. Shipping weight, 131 pounds.....\$99.95

57 PTM 8915—20-watt system same as 57 PTM 8919 except with 2 Universal SAH driver units and 2 University type LH reflex projectors instead of Jensen PM12C speakers. This is really a deluxe set-up for the sound truck. (See Page 62 for data on University equipment.) Shipping weight, 93 pounds.....\$137.50

Shure Military Microphone

Ⓜ If Shure Military Microphone is desired instead of other microphones mentioned, add \$4.00 to the price and so state. Equipment fully licensed by the Electrical Research Products, Inc. under U.S. patents of The American Telephone and Telegraph Co., and Western Electric Co.

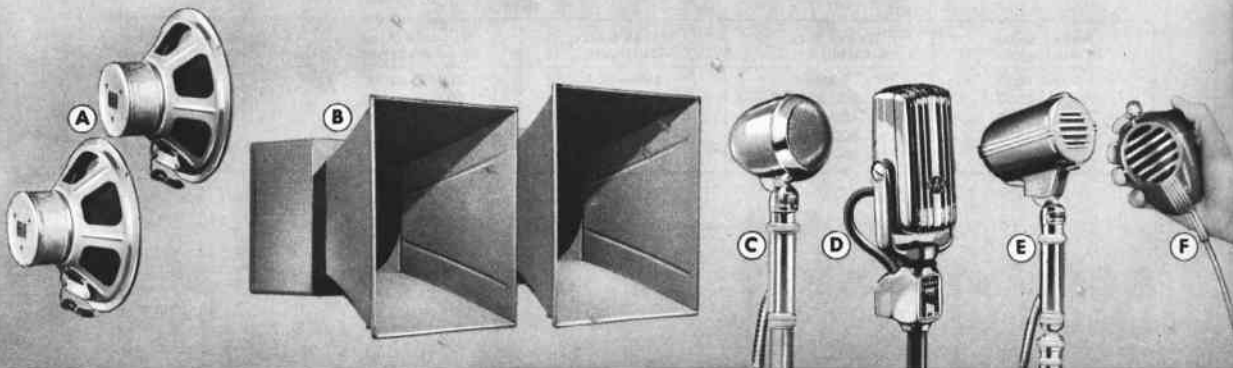
This System Gives a Complete Outfit Including Amplifier-Phonograph, Microphone, Speakers and Baffles for Sound Truck or Interior Uses for as Little as \$8.00 Down—See Page 2.

FOR INDOOR USE

FOR ADVERTISING PURPOSES

FOR OUTDOOR GATHERINGS

Speakers and microphones at right are supplied with this Silvertone Sound System in various combinations as listed above. Should your requirements call for other types you'll find them on Pages 60 to 63. If you're not sure, write to Sears Personal Service Department in Chicago, stating your problem.



OR A. C. OPERATED



System can be furnished in two carrying cases, one for amplifier and one for speakers. See lists below at left.

SILVERTONE 30-WATT DE LUXE SYSTEM WITH AUTOMATIC RECORD CHANGER

You will find that this system has features not available in any comparable apparatus; and these may easily be the very refinements which you require.

This system not only has a phonograph; it has an automatic one! You can put as many as eight 10-inch, or seven 12-inch records on its spindle, turn it on and it will play them through without your having to touch them. This exclusive feature adds immensely to its value and convenience. It works smoothly and positively. Nothing to get jammed, clogged, caught, or out of order. No trouble, no hitch, no waste of time between selections. There are inputs for two microphones with complete mixing and fading facilities for both with phonograph input. High and low tone compensation with continuously variable controls enables you to obtain perfect results under all operating conditions. Output impedances of 3-4, 4-8, 250 and 500 ohms provide for the use of additional speakers (1 to 8) when required. Amplifier and phonograph portions are completely self-contained and, though normally connected rigidly together, can be easily separated when only the amplifier is needed. This is another important and exclusive feature.

Amplifier operates on 110-volt, 60-cycle A.C. or 6-volt storage battery current. You can use it anywhere—indoors or out. Efficient 10-tube circuit gives full 30 watts of power. Reproduces speech and music with theater-equipment quality and naturalness.

No circuit changes required for battery or A.C. operation. No bothersome power pack or auxiliary equipment needed. You change from one to the other in a jiffy. Polarized plugs for all connections.

Beautiful two-tone gray wrinkle baked-on enamel body.
57 PT 08930—Amplifier and tubes only. No record playing equipment. Size 11 inches high, 15½ inches wide, 26 inches long. Shipping weight, 30 pounds. Cash Price\$54.25

Systems with Automatic Record Changer

57 PTM 8929—Amplifier, Automatic Phonograph Unit and Tubes. No speakers or microphone. Shpg. wt., 71 lbs.\$89.95
57 PTM 8928—Amplifier-Phonograph unit, tubes, 2 PM12H Jensen speakers with 35-foot cables, choice of one crystal (C), velocity (D), or dynamic (E) microphone with 25-foot cable and microphone handle. Shipping weight, 91 lbs.\$124.50

\$54.25
Cash

Amplifier and Tubes Only

\$5 Down ... See Page 2

57 PTM 8927—Same as 57 PTM 8928 except with 2 square steel baffles (No. 57 PTM 7469, Page 63) added. Shipping weight, 145 lbs.\$139.50
57 PTM 8933—Same as 57 PTM 8927 except with 2 Jensen PA8H speakers and 2 steel baffles No. 57 PTM 7470 (see Page 62) instead of 2 Jensen PM12H speakers. Shipping wt., 181 lbs.\$149.95
57 PTM 8926—Same as 57 PTM 8928 except with 2 Jensen PM12B speakers instead of 2 Jensen PM12H. Shpg. wt., 94 lbs. Cash Price\$129.95
57 PTM 8931—Same as 57 PTM 8926 with 2 square steel baffles added. Shpg. wt., 148 lbs. Cash Price\$144.95
57 PTM 8932—Same as 57 PTM 8927 except with 2 University SAH Driver units and 2 PH reflex projectors instead of Jensen PM12H speakers. Shpg. wt., 110 lbs. Cash Price\$159.95

Systems with Standard Phonograph Equipment Instead of Automatic Record Changer
57 PT 08950—Otherwise same as 57 PTM 8929. Shpg. wt., 54 lbs.\$68.95
57 PTM 8961—Otherwise same as 57 PTM 8928. Shpg. wt., 74 lbs.\$103.50
57 PTM 8962—Otherwise same as 57 PTM 8927. Shpg. wt., 128 pounds.\$118.50
57 PTM 8963—Otherwise same as 57 PTM 8933. Shpg. wt., 164 lbs.\$128.95
57 PTM 8964—Otherwise same as 57 PTM 8926. Shpg. wt., 77 lbs.\$108.95
57 PTM 8965—Otherwise same as 57 PTM 8931. Shpg. wt., 131 lbs.\$123.95
57 PTM 8966—Otherwise same as 57 PTM 8932. Shpg. wt., 93 lbs.\$138.95
Amplifier Carrying Case. Artificial leather covered. Reinforced corners. Size 27 x 11½ x 15 in. deep. (This case does not fit 57 PT 08930).
57 PT 08957—Shpg. wt., 26 lbs.\$9.95
Speaker Case accommodates two 12-inch speakers. Included are 2 round speaker flares which fasten to outside of case. When not in use they pack neatly within the case. Size 18 x 18 x 19 inches.
57 PT 08958—Shipping weight, 30 lbs.\$16.95
 For Shure Military Microphone (F) see Page 50



For best average installations we recommend Jensen PM12B speakers with this system. There are undoubtedly more Jensen PM12B Speakers used in Public Address work than any other kind.

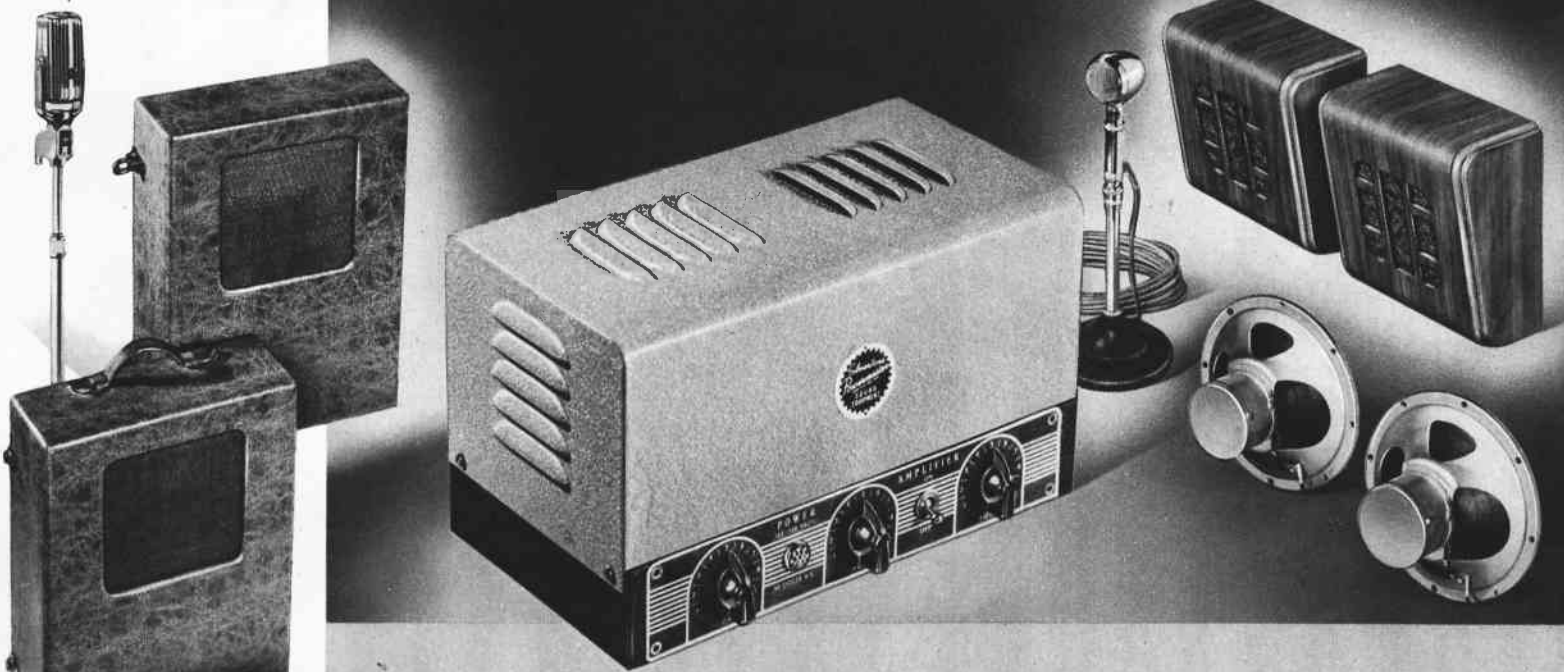


For DeLux installations where results are more important than cost we recommend University drivers and projectors with this system. See Page 62.



© For extra long reach at moderate cost we recommend Jensen PA8H Speakers and steel projectors with this unit. See Pages 62 and 63 for complete descriptions of these Units.

SILVERTONE PORTABLE



14-WATT HIGH GAIN SYSTEM

This Silvertone 14-watt Sound System gives you extraordinary power, excellent tone quality and the most modern features at a price unequalled elsewhere. It is proof that you don't have to buy a big amplifier to get a good amplifier... it is proof that Silvertone leads the field!

Designed by outstanding sound system engineers to give you the best, and longest lasting 14-watt amplifier... tone quality free from distortion. Built as carefully as an expensive watch, with finest materials obtainable.

The many uses of this instrument are amazing. It performs three major services, listed as follows:

1. You can use it for a phonograph amplifier in either home, school or place of business. When used with suitable phonograph equipment and speaker, it will provide ultra-fine music from ordinary phonograph records at sufficient volume for all normal needs.
2. You can use it for home recording. With apparatus listed on Pages 58 and 59 you can make excellent personal recordings.
3. You can use it for Public Address Work. Its reproduction from either microphone or phonograph pickup will deliver sufficient power for gatherings up to 1000 persons.

Amplifier Specifications. 5 tubes: 1-6J7 G, 1-6Y7 G, 2-6V6 G and 1-5V4 G. **Circuit:** Resistance coupled employing 3 stages on the microphone input and 2 stages on the phonograph input. **Inputs:** one crystal, velocity, dynamic, or sound cell microphone and 1 high impedance phonograph. **Output impedances:** 3-4 and 6-8 ohms. **Individual Volume Controls** for microphone and phonograph provide unrestricted mixing and fading of these two when used simultaneously. **Continuous Tone Control** for adjustment of bass or treble response to fit individual requirements. **High sensitivity circuit** eliminates the necessity for "hugging" the microphone to get satisfactory pickup. **Ruby Pilot Lamp** shows through bulls-eye on front panel when power is on. **Quality Components** used throughout! Aerovox condensers, Centralab controls, Halldorson transformers will never let you down! **Tone Quality** that even hair-splitting engineers call good. **Sturdy auto body steel** chassis and ventilated cover durably and attractively finished in two-tone baked-on gray crackle enamel. Results in a far better looking piece

\$15⁹⁵

Cash
Amplifier and Tubes Only
\$2 Down... See Page 2

of apparatus than has ever before been sold at this low price. Size overall of amplifier unit is 6½x6x11 inches long. For 110-volt 60-cycle A.C. Power consumption 85 watts.

57 PT 08914—14-watt amplifier with 5 tubes. Shipping weight, 7 pounds. Cash Price... **\$15.95**

57 PT 08913—(Large view above.) Complete 14-watt public address system for fixed installations. Consists of amplifier, tubes, 2 Jensen PM8C speakers with 35-foot cables, 2 walnut finished wall baffles for speakers, banquet type Microphone stand (A), and choice of Crystal Microphone (B), Velocity Microphone (C), or Dynamic Microphone (D), each with 25-foot cable. State choice. Microphones described on Page 56. Shipping weight, 45 pounds... **\$42.50**

57 PT 08912—Same as 57 PT 08913—except with floor type microphone stand instead of banquet stand. Shpg. wt., 53 lbs. **\$46.50**

57 PT 08911—Same as 57 PT 08913 less wall baffles. Shipping weight, 25 pounds... **\$34.95**

57 PT 08910—Same as 57 PT 08912 less wall baffles. Shipping weight, 33 pounds... **\$39.95**

57 PT 08909—(Shown above at left.) Two Speaker Portable System same as 57 PT 08911 except in artificial leather covered carrying case. Shipping weight, 35 pounds... **\$41.25**

57 PT 08908—Same as 57 PT 08909 except with floor type Microphone stand instead of banquet stand. Shpg. wt., 44 lbs. **\$44.50**

57 PT 08907—Single Speaker Portable Outfit with Jensen ten-inch PM10C otherwise same as 57 PT 08909. Shipping weight, 28 pounds... **\$35.50**

57 PT 08906—Single Speaker Portable Outfit same as 57 PT 08907 except with floor stand instead of banquet stand. Shipping weight, 35 pounds... **\$39.95**

This equipment is available at special prices with any speaker or microphone combination selected from this catalog. Write Sears Personal Service Department in Chicago for prices of combination in which you are interested.

Amplifier Licensed by the Electrical Research Products, Inc., under U. S. Patents of the American Telephone and Telegraph Co., and the Western Electric Co.



SOUND SYSTEMS . . .



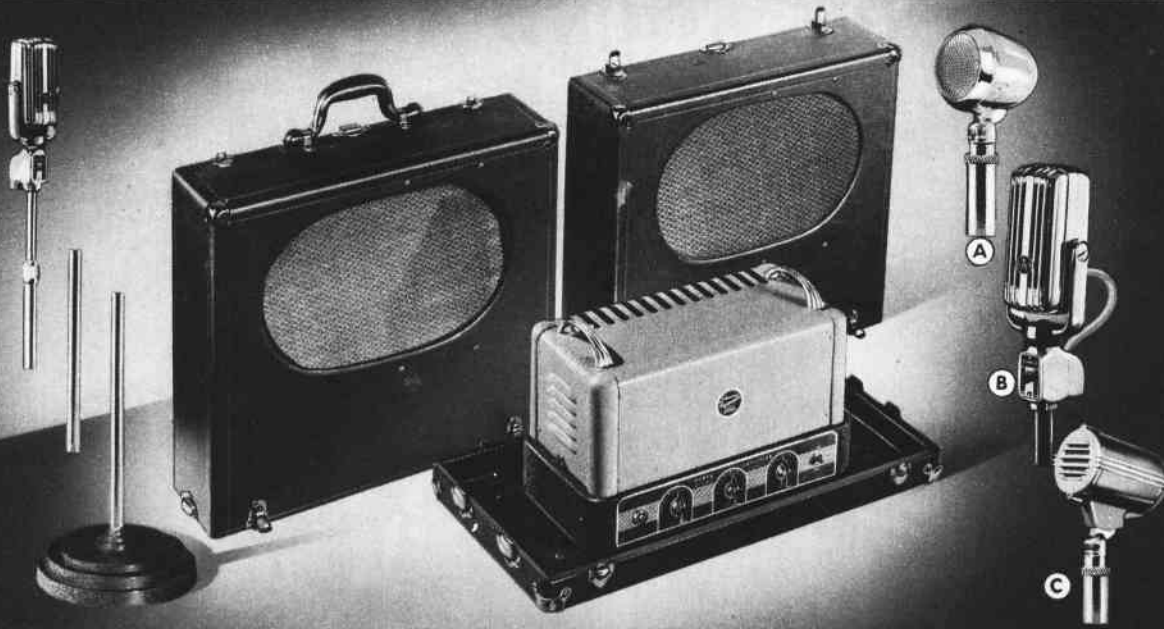
**4-Channel
Electronic Mixer
and Pre-Amplifier**

\$29⁹⁵ Terms
\$3.00 Down
See Page 2

The obvious need for a small portable A.C. operated device permitting the use of 4 microphones with small amplifiers, led to the development of this unit. Its seven-tube circuit provides for completely mixing and fading the outputs of 4 crystal, velocity, dynamic or sound cell microphones and feeding their outputs into the regular microphone input of a standard amplifier. Uses 7 tubes.

Makes a 4-channel amplifier of one normally equipped to handle but one or two. Also provides the preamplification necessary to run long microphone lines, or to use low level microphones with an amplifier of insufficient gain to do so without preamplification. Four gain controls and one master gain. For 110-volt 60 cycle A.C. Metal case finished in gray baked-on wrinkle enamel.

57 PT 08993—Complete with 7 tubes. Shipping wt., 20 lbs. Cash price. **\$29.95**



22-WATT REMOTE CONTROL SYSTEM

Designed for more faithful reproduction, more trouble-free service and ease of operation. Designed for users without technical experience who want a sound system that can be set-up and taken down easily . . . a set that will perform perfectly under a wide variety of conditions. This powerful 22-watt Silvertone meets these needs . . . it has flexibility and portability . . . it is built to give you absolute dependability. Intended for gatherings of 1700 persons or less, with Remote Control an optional feature at small extra cost. Consider these nine important Silvertone features:

- 8 tubes**—an ample number to perform the many circuit functions of the amplifier and handle its output without overloading and consequent distortion.
- Remote Control**—so operator can control output from a position in the audience where he may be positive that his amplifier is adjusted to provide the best and most comfortable hearing conditions possible. Optional, see details at right.
- Two Input Channels** with plugs for **two microphones and one phonograph**. The first volume control handles one microphone. The second control is split, the left half controlling one microphone and the right half the phonograph. If a phonograph pickup which has its own volume control (such as our No. 57 PT 08900 shown on Page 58) is used you can mix and fade **two microphones** with phonograph input.
- Four stage high gain circuit** provides needed sensitivity when microphone is situated several feet from the source of sound.
- High and Low Tone Compensation** which brings out and strengthens either the "highs" or "lows" and enables the operator to accurately adjust the system for best results under all operating conditions.
- Jeweled Pilot Light** reminds you to turn the power off during intermissions or when performance has ended.
- The handsomest, most professional appearing** piece of public address apparatus ever offered at this low price. A rounded corner, set-back, base and ventilated cover beautifully finished in two-tone baked-on wrinkle gray enamel, attractively trimmed with two gleaming chrome plated handles; velvet black and burnished aluminum escutcheon.

\$34⁵⁰ Cash

Amplifier and Tubes Only
Less Remote Control
\$4 Down . . . See Page 2

- 8. Output Impedances** 3-6, 6-8, 250 and 500 ohms to take care of multiple speaker requirements.
- 9. Tone quality that is clear and beautiful.**

Here are a few of the many applications of this equipment: **Traveling Musical Organizations** will find it valuable for sound reinforcement in ninety-nine out of a hundred engagements. For **Political orators** who must often make several speeches each day such an outfit is a godsend.

All but the smallest **Churches** need some sound reinforcement and this is the ideal system for the average congregation. By improving hearing conditions it lessens the vocal strain on the pastor as well as auditory strain on the part of the congregation; hence, permits better attention of both to the text. **Schools, Colleges and Universities** can make excellent use of it in their dramatic public speaking, and musical activities.

Amplifier is designed for 110 volt 60 cycle A.C. Power consumption, 125 watts. Size, 8x9x14 inches long. Licensed by Electrical Research Products Inc., under U. S. Patents of the American Telephone and Telegraph Co. and the Western Electric Co.

Units below are priced without Remote Control feature.
57 PT 08922—22-watt amplifier and 8 tubes. Shipping weight, 22 pounds. Cash Price. (Remote Control extra) **\$34.50**
57 PT 08923—22-watt amplifier, 8 tubes, 2 Jensen PM12C (12-inch) speakers with 35-foot cables. Floor type microphone stand, 25-foot mike cable and your choice of one crystal microphone (A), Velocity Microphone (B) or Dynamic Microphone (C). **State choice.** Shipping weight, 56 pounds. **\$64.95**
57 PTM 8924—Two Speaker portable system. Same as 57 PT 08923 except with 3-piece carrying case. Size 25½x25x15 inches. Artificial leather cover. Leather handle and reinforced corners. Shipping weight, 64 pounds. **\$73.75**
57 PT 08925—Two channel remote control unit with 50 feet of cable. Described at right. For use with above amplifiers. Shipping weight, 6 pounds. **\$5.85**

Optional Equipment. This equipment is available at special prices with any speaker or microphone combination selected from this catalog. Write Sears Personal Service Department at Chicago for prices of combination in which you are interested.



**Remote Control
Unit**

\$5⁸⁵

To accommodate those who have no need for remote control, we have quoted the equipment at left without the remote control unit. Since it is an accessory and is not required for the normal operation of these amplifiers it is optional equipment. Silvertone 22 watt, 35 watt, and 70 watt A.C. Amplifiers described on Pages 53, 54, and 56 of this catalog have provisions for this Remote Control unit. It plugs into the rear side of the chassis and may be either used or disconnected depending upon requirements.

It provides control of two channels from any desired point within the enclosure served by the system and is of great value in adjusting volume level for best results for the various speakers or entertainers who may appear on any single program. It eliminates the difficulty of obtaining complete audibility without introducing feedback. Supplied with 50 feet of cable but longer lengths are available if required.

57 PT 08925—Shipping weight, 6 pounds. **\$5.85**



SILVERTONE 35-WATT HIGH GAIN THREE CHANNEL SOUND AMPLIFIER



Since 35-watt amplifiers are in greater demand than those of any other power rating, our strongest bid for business is in this field. We are out to get that business with values you've never dreamed of getting! When this unit was planned by our merchandising and engineering department we made up our minds that we would include every single feature, every refinement that could possibly add to the desirability of owning such an amplifier and then price it sensationally low. We did it. You get the benefit.

Anybody, everybody, can now afford ample power, all the new features that make for greater flexibility, sweeter tone and added operating simplicity that heretofore have been available only in expensive custom-built equipment.

Compare these features: 9 tubes; use of one to four microphones and one phonograph; three electronic mixing and fading controls for microphones (2 in parallel when four are used) and phonograph. Individual high and low tone equalizing controls; Output level indicator (optional) calibrated directly in watts gives you the method of control which broadcasting stations use. Remote control (optional—see Page 53). Power stage connection for future increase of power (see Page 56). Polarized plug-in connections which insure quick set-up and make mistakes impossible. Ruby pilot light on front panel. Four stage high gain circuit. Output impedances of 3-4, 6-8, 25 and 500 ohms which permit the use of 1 to 8 speakers.

\$44.95 Cash

Amplifier 57 PT 08936
With Tubes
\$5 Down.. See Page 2

Safety fused power circuit for full protection against accidental shorts. Handsome professional style steel cabinet finished in two-tone gray baked-on wrinkle enamel. Two chrome plated handles. Fully licensed by E. R. P. I. under patents at A. T. and T. and W. E. Co. Size 8x9 1/4 x 15 inches long. For 110-volt, 60-cycle A. C.

57 PT 08936—35-watt amplifier only with 9 tubes and volume level indicator as illustrated. Shipping weight, 30 pounds. Cash Price.....\$44.95

57 PT 08935—35-watt amplifier with 9 tubes less output volume Indicator. Shpg. wt., 31 lbs.\$39.95

57 PTM 8937—Complete 35 watt fixed system/consisting of 57 PT 08935 amplifier, tubes, 2-Jensen PM12H speakers with 35 foot cables, 2 walnut veneer wall baffles, choice of one velocity (A), crystal (B) or dynamic (C) microphone with 25 foot cable and full length floor stand. State microphone. See Page 56 for details. Shipping weight, 82 pounds.\$89.95

57 PTM 8938—Same as 57 PTM 8937 except with 57 PT 08936 amplifier. Shipping weight, 83 pounds.\$94.95

57 PT 08939—Same as 57 PTM 8937 except less wall baffles. Shipping weight, 62 pounds.\$77.50

57 PT 08940—Same as 57 PTM 8938 except less wall baffles. Shipping weight, 63 pounds.\$82.50



35-WATT PORTABLE SYSTEMS



\$88.95 Cash

57 PTM 8941
\$8 Down
See Page 2

For portable uses the above amplifier is without equal. It has the power to cover the largest gathering that is likely to assemble in any enclosure not served by a permanent installation, combined with lightness in weight that is truly amazing for its tremendous output. The sturdy three-piece case is built to withstand the hard knocks of severe usage; reinforced at corners and joints where strain occurs. Covered with heavy, durable artificial leather. When completely closed, this Silvertone Portable Public Address System is scarcely larger than an ordinary suitcase. When opened, it discloses the super-power amplifier described above, 2 Jensen 12-inch PM speakers (each with 35-foot cables), floor type microphone stand and microphone with 25-foot cable.

57 PTM 8941—Complete system including amplifier 57PT08935 as illustrated for 110-volt, 60-cycle A.C., tubes, 2-Jensen PM12H speakers with 35 foot cables, your choice of velocity (A), crystal (B) or dynamic (C) microphone with 25 foot cables and full size floor type microphone stand; 3-piece case. Size 21x22x12 inches. No volume level indicator. State microphone. Shipping weight, 89 pounds. Cash Price.....\$88.95

57 PTM 8942—Same as 57 PTM 8941 except with 57 PT 08936 amplifier (as illustrated at top of page), with Volume Level Indicator. Shipping weight, 89 pounds.\$93.95

REMOTE CONTROL FEATURE



FOR PUBLIC SPEAKERS



FOR AUCTIONEERS



FOR ORCHESTRAS—ENTERTAINERS





NEW SILVERTONE TRANSCRIPTION REPRODUCER



The useful applications of this unit are so many and varied that by no stretch of the imagination could one explore them all. It is truly a marvelous device. Essentially it is a self-contained 14-watt, 7-tube high gain, high fidelity amplifier with microphone input, an electric phonograph and a very fine speaker—all in a small artificial leather covered carrying case measuring only 16x16x12 inches.

Its most extensive use may well be among **salesmen and sales managers**. It makes possible top quality reproduction of transcription recorded talks which may be presented in conjunction with industrial and advertising movies at regional sales meetings and the like. For this purpose it offers the advantage of optional microphone use with fading and mixing with phonograph. **Mortuaries** can render better community service with the aid of this device. Recorded organ, chime, choir, or vocal soloist music can be reproduced with ultra-fine quality, or funeral sermons, remarks and other spoken portions of the service can be suitably reproduced and amplified to large audiences and overflow groups.

Small restaurants and tea rooms, desiring to give their patrons music with their meals yet unable to afford the expense of an orchestra, can solve this problem very nicely and at little expense by using this unit.

In schools the microphone is educationally valuable as a means of developing skill in technique of speech, drama, and music, while the phonograph portion of this system will render valued service in many ways—music for school dances and parties, for instance. Youngsters who gather for parties and dancing will find this a very economical solution to their music problem.

Music stores will find it excellent for demonstrating phonograph records.

\$42⁵⁰ Cash
Less Microphone
\$5 Down .. See Page 2

Every lodge, club and Legion post should have one of these fine reproducers on hand if for only occasional use. The cost is almost negligible. The power output of 14 watts is ample for small dances and for club room use. No finer phonograph reproducer could be asked for. **Standard Model**. Has 14-watt, 5 tube high gain amplifier for 110-volt, 60-cycle operation, Microphone and phonograph volume control (with mixing and fading of both). Tone control. 10-inch Jensen PM10C speaker with 35 foot cable, standard 78 R.P.M. phonograph motor with 10-inch turntable.

57 PT 08991—Without microphone and stand. Shpg. wt., 38 lbs. Cash Price..... \$42.50

57 PT 08992—As above with choice of velocity (A), crystal (B) or dynamic microphone (C) (see Page 56) with 25 foot cable and full length floor stand. **State microphone**. Shipping weight, 50 pounds. \$68.50

Professional Model. Has amplifier as described above, 10-inch Jensen PM12H speaker with 35 foot cable, transcription phonograph motor (two speeds: 78 R.P.M. and 33 1/4 R.P.M.) with 12-inch weighted turntable and automatic stop. Will play any size record up to 17 1/4 inch. Shipping weight, 50 pounds.

57 PT 08994—Without microphone and stand. \$65.00

57 PT 08995—Same as 57 PT 08994 with choice of velocity (A), crystal (B) or dynamic (C) Microphone (see Page 56) with 25-foot cable, and full size floor stand. **State microphone**. Shipping weight, 60 pounds. \$79.00

Big Users: Get our Special Quotations on these units in Quantities. We can save you money. Write Dept. 657 Chicago.

PRESTO PORTABLE RECORDER

Presto recording is a new and fascinating amusement. This highly perfected sound recorder makes permanent phonograph records of all ordinary sounds on acetate blanks. The tone is clear and natural, equal in quality to high grade radio reception. With this Presto recorder, you can make records of conversations, songs, stories or short dramatic sketches. It can be attached to any radio set to record programs on the air. In this way you can often obtain phonograph recordings of new songs long before the ordinary records are on sale. Business men find it useful in making records of conferences and long distance calls. Hundreds of actors, musicians and entertainers study their own work through Presto recordings; it provides the only way for them to apply their critical abilities to their own performance. In every way this Presto Recorder is a thoroughly practical instrument for all commercial and educational uses.

Records can be played back as soon as they are recorded. No treatment is required to make them suitable for playing. Records can be played 100 times or more on any phonograph, using ordinary steel needles. Microphone furnished will pick up voices at a distance of 20 feet or more.

Presto Sound Recorder is equipped with 12-inch turntable and is suitable for making 6, 8, 10 or 12-inch records at 78 R.P.M., the standard phonograph speed. Exclusive rubber tire on turntable rim absorbs vibration, gives steady speed, and eliminates all waver from recordings. The Presto rubber tire turntable eliminates idler wheels and has practically unlimited life. Constant speed self-starting motor.

Cutting head is driven by a positive action worm and gear system located beneath the turntable for protection from dust or accidental damage. Cuts 100 grooves per inch, the pitch that gives greatest economy consistent with long playing life. Cuts outside to inside.

High grade magnetic type pickup and cutting head the kind used in the most expensive sound recording and record playing installations. Easy to adjust angle of cutting needle and cutting pressure. A cam lever lowers cutting head gently onto disc, preventing accidental damage to sapphire cutting needles.

Four-Stage Amplifier has a maximum undistorted output of 5 watts and an overall gain of 115 db. Amplifier control panel contains a volume indicator meter, volume controls for recording and playing records, and a tone control. A jack serves to connect the recorder to any radio set for recording radio programs. Case size, 10x16x20 inches. For 110-volt 60-cycle A.C. Shipping weight, 68 pounds.

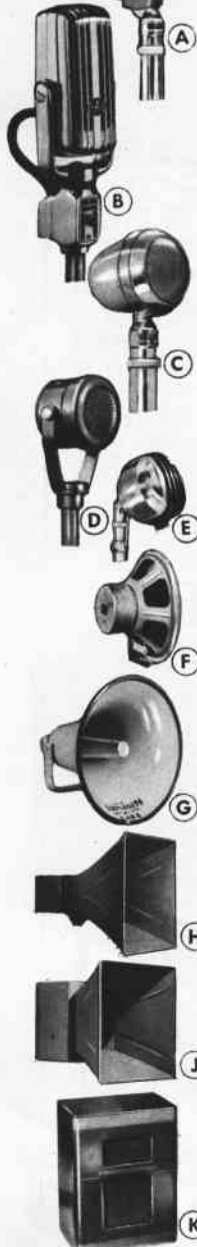
57 PTM 8998—Complete with tubes, microphone and stand. Not Mailable. Cash Price..... \$169.50

\$169⁵⁰ Cash
\$15 Down
See Page 2





- AUTOMATIC VOLUME CONTROL
- AUTOMATIC VOLUME EXPANSION
- HIGH AND LOW COMPENSATION
- FOUR-CHANNEL REMOTE CONTROL



Choice of Microphones

At no additional cost you may have your choice of Dynamic (A), Velocity (B), or Crystal (C) Microphones with these systems. The dynamic, without baffle, can be made semi-directional in the horizontal position and non-directional when head is tilted to vertical position. Frequency response 50 to 7000 cycles. The Velocity is somewhat directional and is eminently suited to enclosures which occasion feed-back trouble. The Crystal has a response characteristic which favors voice frequencies and is therefore recommended for speech pick-up.

DeLuxe Microphone Equipment

To accommodate those who require better-than-ordinary microphone equipment we have made these systems available with Turner "99" Dynamic (D) and Brush All-Purpose Crystal (E) Microphone at slight additional cost. See microphone pages for full description of these fine microphones. If Turner "99" Dynamic is desired instead of optional equipment mentioned above add \$2.65 for each microphone so substituted. If Brush All-Purpose Microphone is preferred add \$5.00 for each substitution.

Speaker Equipment

While Jensen PM12B Speakers (F) are standard equipment, a wide choice of Speakers and Enclosures is open to you in the purchase of this and all other Silver-tone Public Address Equipment. We have types which best fulfill each individual requirement. If you wish to cover long distances select projector (H) with Jensen PAH8 Speakers or University Projectors (G). If wider coverage with corresponding decrease in reach is desirable, select 12-inch Speakers with Steel Baffles (J). Jensen 12-inch Peridynamic Baffles (K) for ultra-fine interior reproduction can be substituted for (J) baffle at an additional cost of \$3.49 for each substitution.

70-WATT FOUR-CHANNEL AMPLIFIER AND POWER STAGE

(Shown above at left) Here is the engineers' amplifier—a brilliant example of what can be accomplished by capable designers when untrammelled by limitations of time and material costs . . . unquestionably one of the most advanced, most versatile and most complete single pieces of sound apparatus ever offered the American public.

Designed to meet the most exacting requirements of the finest of high power installations and built to rigid laboratory standards, this unit cannot fail to capture the imagination of every experienced sound man who considers thoughtfully its many outstanding refinements. This amplifier has 4 input channels, accommodates 4 microphones or 3 microphones and one phonograph. Has complete mixing and fading controls for all four channels. This is a prime requisite for satisfactory microphone pickup of stage productions. Even the smallest stage requires several. It has high and low tone compensation with individual controls for bass and treble responses. Bass boost maintains proper tone balance at high volume levels where all speaker efficiency begins to fall off on lower frequencies. You get faultless reproduction at 7 watts or 70 through the proper manipulation of these controls.

Automatic Volume Control maintains desired volume level as established by volume control settings. Velvet smooth operation irrespective of input signal variations.

Automatic Volume Expansion, the most important single contribution to the art of amplifier design in recent years. Crescendoes barely perceptible through amplifiers without this refinement become soul stirring surges of swelling volume that mere words cannot adequately describe.

Output Level Indicator calibrated directly in watts. Gives you the accuracy of instrument control over volume. Predetermined volume levels can be instantly re-established without experimentation.

Four Channel Remote Control Connections. Two of our remote control units shown on Page 53 will provide distant monitoring of all 4 channels of this amplifier.

Power Stage Connections. For power requirements beyond the rated 70 watts of this amplifier one or more 70-watt power stages as illustrated alongside the amplifier can be used.

Output Impedances. Four taps of 62.5, 125, 250, 500 ohms provide suitable impedance matching for any conceivable speaker requirement of up to 72 speakers. The number of speakers you can use is limited only by the amount of power you wish to feed to each.

Separate Plate and Filament Switches serve the dual purpose of protecting circuit during warm up time and providing means of rendering amplifier completely inoperative without allowing filaments to cool.

Master Gain Control provides overall control of amplifier's combined output.

Handsome and Professional appearance. Steel base and cover finished in two-tone gray baked-on enamel. Chrome plated handles. Cover ventilated by means of louvers on top and three sides.

\$69⁹⁵ Cash

Amplifier and Tubes Only
Less Remote Control

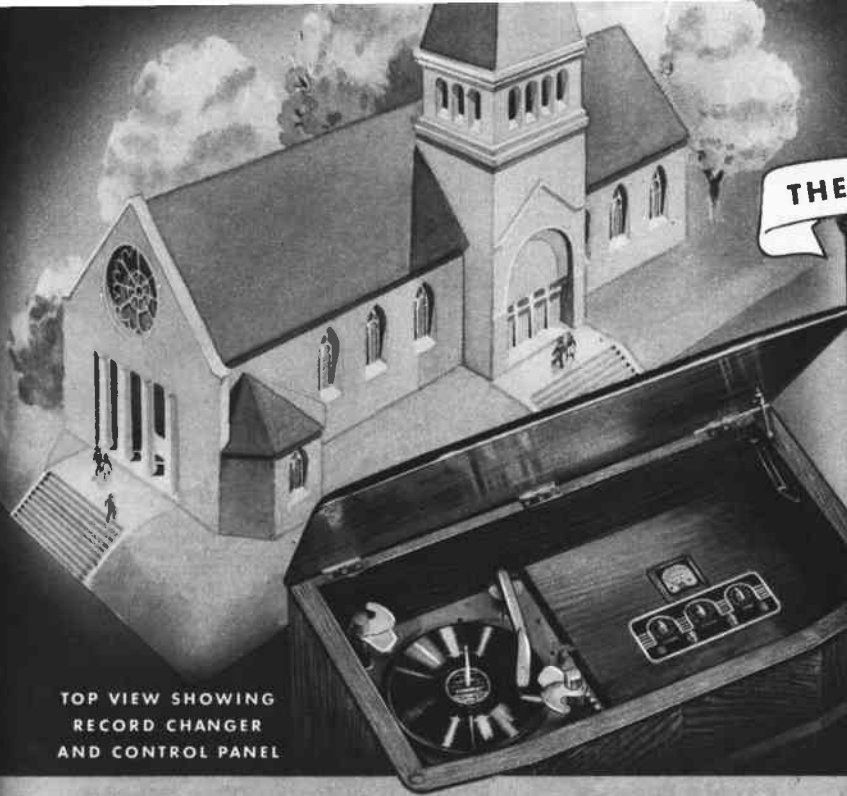
\$6 Down . . . See Page 2

Coverage. The tremendous output of this amplifier when suitably used will provide satisfactory coverage of indoor gatherings of up to 7500 persons.

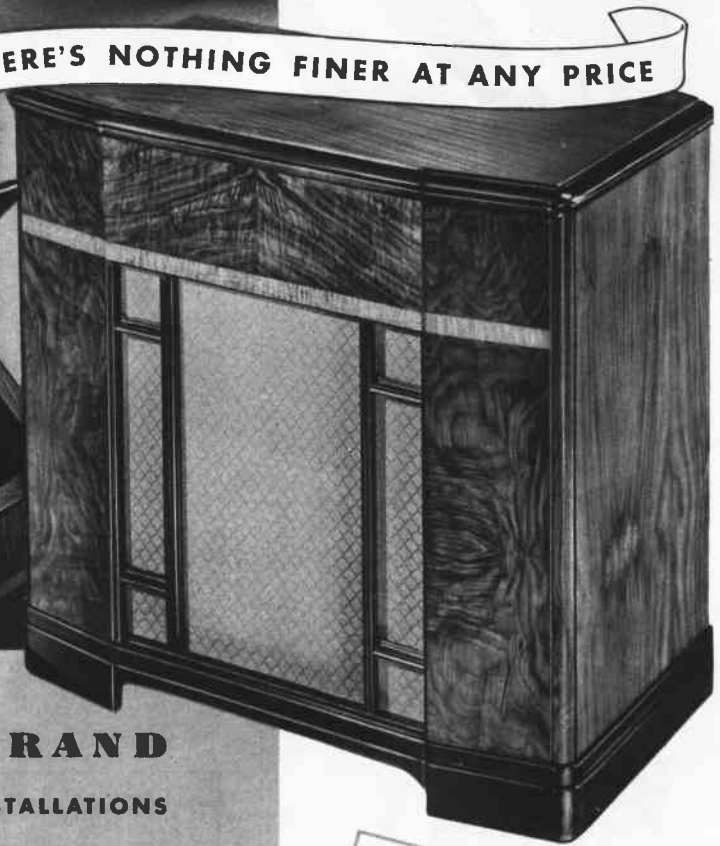
The Circuit. To perform the many functions of this amplifier, 17 tubes are required, and there are no dummies. The most modern inverse feedback transformer coupled circuit provides the smooth, distortionless performance you would expect from such a high class piece of apparatus. Five stages insure high sensitivity and perfect operation with any type high impedance microphone you may wish to use (carbon excepted). Size 10 1/2 x 9 x 2 1/2 inches long. Amplifier is designed for use on 110-volt, 60-cycle A.C. and is licensed by Electrical Research Products Inc., under U. S. patents of American Telephone and Telegraph Company and Western Electric Company. **Not Mailable.**

- 57 PTM 8970—Amplifier and tubes. Shpg. wt., 55 pounds. Cash price \$69.95
- 57 PTM 8971—Amplifier, tubes, choice of one Velocity (A), Crystal (B), or Dynamic (C) with 25-foot cable, floor type microphone stand and 4 Jensen PM12H speakers with transformers but without cables (see Page 32 for speaker cable). Shipping weight, 110 pounds. \$132.50
- 57 PTM 8972—Same as 57 PTM 8971 with 4 square steel baffles added (see 57 PTM 7469, Page 63). Shpg. wt., 228 lbs. \$156.50
- 57 PTM 8973—Same as 57 PTM 8972 except with 4 Jensen PAH8 speakers and 4 steel projectors (see 57 PTM 7470 on Page 63) instead of PM12H speakers. This is an excellent combination for chime tower. Shpg. wt., 285 lbs. \$169.50
- 57 PTM 8975—Same as 57 PTM 8972 except with 4 University SAH Driver units with transformers and 4 University LH reflex projectors. This is the very finest combination for chime towers. Shpg. wt., 157 lbs. \$239.95
- 57 PTM 8976—Complete auditorium equipment consisting of 70-watt amplifier, tubes, 2 microphones of your selection from Velocity (A), Crystal (B), or Dynamic (C) with 25-foot cables, 2 microphone floor stands, 6 Jensen PM12H or PAH8 speakers with transformers, 6 baffles of your selection from among 57 PT 07468, 57 PT 07440, 57 PTM 7470 or 57 PT 07443 on Page 63. Order speaker cable as required, see Page 32. Approximate shpg. wt., 275 lbs. \$229.95
- Power Stage**
- (Shown above at right) Any number of these stages can be driven by any amplifier having a 500 ohm output impedance tap. Since it is strictly a power stage it must be used in connection with an amplifier. When so used it adds 70 watts to the total available output. It supplies no field current and must, therefore, be used with P.M. or A.C. electro dynamic speakers. It has an output level indicator calibrated in watts and output impedances of 62.5, 125, 250 and 500 ohms brought out to screw terminals. Four speaker sockets with adjustable taps provide impedances of 125, 250 and 500 ohms. Master gain control. Tubes used 4-6L6G, 1-6F6G and 2-5U4G. Class AB circuit. Uniform in height and width with 70 watt amplifier. Length 14 inches. For 110-volt, 60-cycle A.C.
- 57 PT 08980—Power stage complete with tubes. Shipping weight, 41 pounds. Mailable. \$49.95

THERE'S NOTHING FINER AT ANY PRICE



TOP VIEW SHOWING
RECORD CHANGER
AND CONTROL PANEL



SILVERTONE CONSOLE GRAND SOUND SYSTEMS FOR DELUXE INSTALLATIONS

Sound systems are now a basic necessity in every large house of worship. They enable congregations to hear better and thus derive greater inspiration from church services—for, as every minister and priest knows, parishioners lose interest and fail to get the good of sermons when they cannot hear without straining. Choir and solo music takes on new beauty and dignity when picked up by the microphone and distributed clearly and distinctly throughout the edifice. Organ and recorded chime selections win community approval when transmitted out-of-doors through tower or belfry speakers—especially on festival occasions such as weddings, christenings, confirmations, and on religious days like Christmas and Easter.

Modern cemeteries, too, have need for a centralized sound distribution system. For example, a completely equipped Masonic cemetery near Chicago on each Sunday from May to October broadcasts chime, organ, instrumental and vocal recordings through loud speakers concealed in a cupola atop the cemetery office. At large funerals and on patriotic holidays such as Memorial Day and July 4th the microphone is used to reproduce the voices of speakers, singers, and instrumentalists and distribute the sound throughout the grounds.

It is to fulfill such applications that the Silvertone console grand was designed.

Housed in its beautiful and massive cabinets are a 35-watt 3-channel amplifier and an automatic record changer. The top of the console lifts to give access to the controls which, when once adjusted, require no further attention. A visual volume level indicator calibrated directly in watts makes adjustment easy and positive.

The 35-watt basic amplifier delivers adequate power for the interiors of even the largest churches and cathedrals. Even coverage of basement and adjoining rooms will rarely call for more. For a more complete description of the amplifier used see Page 54.

When it is desired to include belfry speakers for the broadcasting of chime and organ programs one or two power stages must be added. There is ample room in the console for these also and the amount of power required will depend, of course, on the elevation of the speakers and the distance the tones are to carry. Speakers at great heights will require more power than those nearer the sidewalk level. Usually 70 watts will be sufficient. If, after a trial, it is found that still more power is needed, another stage can be added at little expense.

The basic amplifier has inputs for 1, 2, 3, or 4 microphones in addition to the phonograph; one for the choir and organist, the other for the pastor. There is also provision for connecting headphone wires leading to the section in the church set apart for the hard-of-hearing. Headphones and volume control boxes for this purpose are listed on Page 15.

The automatic record changer accommodates eight 10-inch or 12-inch records with each loading. Special chime records suitable for church and cemetery use will be found on Page 58.

\$137⁵⁰ Cash

57 PTM 8985F

\$12.50 Down . See Page 2

Cabinet is a distinctive design with an offset front treatment that produces a lovely overall effect. Hand-rubbed, selected stump walnut veneers with Australian Blackwood inlay form the pilasters and front of cabinet. Cabinet size: 34 in. high, 33½ in. wide, 17½ in. deep. Licensed by Electrical Research Products Inc., under U. S. patents of the American Telephone and Telegraph Company and Western Electric Company. Numerous combinations are available using the basic amplifying unit described, all at special prices. Below are listed a few of them for your convenience and guidance in making a suitable selection. If, however, you desire a different selection of combinations you may have it at a comparable money-saving price. Write our Personal Service Department, Chicago, for special quotations on systems not listed below. If you need assistance in making your selection we will gladly give it. This is Custom-Built Equipment. Allow 14 days for shipment.

For Sears Easy Terms, See Page 2

57 PTM 8985F—Basic 35 watt amplifier, tubes, and phonograph unit in console as shown. Not Mailable. Shipping weight, 107 pounds. Cash price. \$137.50

57 PTM 8986F—As above with 4 Jensen PM12B speakers, 4 walnut wall baffles No. 57 PT 07443 shown on Page 63, two velocity (A), crystal (B) or dynamic (C) microphones (see preceding page for illustrations) each with 50-foot cable, and two floor type microphone stands. Not Mailable. Shipping weight, 255 pounds. \$225.00

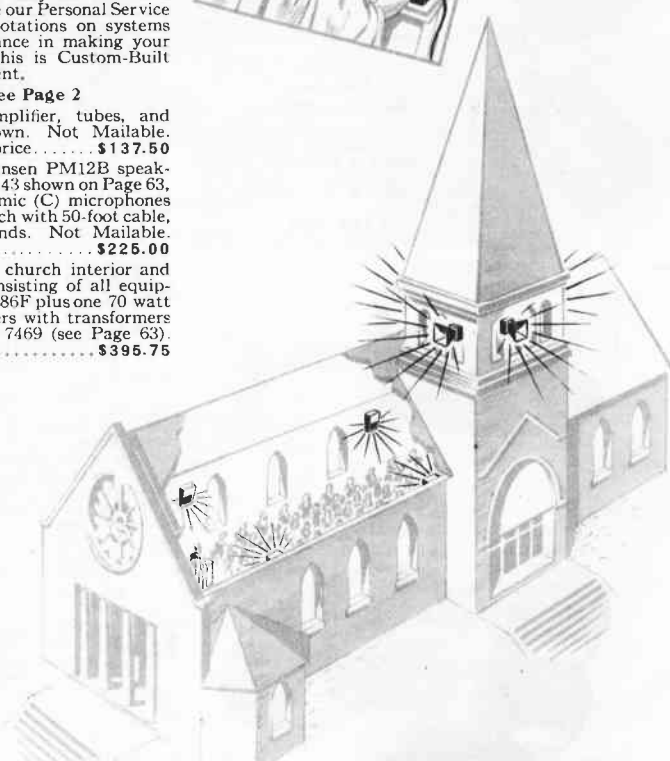
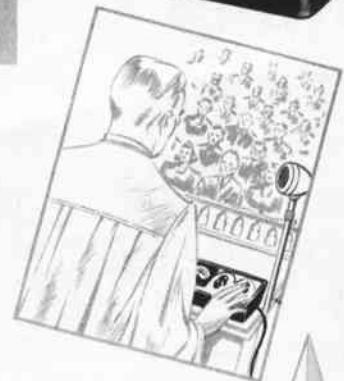
57 PTM 8987F—Complete 105-watt church interior and belfry chime broadcasting system consisting of all equipment contained in selection 57 PTM 8986F plus one 70 watt power stage, 4 Jensen A12PM speakers with transformers and 4 steel baffles number 57 PTM 7469 (see Page 63). Shipping weight, 476 pounds. \$395.75

57 PTM 8988F—Same as the 57 PTM 8987F except 4 University WRSA Driver units and 4 LH University reflex projectors are substituted for 4 Jensen A12PM speakers and 4 steel baffles, No. 57 PTM 7469. A superb combination—worthy of America's finest cathedrals and chime towers. Shipping weight, 400 pounds. \$472.50

Pulpit Volume Control

We also have available for this system a handsome two channel volume control with visual output meter designed to enable the pastor to control the volume from either Microphone without leaving the rostrum. Solid walnut. This device makes for such added convenience and efficiency that it should be a part of every Church System. 50-ft. cable.

57 PT 08989—Shipping weight, 16 pounds. \$15.50



RECORD PLAYERS



Public Address Record Player

\$9.95 Up
Every public address system should be provided with a good record player. There are many occasions when recorded programs are desirable. This machine, with modern electrically-cut records played through any Silvertone Public Address Amplifier, will provide entertainment of ultra-fine quality. All Silvertone Amplifiers have provisions for plugging in this record player. It is provided with tone control and volume control on motor board for convenience in manipulation. Substantially made artificial leather covered carrying case, size 7¼x13¼x15¼ inches. Quiet running, powerful motor with 6-foot power cord. 10-inch turntable. Standard speed of 78 R.P.M. 110-volt 60-cycle A.C. Shipping weight, 29 lbs. **57 PT 08901**—With Magnetic Pickup. . . . \$9.95
57 PT 08900—With Astatic crystal pickup. Cash Price. . . . \$13.25

Tone Equalizer

(A) An adjustable tone compensation network that is recommended for use with all crystal pickups. It connects between pickup and amplifier. The rotary switch provides four equalizing circuits. Single hole mounting. Furnished complete with dial plate knob and instructions. Shpg. wt., 1 lb.



57 PT 7770
Tone Equalizer, Each. . . . \$1.91

Astatic Scratch Filter

(B) An inexpensive device designed to suppress needle scratch from either crystal or magnetic pickups. Encased in cadmium plated shell. Size 1½x2½x¾ in. Shipping wt., 8 oz.



57 PT 7771
Astatic Scratch Filter. Ea. . . . 73c



\$28.95 Cash

\$3 Down
See Page 2

(C) (Shown at left.) You can build your own recorder with this new, inexpensive and durable mechanism. This unit brings the cost of GOOD recording equipment within the budget of the average amateur and user. It is the answer to the growing demand for a recording assembly that can be used with standard amplifiers and radios to record on acetate blanks up to 12 inches in diameter. Consists of a spindle and worm gear, driven at the center of the turntable, feed screw cutting head mounting and high fidelity cutting head. The cutter impedance of 8 ohms matches the available impedance of any Silvertone Amplifier listed in this catalog. Only 2 watts of amplifier power is needed. Therefore even the smallest Silvertone amplifier will suffice. A radio set of phonograph-radio combination can also be used to supply necessary recording power. The mechanism is so designed that it can be attached easily to any good phonograph motor, such as the Garrard transcription motor described

\$4.00 Each

Recorded on 2 Sides

Unquestionably the finest electrical transcriptions available for churches, schools, cemeteries, public buildings and homes. All recordings are made directly on very tough, durable material by electrical equipment of laboratory perfection. Tones are so faithfully reproduced that it is almost impossible to detect from actual chimes. When played through Silvertone public amplifiers and good quality speakers, reproduction becomes the practical equal of the most expensive carillons. Records are 12-inch with recordings on two sides. Blank space is provided at start of such record for use with automatic record changers. Standard speed of 78 R.P.M. These records are made to order—**not** carried in stock. The usual practice is to have two hymns on each side of a 12-inch record, and two verses to each hymn. The break between the hymns is indicated on the record although the record will play straight through. Write Personal Service Department, Chicago, for list of over 500 religious, patriotic and general titles available. Shipping weight, 1 pound.

57 PT 7786—Each 12-inch record. . . . \$4.00



Wireless Record Player

\$10.95 Cash
\$2 Down
See Page 2
This Silvertone record player will provide fine reproduction of 10 or 12-inch phonograph records through your radio, regardless of its age or make. There are no connecting wires between the machine and the radio. Reproduces the recorded program and transmits it to your radio through the air. Does not interfere with normal operation of set. Crystal pickup. Walnut colored Bakelite case. Smooth running motor. Size overall, 12½x8¼x5½ inches. Underwriters Approved. For 110-volt, 60-cycle A.C.
57 PT 06229—Shipping wt., 13 lbs. Cash. . . \$10.95

Economy Record Player

\$7.65 The efficient Silvertone record player is designed for use with radio sets (having provisions for phonograph input, or sets in which it is practical to make the necessary connections). Plays 10-inch or 12-inch records. Has quiet-running motor and crystal pickup. Adjustable volume regulator and on-off switch. Brown Bakelite case with metal parts finished to match. Size 5½x12½x8¼ inches. For 110-volt, 60-cycle A.C. Instructions for installing included.
57 PT 06227—Shipping weight, 9 pounds. . . \$7.65
57 PT 5429—Adapter for radios without phonograph jack. Shipping weight, 6 ounces. . . . 98c



Presto Blanks

Acetate coating on aluminum for making home recordings. Low surface noise, good frequency response. Long wearing "Orange Seal" quality.

Catalog Number	Size, Inches	Shipping Weight	Price, Each
57 PT 7791	6	8 oz.	\$0.40
57 PT 7792	8	8 oz.	.55
57 PT 7793	10	8 oz.	.80
57 PT 7794	12	8 oz.	1.00

Phonoflex Recording Blanks

A new low-priced recording disc of plastic material on bristol board base. Non-inflammable. Cuts as easily as acetate. Coated both sides. Will give as many playings as ordinary recording.

Catalog Number	Sizes, Inches	Shipping Weight	Price, Each	50 or More Each
57 PT 7795	6	4 oz.	22c	20c
57 PT 7796	8	4 oz.	34c	30c
57 PT 7797	10	8 oz.	45c	40c
57 PT 7798	12	8 oz.	56c	50c

3-Tube Electrically Amplified Phonograph!

This Silvertone is not an ordinary phonograph but a powerful amplifying electric with the sound system of a big radio built into it. Has a 3-tube circuit with 3 watts of power output and a 6½-inch radio-type dynamic speaker that means superb tone realism and highest fidelity—from whisper softness to tremendous volume.

\$19.95 Cash

\$2.50 Down
See Page 2

It's portable, too. Covered in smart luggage fabric—tan with woven gold, maroon, and dark brown stripes. Waterproof and washable. Compact, easy to carry. Size 17¼x14¼x7½ inches.

Save \$20 at Sears. Most amplifying phonographs sell for \$40 to \$50. We bring you this Silvertone for only \$19.95.

Approved by Underwriters. Plays 10 and 12-inch records with lid closed. High-fidelity crystal pickup. Variable volume and tone controls. Self-starting constant speed electric motor with On-Off switch. Compartment for 10 and 12-inch records. Needle cup. Package of 50 needles. For 110 to 125-volt, 60-cycle A.C. For 50-cycle add 50c. For 25-cycle add \$2.00. State current. Mailable.

57 PT 05827—Shpg. wt., 24 lbs. Cash Price. . . . \$19.95



REK-O-KUT Recording Mechanism

on the following page. Records 80 lines per inch which permits 3 minute and 10-second recordings on 10-inch blanks and over 4 minutes on 12-inch blanks at 78 R.P.M. Either a 78 or 33¼ R.P.M. motor can be used. Records from inside to outside. Shpg. wt., 5 lbs.

57 PT 7764—Cutting heads, feed screw, carriage hardware and instructions. Cash price. . . . \$28.96

Recording Needles

Rangertone Stellite polished hard metal needles for Acetate or other semi-plastic discs. Shipping weight, 2 oz.

57 PT 7785—Each. . . . \$1.00

Genuine Presto sapphire recording needle for Acetate discs. Shipping weight, 2 ounces.

57 PT 7790—Each. . . . \$6.00

Recording Blanks are listed above.

Stroboscope. For checking 78 and 33¼ Turntable speeds. **57 PT 7799**—Shipping weight, 4 ounces. . . . 12c

Rangertone Chime Transcriptions

vided at start of such record for use with automatic record changers. Standard speed of 78 R.P.M. These records are made to order—**not** carried in stock. The usual practice is to have two hymns on each side of a 12-inch record, and two verses to each hymn. The break between the hymns is indicated on the record although the record will play straight through. Write Personal Service Department, Chicago, for list of over 500 religious, patriotic and general titles available. Shipping weight, 1 pound.

AUTOMATIC RECORD CHANGERS



RCA Number 9865

\$2643
Cash
\$3 Down
See Page 2

Plays seven 12-inch records or eight 10-inch records automatically and repeats the last record. Records of any size up to 12 inches may be played normally. A reject lever, when thrown, automatically feeds the next record. Has crystal pickup into which needles are put in from top. Offset arm assures perfect tracking. Light needle pressure gives long record life. Brown wrinkle lacquer finish with chrome trim. Size: Motor board 14 3/4 in. wide x 11 1/2 in. deep. Space required above motor board 4 1/4 inches. For 110-volt, 60-cycle A.C. Shipping weight, 35 pounds.

57 PT 07545—Cash Price, \$26.43



GARRARD Number RC10

\$3822
Cash
\$4 Down
See Page 2

Plays eight 10-inch or 12-inch records automatically. Has an automatic stop which operates as soon as the last record has played. An automatic rejection knob, when turned, rejects any record either before playing or while it is being played. Has speed regulator. Powerful motor designed to give a lifetime of service. Crystal pickup. Size 15 in. long, 11 3/4 in. wide, 4 1/2 inches clearance above plate. Clearance required below plate 4 1/2 in. For 12-in. records cabinet space should be 15x13 in. For 100/130 and 200/250-volt, 50/60-cycle A.C. Made in England.

57 PT 09605—Shpg. wt., 30 lbs. Cash Price, \$38.22



GARRARD Number RC50

\$5290
Cash
\$5 Down
See Page 2

This machine will play eight disc records of any make—10 or 12-inch—in any assortment, any combination. The motor is the finest phonograph motor that money can build. Automatic stop functions as soon as last record is played. High grade crystal pickup. Non-slip spindle eliminates record skidding. Any record may be automatically repeated at any time. Speed regulator. Dimensions overall with full record supply: 16 inches long x 14 inches wide x 5 1/2 inches above plate and 4 3/4 inches below plate. For 100/130 and 200/250-volt, 50/60-cycle A.C. Made in England.

57 PT 09606—Shpg. wt., 35 lbs. Cash Price, \$52.90

Phono. Motor

RCA33343. Smooth, easy-running motor that is very satisfactory for home record players. 7-inch turntable covered with brown flock. Plays any size record up to 12 inches. See pickup arm (A) below designed for use with this motor. For 110-volt, 60-cycle A.C. Shipping weight, 6 lbs.

57 PT 7546..... **\$3.50**

GARRARD Transcription Motor

This super-deluxe phonograph motor is capable of meeting the most exacting requirements of broadcasting stations, recording studios and other similar applications. Two-speed motor equally constant in speed at 78 or 33 1/3 R.P.M. Self-starting, induction type with no brushes to create radio interference. Patented governor insures perfect regulation on shot lubrication. Minimizes upkeep problem. Extra powerful torque with 12-inch weighted turntable insures freedom from "wows" and vibration. For 100/130-volt and 200/250-volt, 40/60-cycle A.C. See Page 2 for Terms. Made in England.

57 PT 09607—Shpg. wt., 15 lbs. **\$23.52**

Rim Drive Motor

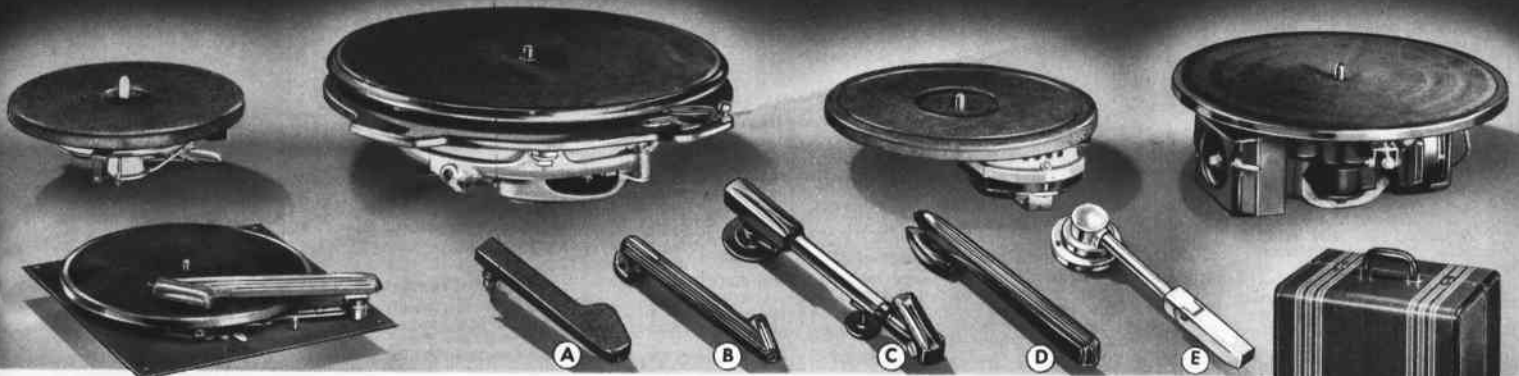
Model RX. 78 R.P.M. General Industries self-starting induction type. Motor is rubber insulated from bath mounting plate and turntable. Turntable shaft revolves with turntable. Driving pulley, idler and turntable positively aligned in one plane, assuring efficient operation. 9-inch turntable. 110-volt, 60-cycle A.C. Shpg. wt., 10 lbs.

57 PT 7775..... **\$3.63**

Green Flyer Motors

The old reliable General Industries Type. Noiseless; self-starting. Bronze finish. For 110-volt, 60-cycle A.C. See Page 2 for Sears Easy Terms.

57 PT 7776—Model A. 78 R.P.M. 10-inch turntable. Shipping weight, 11 pounds. **\$7.65**
57 PT 7777—Model D. Dual speed 10-inch turntable. Wt., 13 lbs. **\$10.20**
57 PT 7778—Model G. For 110-volt D.C. or 110-volt, 60-cycle A.C. 10-inch turntable. Shpg. wt., 14 lbs. **\$11.85**



Electric Phonograph Assembly

Designed for those who desire a complete phonograph motor, turntable and pickup assembled on a steel panel. Base plate 11 1/4 inches wide, 11 inches front to back. High impedance crystal pickup with true tangent offset head. General Industries Type CX Motor, direct drive 78 R.P.M. Self-starting, induction type. Automatic stop. Fully enclosed with silent helical cut gears running in a bath of oil in sealed housing. Combination metal and rubber turntable drive sleeve and record-centering tip insures mechanical and electrical insulation between turntable and motor. 10-inch turntable. Depth below plate 3 1/2 inches. For 110-volt, 60-cycle A.C. See Page 2 for Easy Terms.

57 PT 07779—Shpg. wt., 17 lbs. **\$13.20**

Permo-Point Needles

Extra fine, long-playing phonograph needles especially recommended for public address systems and automatic record changer use. Smooth precious metal point, assures longer record life and clear mellow tone. Shipping weight, each, 2 ounces.

57 PT 5925—Plays 2000 times. **69c**
57 PT 5926—Plays 1000 times. **39c**

NATIONALLY ADVERTISED Crystal Phonograph Pickups and Cartridges

(A) RCA Junior Crystal Pickup. Plays either 10-inch or 12-inch records. Sealed crystal. Needle position is offset. Shock-proof rubber mounting. Brown wrinkle lacquer finish to match RCA phonograph motor 57 PT 7546 above.

57 PT 7547—Shpg. wt., 2 lbs. **\$2.91**

(B) Astatic Model O-7 Crystal Pickup. Designed for applications requiring quality output combined with short mounting centers; only 7 inches. Plays 10-inch or 12-inch records. Output 2.9 volts across .5 meg. load. Needle pressure 2.75 oz. Length overall, 9 1/2 inches. Statuary brown finish.

57 PT 7765—Shpg. wt., 1 lb. 4 oz. **\$3.82**

(C) Astatic B-10 Crystal Pickup. A deluxe pickup for those who desire the ultimate in fidelity of record reproduction. The true Tan offset head reduces tracking error to 1.5 degrees on a 12-inch record. Rotating head facilitates needle loading. Ball bearing swivel base and cradle type arm rest. Telephone black and bright chrome trim.

57 PT 7766—B-10 for 10-inch and 12-in. records. Shpg. wt. 3 lbs. **\$10.29**

57 PT 7767—B-16 for lateral transcriptions up to 16 inches. Shipping weight, 3 pounds 8 ounces. **\$13.23**

(D) Shure Zephyr Crystal Pickup. Plays 10-inch and 12-inch records. Does complete justice to the complete range of modern high fidelity recordings. Needle pressure 2.75 ounces. Tone arm elastically isolated from base with "full floating" mounting. Output 2.75 volts. Arm is 11 inches long. Black Bakelite shell.

57 PT 7780—Shpg. wt., 1 lb. 4 oz. **\$4.41**

(E) Shure Transcription Reproducer. Meets every requirement of broadcasting stations and other uses where only the very finest equipment is used. Genuine grafoil Bimorph crystal cartridge, triple moisture proofed. Head pivots horizontally for easy needle changing. 2.75 oz. needle pressure. Output 2.25 volts. For 10-inch and 12-inch records. Overall length, 10 3/4 inches. Chrome finish.

57 PT 7781—Shpg. wt., 2 lbs. **\$9.11**

Shure Replacement Cartridges

Shipping weight, each, 8 ounces.
57 PT 7782—Model WZ0C. For Shure Zephyr. Economy, Transcription Pickups. Lug Terminals. **\$2.94**
57 PT 7783—Model WZ4C Universal type for popular make pickups using screw terminal cartridges. **\$2.94**
57 PT 7784—Model WZ5C. Universal type for popular make pickups using pin terminals. **\$2.94**



GARRARD Record Changer Cases

Airplane luggage style. Sturdy and durable for hard use and long wear. Leather corners and carrying handle. Fine quality hardware. Shipped with motor board to fit Garrard automatic record changers described above. Shipping weight, 14 pounds.

57 PT 9608—For Model RC 10 Garrard record changer. **\$6.91**

57 PT 9609—For Model RC 50 Garrard record changer. **\$7.50**

Easy Terms

You can buy any item in this Catalog on Sears Easy Payment Plan in orders of \$10 or more.

See Page 2 for complete information on Sears Easy Payment Terms.



SHURE

"UNIDYNE"

Uni-Directional Microphone

Very latest in dynamic microphone design. Eliminates feedback, audience and background noise—greatly reduces reverberation pickup. Employs the exclusive Shure "uniphase" principle. Gives smooth wide-range reproduction from 40 to 10,000 cycles over a wide angle at the front, yet is dead (down 12-15 db) at the rear. Solves many troublesome sound pickup problems in public address, recording and broadcasting. Rugged, shock-proof construction with specially-suspended, double-wind-screened moving-coil system. Practically unaffected by heat and humidity—ideal for severe outdoor as well as indoor service. Ultra-modern streamlined design finished in beautiful satin chrome. Head tilts through full 90-degree angle. Built-in cable connector. Special locking microphone plug attached to cable 1/4 in.-27 thread for stand mounting. Case dimensions: 4 1/4 in. high; 3 1/4 in. wide; 3 1/4 in. deep. Net weight, less cable, 2 1/2 lbs. Shipping weight, 4 pounds 4 ounces.

57 PT 8205—Model 55C. High impedance (100,000 ohms). Price.....\$26.46



Amperlite

KONTAK Mikes

These microphones faithfully reproduce the vibration of any musical instrument on which they are placed. Frequency range 40 to 9000 cps. Output level—40 db. Suitable for use on all string instruments such as guitars, violins, string bass viols, or other instruments including pianos, reed organs, harmonicas, trumpets, clarinets, etc. Can be used with any Amplifier. Or, with Amperlite Booster transformer listed below, can be used with modern radios of 6 or more tubes. Cannot be used without amplifier or radio. 15-foot cable. No phone plug or attaching clamp. Standard Model SKH illustrated at left above. No volume control. Foot pedal control listed below is recommended. Shipping wt., 1 lb.

57 PT 8206—Price.....\$7.06

DeLuxe Model KKH illustrated at right above. Has hand volume control. Shpg. wt., 1 lb.

57 PT 8207—Price.....\$10.58

Booster Transformer Model BT for use with above mikes for playing through radio set. Shpg. wt., 2 lbs.

57 PT 8208—Price.....\$1.76

Foot Pedal Control. For Model SKH. Shipping weight, 4 pounds.

57 PT 8209—Price.....\$7.06

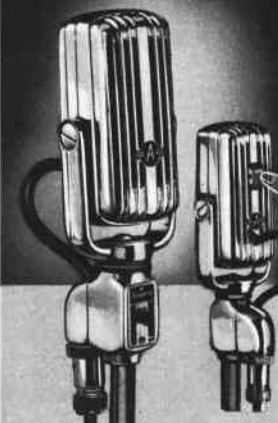


Booster Transformer



Foot Pedal Control

THE AMPERITE ACOUSTIC COMPENSATOR VELOCITY MICROPHONE



Distinguished in Design and Quality

\$2470 Cash

Terms: \$3 Down See Page 2

Genuine Alnico Magnet. Hand-hammered ribbon. Impervious to temperature and humidity changes. High output. Excellent for close talking or distant pickup. Free from background noise. Acoustic Compensator permits increase of high frequencies by merely moving finger button. Frequency range 40 to 11,000 cps. output—65 db. Chrome finish. Complete with built-in switch and 25-foot cable. Shpg. wt., 8 lbs. Also sold on Easy Terms. See Page 2. 57 PT 8200—Model RBHK. High impedance. For cable lghts up to 125 ft. Price...\$24.70 57 PT 8201—Model RBMK. Low impedance (200 ohms). For cable lengths up to 3000 feet. Price.....\$24.70

Popular Priced Model RSHK

Almost, but not quite as good as the models listed above. Same case, same features except that less expensive construction reduces frequency range to 60 to 8000 cps. Output—68 db. High impedance. Chrome finish. Shpg. wt., 8 lbs. 57 PT 8202—Complete with 25-foot cable. Price.....\$18.82



THE AMPERITE MODEL SR 80 STUDIO VELOCITY MICROPHONE



For Those Who Demand the Very Best

\$3920 Cash

Terms: \$4 Down See Page 2

This fine microphone will fully meet the requirements of the most exacting purchaser. Considered by many the finest microphone available for general use. Designed primarily for broadcasting studio and recording uses, it is nevertheless being used extensively in the better quality Public Address installations. Having the amazingly broad frequency range of 40 to 15000 cps. it reproduces voice and music with the utmost fidelity. Output—56 db. No preamplifier needed with high gain amplifiers. Gun metal finished case. Comes complete with built-in switch and 25-foot cable. Shpg. wt., 8 lbs.

Buy on Sears Easy Payment Terms if you prefer. For details see Page 2.

57 PT 8203—Model SR80H. High impedance. 57 PT 8204—Model SR80 Low impedance (200 ohms). Price either model.....\$39.20

When low impedance microphones are used with amplifiers having high impedance inputs it is necessary to provide a matching transformer between microphone and amplifier. See transformer number 57 PT 8245 shown on Page 61.

ASTATIC



T3 Diaphragm Crystal Microphone

(A) For Public Address, Recording, Amateur and general Applications. Tilting head. Chrome plated case. Interchangeable plug and socket. Response substantially flat, 30 to 10,000 cps. High impedance. Output—52 db. 25-foot cable furnished. Shipping weight, 2 lbs. See Page 2 for Easy Payment Terms.

57 PT 8210.....\$14.70

JT30 Diaphragm Crystal Microphone

(B) A new popular-priced wide-range model of good response and high output. Substantially flat 30 to 6000 cps. Output—52 db. Genuine Bimorph Crystal. Die-cast case with fixed angle position. Opalescent-gray finish. Spring cable protector. 25-foot cable. Shipping weight, 1 pound 8 ounces.

57 PT 8211.....\$9.70

D104 Crystal Microphone

(C) Designed especially for and used by more than 12,000 Radio Amateurs. Response has rising characteristic above 500 cps. to stress the important speech frequencies. Solid bronze case, chrome finish. High impedance. Output—40 db. requires minimum gain in Amplifier. 8-foot cable. Shipping weight, 1 pound 12 oz.

57 PT 8212.....\$13.23

Microphones like everything else at Sears sold on Easy Terms. See Page 2.

UNIVERSAL BRUNO



Universal Velocity Microphone

(D) An outstanding microphone development for all-around use. Combines striking beauty with superlative performance. Chrome finished. Suitable for either close-talking or distant pickup. Frequency range 40 to 10,000 cps. Output level—66 db. High impedance. Has 3/4-inch 7-27 thread. 25-foot cable. Shipping weight, 3 pounds. See Page 2 for Sears Easy Payment Terms.

57 PT 8219—Model 5MM-H.....\$14.41

Universal Crystal Microphone

(E) A strictly first-quality instrument. Curvilinear diaphragm. Free from background noise. Low Acoustic feed-back. Modernistic chrome-finished case. High impedance. Fits 3/4-inch to 7-27 thread. Output—64 db. Frequency response 50 to 5,000 cps. Shipping weight, 3 pounds. See Page 2 For Complete Details of Sears Easy Payment Terms.

57 PT 8220—Model 15MM-X.....\$14.41

Bruno VRHP Dynamic Microphone

(F) One of the finest Velocity Microphones ever offered at a popular price. Embodies the latest electroacoustic improvements. Free from cavity resonance and background noise. Output—67 db. Frequency response 80 to 12,000 cps. Gun metal finished case. 25-foot cable. Fits 3/4-inch 7-27 thread. Shipping weight, 4 pounds. See Page 2 For Sears Easy Payment Terms.

57 PT 8221.....\$14.70

Utility Microphone Handle

(G) Ebonyized wood with brass threaded insert to fit standard 3/4-inch 7-27 microphone end rings. Shipping weight, 1 pound.

57 PT 8215—Price.....25c

Swivel-Type Table Stand

(H) Black wrinkle base. Chrome plated tube. Height 10 1/4 inches. Ball and socket swivel has 3/4-inch 7-27 thread. Shipping weight, 5 pounds.

57 PT 8216—Price.....\$1.59

Same as above except without swivel. Height, 8 1/2 in. 3/4-inch 7-27 thread. Shpg. wt., 4 lbs. 8 oz.

57 PT 8217—Price.....\$1.10

Carbon Microphone Rings

(I) Attractive chrome finish. 8 rust-proof springs included. Fits 3/4-inch 7-27 thread. For use with any stand or handle here described. Diameter, 6 inches. Shipping weight, 1 pound

57 PT 8218—Price.....\$1.25

"Velvet-Action" Floor Stand

(N) Tubes of heavy brass, heavily chrome plated. Ten-inch metal base, black crackle finish. Stand is adjustable from 36 to 67 in. Threaded for 3/4-in.-7-27 microphone. Shpg. wt., 10 lbs.

57 PT 08213.....\$3.60

Shure Bros. Studio Stand

(P) Model S55A. Super-positive friction lock clutch. Adjustable 48 to 70 in. Leg spread 15 1/4 inches. Iridescent gray finish. Shipping weight, 14 pounds.

57 PT 08214.....\$9.11



**ASTATIC
NEW MODEL DN
DYNAMIC
MICROPHONE**



**Moving Coil Type
Microphone**

The Model "DN" is replete with new engineering accomplishments. Outstanding features incorporate Astatic's new UNITARY MOVING COIL SYSTEM, a correctly designed magnetic structure with ALNICO magnet, and a carefully proportioned ACOUSTIC CIRCUIT to highly damp the natural resonance of the moving system and provide a response characteristic substantially flat from 50 to 7000 cycles. The case design is distinctively new and good looking and attractively finished in two-tone, opalescent-gray and chrome. Side vented grille design protects against crushed diaphragms. Complete barometric compensation is also provided. The "DN" design employs all features necessary for wide applicability, including Astatic's tilting-head swivel mount, and plug-connector with spring cable protector. High impedance. Output 55 db. 25-foot cable. Fits 3/8-inch 7-27 thread. Shpg. wt., 2 lbs. 10 oz.

\$13.23
Cash

Terms: \$2 Down
See Page 2

57 PT 8222—Cash Price.....\$13.23

**NEW BRUSH
MODEL "AT" ALL PURPOSE
CRYSTAL
MICROPHONE**



**High or Low Impedance
in the Same Mike**

The first commercial high fidelity microphone, by present day standards, was the Brush crystal sound cell type introduced in 1933. Today, Brush sound cell microphones, more than ever before, are generally accepted the world over as standard for the most exacting sound measurements and for all applications in which the highest quality is required.

The diaphragm type of crystal microphone was developed to secure greater output. In general, this type has been characterized by somewhat less uniformity of response for the higher frequencies than the sound cell type. Consequently, Brush and its licensees have pioneered in developing special methods of compensation, to secure marked improvement in quality.

As a good general purpose microphone, the Brush AT is without equal. Never before has such a universal microphone been offered at the price. Its many features are housed within a satin chrome, die cast case of modern and arresting design.

Exceptional sensitivity—(48 db.), satisfactory operation with even the smallest type of P.A. Amplifiers. Conveniently variable tone control of bass and treble. "Mellow Quality" or good articulation as desired. Effective output of amplifier (also transmitter) may be increased by eliminating unnecessary bass. Control of feed-back. High or low impedance operation, viz., crystal impedance (22,000 ohms at 1,000 cps.) or 50,200 or 500 ohms. Conversion of impedance easily and quickly accomplished. Crystal capacity unusually high (.007 mfd.), permitting the use of considerably more cable than with ordinary microphones. Moderately directional. No compensation necessary for cable length. Position of microphone easily adjustable with new unique swivel design. Suitable for outdoor operation; immune to wind disturbances. Shipping weight, 5 pounds. See Page 2 for Easy Payment Terms.

\$17.35
Cash

Terms: \$2.50 Down
See Page 2

57 PT 8223—Microphone complete with 3-prong, plug and socket and 25 feet of cable. Cash Price.....\$17.35

SHURE

**"UNIPLEX"
Uni-Directional
Microphone**

(A) Response 30 to 10,000 cycles at the front, yet is practically unaffected by sound approaching from the rear. Output level 62 db. Specially moisture-proofed Grafoil Bimorph crystal. Tilting head. Finished in Chrome. 25-ft. of cable. Standard 3/8-inch—27 thread. Shpg. wt., 3 lbs.
57 PT 8248
Price.....\$19.11



Model 700D

(B) Response, 30 to 10,000 cycles. Dual-Drive Grafoil Bimorph Crystal. Internal Screen-Protected Cartridge. Crystal Triple Moisture-Sealed. Output Level—53 db. Curvilinear Diaphragm. Swivel type. Semi-directional. Tilting head. Satin Chrome finish. 25-ft. cable. Shpg. wt., 3 lbs.
57 PT 8249
Price.....\$14.70



"Rocket"

(C) Response from 30 to 10,000 cycles. Output: 55 db. below 1 volt per bar. Special moisture-sealed Grafoil Bimorph crystal and other exclusive "Ultra" features. Model 705A—"ROCKET" Crystal Microphone. Complete with 25-ft. shielded single conductor cable. Shpg. wt., 2 lbs.
57 PT 8250
Price.....\$14.70



Streamliner

(D) Gives voice and music reproduction highly suitable for low-cost public address. Beautifully streamlined; rich Satin-Chrome finish. 3/8-in.—27 thread for stand. Diameter, 2 3/8 in. CRYSTAL MODEL. Response 30 to 10,000 cycles. Output—53 db. Grafoil Bimorph crystal, fully moisture-proofed. Complete with 7-ft. cable. Shpg. wt., 2 lbs.
57 PT 8252
Price.....\$9.70



"Military"

Fits naturally, comfortably in the palm of the hand. Light and compact, takes minimum space in portable equipment. Sturdy cast-aluminum case, with bright Satin grille and bars against a background of Iridescent Gray. Excellent response and high output level. Improved cam-operated switch locks in the "ON" position when pushed "up," operates "ON-OFF" in the "down" position. Switches to control external circuits can be furnished on special order. An ideal unit for sports announcers.



Size: 3 3/8 inches high; 2 3/8 inches wide; 1 3/8 inches thick. Complete with removable Suspension Hook, and 7-ft. shielded rubber jacketed cable with spring cable projector. Shipping weight, 1 pound. See Page 2 for Sears Easy Terms.

57 PT 8253—Complete with switch.
Price.....\$13.23

Page 61

CARBON TYPES



Universal Press-to-Talk Sets

(G) Combines microphone and receiver in one unit. Double pole press switch in receiver end. Can be operated in either hand with equal ease. 2000 ohms receiver. Recommended for "Pack" transmitter, portable two-way systems, yachts and similar uses. Has 6-foot, 4-conductor cable. Shipping weight, 1 pound 8 ounces.
57 PT 8224—With Single Button Carbon Mike. Price.....\$8.53
57 PT 8225—With High Impedance Crystal Mike. Price.....\$16.76

Universal Model W Carbon Mike

(H) Single Button. Combines high sensitivity, light weight, and compactness. Diameter only 1 3/8 inches. Thickness 1/2-inch. Impedance 200 ohms. Output—38 db. Bakelite case. Shipping weight, 8 ounces.
57 PT 8226—Price.....\$1.76

Universal XX Carbon Microphone

(J) Double Button. Unquestionably the most popular microphone of its type on the market. Its high output insures maximum volume on either high or low gain amplifiers. Highly polished chrome plated. Diameter, 2 1/2 inches. Thickness, 1 3/8 inches. Duraluminum diaphragm. Frequency range 40 to 6,000 cps. Impedance 200 ohms per button. Shipping weight, 1 pound.
57 PT 8227—Price.....\$5.88

TURNER

Turner Model 99 Dynamic Microphone

(K) Indoors or out, regardless of climate or temperature you get sure-fire operation with this superb instrument. Designed for the man who can't afford to have a failure. Response range 50 to 9000 cps. Output level—54 db. Removable connector with locking feature. Clear, crisp reproduction of either speech or music. Gunmetal finish. High impedance. 3/8-inch 7-27 thread. 25-foot cable. Shipping weight, 5 lbs. See Page 2 for Easy Payment Terms.
57 PT 8228—Price.....\$17.35

Turner Model 66 Crystal Microphone

(L) Designed to give better high frequency response than the ordinary crystal. Narrow beam pickup reduces feedback. Wind and blast proofed. Compensated for barometric changes. An ideal mike for radio amateur use. Chrome case. Range 40 to 9000 cps. Output—54 db. 3/8 inch 7-27 thread. High impedance. 25-foot cable. Shipping weight, 3 pounds 8 ounces. See Page 2 for Easy Payment Terms.
57 PT 8229—Price.....\$14.70

Turner Model 55R Crystal Microphone

(M) The lowest priced crystal microphone on the market. A very popular unit with Radio Amateurs. Entirely suitable for all except the most exacting installations. Response 50 to 7000 cps. Semi-directional characteristics reduce feed-back and reflections. Output—56 db. High impedance. 15-foot cable. Shipping weight, 3 pounds.
57 PT 8230—Price.....\$9.38

(T) Amphenol type MC1 connectors for microphones, phono pickups, and speakers. Single conductor utilizes shell for second conductor. Accommodates cable up to 1/4 inch. Chrome plated. Shipping weight, each, 4 ounces.
57 PT 8231—Type MC1F. Female, with coupling ring.....29c
57 PT 8232—Type MC1M. Male, with coupling threads.....24c

57 PT 8233—Type PC1M. Male connector for chassis mounting.....18c
(U) Amphenol Multiple conductor connectors.
57 PT 8234—Type MC3M three conductor Male with coupling ring...59c

57 PT 8235—Type MC3F three conductor Female with thread.....59c

57 PT 8236—Type SP-PC3F three contact Female for chassis mounting...59c

(V) Amphenol Cable Connectors. Metal cased. Male plugs fit standard tube socket. Shipping weight, each, 3 ounces.
57 PT 8237—4 prong Male.....15c
57 PT 8238—4 contact Female.....15c
57 PT 8239—5 prong Male.....15c
57 PT 8240—5 contact Female.....15c
57 PT 8241—6 prong Male.....15c
57 PT 8242—6 contact Female.....15c

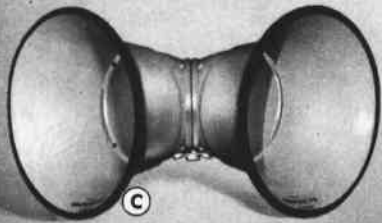
(W) Microphone Plug suitable for either two or three conductors. Bakelite shell. Shipping weight, plug or jack, 3 ounces.
57 PT 8243—Plug.....39c
57 PT 8244—Jack.....29c

(X) Amperite Line Impedance Matching Transformer. Enables use of low impedance microphone and cable lengths up to 5000 feet with high impedance amplifiers. For 25, 50, or 200-ohm microphones. Shipping weight, 3 pounds.
57 PT 8245.....\$3.53



**For Microphone
Cables Shown
at left See Page 32**

UNIVERSITY REFLEXED SPEAKERS



The importance of good speakers for public address installations cannot be overestimated. No sound system is better than its speaker equipment. Efficient speakers justify their cost not only by virtue of their better tone quality—through their increased efficiency they convert the highest possible percentage of the amplifiers' electrical energy into sound waves, thereby increasing the apparent power output of the apparatus.

The Driver Units: Only the highest quality materials and workmanship are used in University driver units. Pole pieces are machined "Armco" electrical quality iron which is 99.7% pure iron. The surface of the "Alnico" Magnets and washer shaped pole pieces are ground microscopically flat.

Due to an exclusive method of voice coil centering these units have far greater efficiency than can possibly be realized with ordinary speakers. Fully 75% of the magnetic gap is occupied by the voice coil as compared to the usual 50%. The construction of the diaphragm alone requires 23 separate and distinct operations.

Specifications of Driver Units

Model No.	Power Capacity In Watts with Horns			Frequency Range Cycles	Max. Height	Max. Diam.
	SMH	LH	PH			
W RSA	..	18	17	70-7500	4 in.	4 in.
SAH	21	27	25	90-5000	4 1/2 in.	4 in.
PAH	..	25	24	70-5000	4 1/2 in.	5 in.

Price List of Driver Units

To make up a complete loud speaker you must have a driver unit and a projector. These we price separately. Horns with wide projection angles will not carry the sound as far as those with narrow projection angle. The longer the projector the better the low frequency response. All University Driver Units are of the Permanent Magnet Dynamic type and require only two connecting wires. All voice coils are of 8 ohm impedance. Any driver unit fits any projector here described.

Type W RSA Driver Unit. Power handling capacity (18 watts). Excellent for public address work where the utmost in clarity in speech and music is required. Aluminum cover furnished when purchased with projector.

57 PT 07480—Shipping weight, 8 pounds.....\$22.34

Type SAH. This entire unit is enclosed in a spun aluminum head assembly. The unit is thus absolutely watertight. Best unit for outdoor use. Handles 25 to 30 watts.

57 PT 07481—Shipping weight, 8 pounds.....\$17.64

Type PAH. For standard public address work requiring power handling capacity up to 24 to 27 watts. When ordered with any University projector an aluminum cover is furnished at no extra cost.

57 PT 07482—Shipping weight, 12 pounds.....\$26.46

The Projectors: It is a well known fact that the driver unit exponential horn loud speaker possesses the highest possible acoustic efficiency. A correctly designed combination having up to 50% electro-acoustic conversion efficiency at speech frequencies, as compared to about 10 to 20% for cone speakers. The invention and development of University reflexed exponential projectors constitute one of the very few important contributions to the further improvement in this type in recent years. To obtain proper "loading" (which is essential to wide frequency response) without undue length and bulkiness, these projectors are so designed that the air column is almost three times the overall length of the horn itself. This sound travel provides frequency responses as wide as 70 to 7,500 cycles.

Waterproof Chambers: The reflexed chambers of University Projectors act as a trap against the possibility of any water entering the mouth of the driver units. It is impossible for a direct stream of water into the horn to get further than the second turn.

Specifications for Reflex Projectors

Model No.	Mouth Opening	Overall Length	Acoustic Length	Low Cut-Off C.P.S.	Projection Angle	Application
PH	21 in.	16 in.	42 in.	140	80°	Speech
LH	25 in.	21 in.	56 in.	115	90°	Speech and Music
SMH	14 in.	12 in.	32 in.	180	75°	P.A. Speech

Price List of Projectors

A Type LH. Very heavy gauge aluminum with all exposed edges made with oversize beads. The double curvature of surface results in a structure absolutely free from all resonance or possibility of rattle. Each horn is tested throughout the audio spectrum, 30 to 10,000 cycles at maximum power. Coupling thread 1 1/4 x 18 inches. See above table for dimensions. Not Mailable.

57 PTM 7483—Shipping weight, 12 pounds.....\$19.99

B Type PH—Same as type LH except for dimensions, for which see table above. Mailable, but we recommend freight or express.

57 PT 07484—Shipping weight, 9 pounds.....\$12.35

Type SMH—Not shown. Similar to type LH. Same construction except dimensions are smaller. See table above.

57 PT 07485—Shipping weight, 7 pounds. Mailable...\$9.11

C Type LWM. Non-Reflex Type. Double cone projector for one 12-inch standard dynamic speaker. Mounting speaker within projector results in bi-directional coverage from a single speaker. All metal, rubber edges at bell. Bell opening 20 inches. Depth overall 30 inches. Mounting brackets extra.

57 PTM 7486—Shpg. wt., 10 lbs. Not Mailable.....\$13.52

57 PT 7487—Mounting bracket for LWM projector. Shipping weight, 3 pounds.....88¢

Specifications of Jensen Speakers

The rating in watts is the output of the amplifier with which the speaker can be used. The efficiency of a speaker is its relative ability to convert electrical energy into sound energy. It is cheaper therefore, to buy better speakers than to invest in more powerful amplifiers. You will notice that you can get as much "loudness" from an A12PM speaker with 3.15 watts input as you can get from a PM10C using 10 watts.

Jensen speakers are without transformers. All speakers and transformers are arranged so that you can easily complete the assembly.

Speaker	Size, in.	Power Rating Watts	Relative Efficiency
PM10C	10	9	0. db=10 watts
PM12C	12	10	+0.5db= 8.9 watts
PAH8	8	15	-2.5db= 5.6 watts
PM12H	12	12	-2.5db= 5.6 watts
PM12B	12	14	-4.0db= 4.0 watts
A12PM	12	15	-5.0db=3.15 watts
M18AC	18	25	-8.5db=1.43 watts

Jensen Speaker Transformers
Model X Transformers are for public address use in matching impedance

values of 500, 1000, 1500, 2000 and voice coil.

57 PT 7425—Core 3/4 x 3/4 inch. For models PM10C and PM12C. Shpg. weight, 1 lb. 8 oz. Each. \$1.32

57 PT 7426—Core 7/8 x 7/8 inch. For models PM8H, PM12H, PM12B, A12PM. Shpg. wt., 2 lbs. Each. \$1.62

Model X Transformers are for radio use. Impedance values are: Voice coil, 4500, 7000, 10,000, and 14,000 ohms.

57 PT 7427—Core 3/4 x 3/4 inch. For model PM10C and PM12C. Shipping weight, 1 pound 8 ounces.....\$1.32

FAMOUS JENSEN SPEAKERS

Jensen "C" Speakers

For Radio and Low Power P.A. Heavy duty, highly efficient reproducers for better quality radio and medium power public address uses. Have magnet covers. Voice coil 6 ohms. Priced without transformer.
57 PT 7430—PM10C. 10-inch. 9 watts. Shipping wt., 6 lbs.....\$6.17
57 PT 7431—PM12C. 12-inch. 10 watts. Shpg. wt., 7 lbs. 4 oz.....\$7.79

"H" Speakers

A new series designed especially for public address work. Have magnet covers. Voice coil 6 ohms. Priced without transformer.
57 PT 7432—PAH8—8-inch. 15 watts. Designed for projector such as our 57 PTM 7470 shown on next page. Shipping weight, 11 lbs.....\$8.82
57 PT 7433—PM12H—12-inch. 12 watts. Shipping weight, 10 pounds..\$11.47

PM12B Speaker

A widely used permanent magnet type reproducer for public address work. Featured in our own systems. Somewhat more efficient than the model "H." Will handle 14 watts continuously. 8 ohm voice coil. Does not have cover over magnet. See upper illustration at right. Shipping weight, 12 pounds.

57 PT 07434—Less transformer.....\$14.70

A12PM Speaker

Recommended where as much as 15 watts must be handled by each reproducer. A marvel of tone quality and efficiency. Unquestionably the most widely used 12 inch PM speaker in the public address industry. Has magnet cover. 8 ohm voice coil. Shipping weight, 18 pounds.

57PT07435—Less transformer.....\$20.43

18-inch Dynamic Speaker

\$50⁸⁶ Jensen M-18 A.C. The largest, most powerful, most capable speaker in the famous Jensen line. Power handling capacity 25 to 40 watts. Its size and unusual performance ability strongly recommend it for super quality public address installations. Very extensively employed in theater installations. Its conversion efficiency is the highest ever attained in electro dynamic Cone speakers. Voice coil impedance 8 ohms. Cone housing diameter 18 in. Voice coil diameter 2 1/2 in. For 110-volt, 60-cycle A.C. See table above for efficiency comparison with that of other Jensen Speakers. Shpg. wt., 78 lbs. Not Mailable.
57 PT M 7436—Less transformers. Cash Price. \$50.86

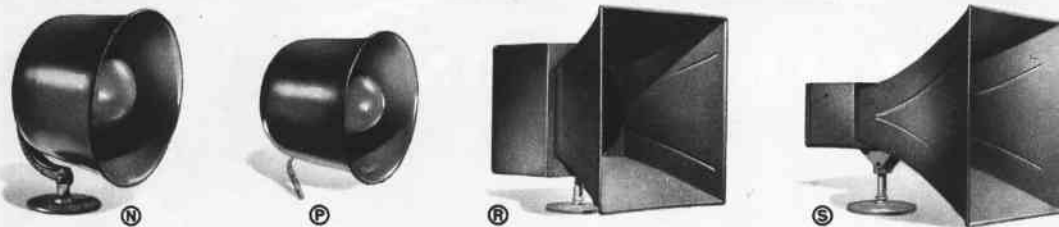


← Replacement Radio Speakers

Finest quality radio type speaker for replacements or extension speakers. P.M. Speakers have Universal transformers with taps to match all popular output tubes, both single and push-pull. Magnetic Speakers have 10,000 ohm inputs and are suitable for practically all uses to which a magnetic speaker can be put except public address.



Size In.	P. M. Dynamic			Magnetic		
	Catalog Number	Shpg. Wt. Lbs. Oz.	Price Each	Catalog Number	Shpg. Wt. Lbs. Oz.	Price Each
6	57 PT 5661	3 10	\$1.98	57 PT 5611	3 10	\$1.10
8	57 PT 5662	6 8	2.79	57 PT 5612	6 8	1.65
10	57 PT 5663	7 4	3.25	.....	.....	.....



All Items in this Catalog can be bought on Easy Payment Terms on orders of \$10 or more ... See Page 2

SPEAKER ENCLOSURES

Waterproof Marine Horns

(N) Reflex construction prevents damage to speaker from rain. Made of heavy aluminum. Bracket is extra. **Type WX-8.** For 8-inch speaker (Jensen PAH8 listed on preceding page is an ideal speaker for this horn). Bell opening 18 inches, length 13 inches. **57 PT 07465—Shpg. wt., 10 lbs. \$9.11**
Type WX-12. For 12-inch speakers. Bell opening 23 in., length overall 16 in. **57 PT 07466—Shpg. wt., 14 lbs. \$16.46** Adjustable mounting bracket. Shpg. weight, 12 lbs.
57 PT 7467—For WX-8. \$4.12
57 PT 7476—For WX-12. \$4.12

(P) **Marine Midget Speaker.** Designed for indoor and outdoor use. Inverted reflex design provides air column length of 15 inches. Made of heavy aluminum. PM speaker supplied has power handling capacity of 5 watts. Voice coil impedance 6 ohms. Bell opening is 10 inches in diameter, length 8 inches. An excellent unit for factory call systems and similar other applications where a good small speaker as well as one which is fully protected is needed. Comes complete with mounting brackets. **57 PT 07468—Shipping weight, 4 pounds. \$6.17**

All Steel Heavy Duty Flare Baffles

(R) This all steel baffle is of spot welded 20-gauge steel throughout and finished in baked-on wrinkle lacquer to give protection from weather through many years of service. Scientifically proportioned to give proper air column "loading" to produce good quality reproduction of both voice and musical frequencies. Bell opening 20x20 inches. Length overall 18 1/2 inches. Comes complete as illustrated including adjustable mounting bracket. For 12-inch speaker. Not Mailable. **57 PTM 7469—Shipping weight, 27 pounds. \$8.15**

(S) This baffle when used in conjunction with a Jensen PAH8 speaker (see preceding page) will provide long range coverage with minimum power. Such a combination is a good compromise between the long-range but relatively poor tone quality of the "Morning glory" horn, and the short-range, excellent tone of the Short flare baffle. Made of spot welded 20-gauge steel. Black baked-on wrinkle lacquer finish. Bell opening 27x27 inches. Length overall 31 inches. For 8-inch cone type speaker. Bracket included. **57 PTM 7470—Shpg. wt., 42 lbs. Not Mailable. \$13.95**

Dynamic Horn

(D) The directional qualities of this horn make it particularly suited to outdoor applications where extreme reach and penetrating power is required. Combines the extreme range of the older type morning glory horns with cone type speaker tone. Designed for use with 10 or 12-inch cone type dynamic speaker which gives good tone quality. Made of acoustic stormproof material which has no resonance frequency of its own and which, therefore, reproduces all frequencies within the range of the speaker used without vibration or resonance peaks. Finished in aluminum. Shipped taken apart, though very easy to assemble. All necessary hardware furnished. Bell opening 35x23 inches. Length overall 44 inches. Shipping weight, 8 pounds. Not Mailable. **57 PTM 7476—Complete with speaker housing as shown. \$10.95**

Round Projector

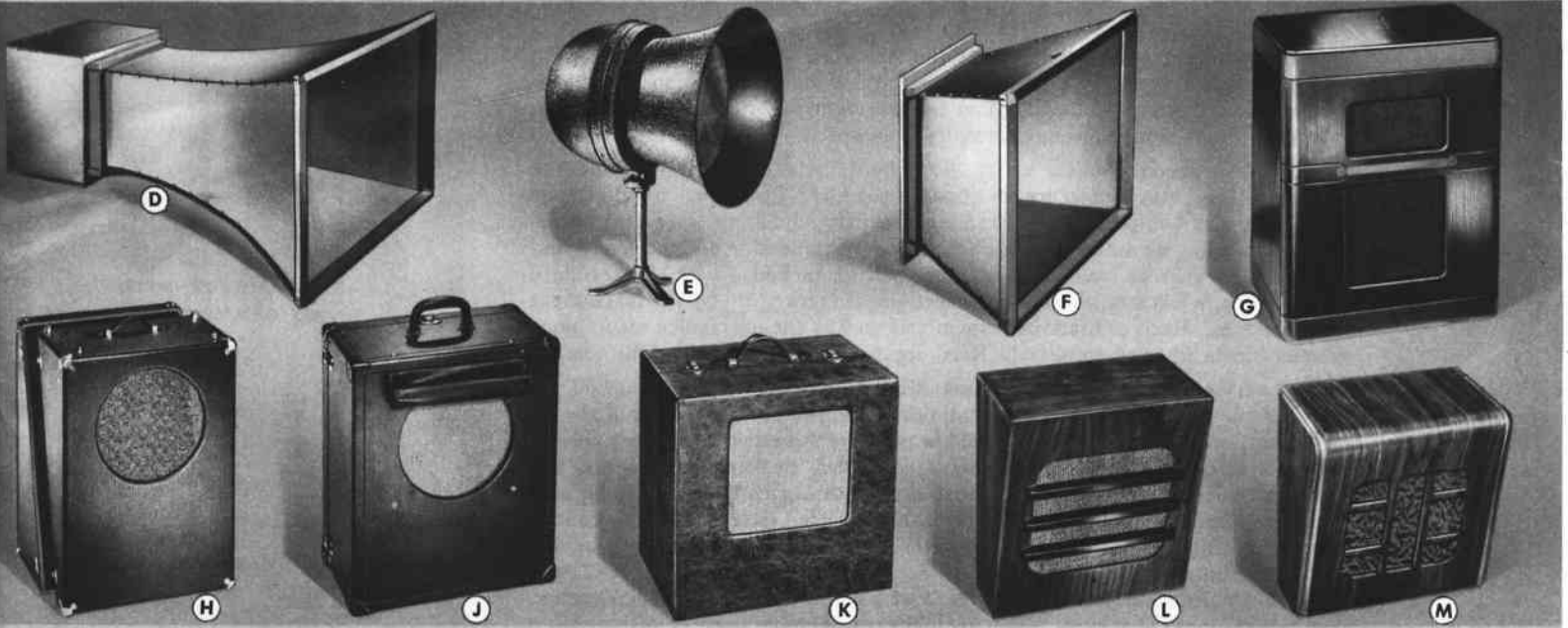
(E) For either indoor or outdoor use. Widely used for auto-top mounting in combination with auto-top mounting platform listed below. Can be easily and quickly removed from auto to auditorium. Projector is made of spun aluminum and steel, weather protected by coating of wrinkle lacquer. Mounting platform has four sponge rubber feet to protect car top. Four heavy web straps and adjustable catch fasteners provide steadfast anchorage to door openings, ledges and other readily available constructional features of any automobile. Projector is for 12-in. speakers. **57 PT 07440—Projector and mounting bracket only (No auto top platform). Shpg. wt., 18 lbs. \$8.15**
57 PT 7441—Auto Top Mounting Platform complete with straps (less Projector). Shipping weight, 10 pounds. Each. \$4.10

Flare Baffle

(F) Improves frequency response and controls sound distribution. Shipped taken apart. Easily assembled. Weatherproof material. Aluminum finish. Baffle takes 10, 11, or 12-inch speakers. Price does not include speaker housing. Bell, 22x23 inches; depth, 25 inches. Very directional. Gives long range with relatively narrow beam. Shipping weight, 15 pounds. **57 PT 07471—Each. \$5.00**
 Wide angle type. Bell, 30x18 inches; depth 14 inches. Less reach than above but wider beam. Shipping weight, 10 pounds. **57 PT 07472—Each. \$4.12**
57 PT 7473—Weatherproof speaker housing for either baffle. Size, 15 1/4 x 15 3/4 x 11 inches deep. Shipping weight, 8 pounds. Each. \$2.35

Jensen Enclosures

(G) Whole octaves are added to speech is crisp and intelligible. Objectionable resonance and boom is eliminated and performance becomes more independent of acoustic environment when these baffles are employed. Combines the famous **Peri-dynamic** and **Bass-Reflex** principles developed by Jensen laboratories. Only the energy radiated from one side of the speaker diaphragm is directed into free space. No uncontrollable mass of air escapes from the cabinet and, hence, no objectionable resonance. Beautiful walnut finish. Shipped taken apart. Easy to assemble. All hardware included. **57 PT 07437—BR10 for 10-inch speaker. Size 28x21 1/2 x 12 1/2 inches. Shpg. wt., 38 lbs. \$11.64**
57 PT 07438—BR12 for 12-inch speaker. Size 30 3/4 x 23 3/4 x 12 3/4 inches. Shipping weight, 47 pounds. \$13.44



Dual Case

(H) A practical, black artificial leather covered case for one or two 12 1/2-inch (or smaller) dynamic speakers. Divides diagonally, each half forming a separate speaker case which rests with wide end on the floor. Strong clasps hold halves of case together firmly. Overall size when closed, 21 1/2 inches high, 13 1/2 inches wide, and 8 1/2 inches deep. Net weight, 7 pounds. Shipping weight, 11 pounds. **57 PT 07474—Each. \$5.69**

2-Section Case

(J) Case has two sections. Size overall when closed, 18 3/4 inches deep, 22 inches wide, 29 3/4 inches high. Speaker section drilled for standard 12-inch speaker. Tray section accommodates amplifier not more than 20 inches long. Ample space in amplifier tray for microphone stand, microphone and cables. Covered with heavy grade black seal-grain artificial leather. Deluxe quality. Shpg. wt., 26 lbs. **57 PT 07442. \$6.79**

Carrying Case

(K) This deluxe quality single speaker carrying case will accommodate a 10-inch or 12-inch speaker and provide enough baffle area to give you good tone quality. Cheaper cases, of which there are many varieties, are usually too small to give you this needed area. Substantially constructed and covered with a heavy grade of artificial leather. Size overall 16x16x12 inches. **57 PT 07496 Shpg. wt., 12 lbs. \$4.95**

Standard Baffle

(L) Made of slightly lighter material than the wall baffle described at left. A good value. Guaranteed the equal in quality and appearance of any hardwood wall baffle you can buy at a comparable price. Walnut veneer. Size 15 1/2 x 14x11 inches. For 12-inch (or smaller) speaker. **57 PT 07490 Shpg. wt., 6 lbs. \$3.90**
 See Page 2 for Easy Payment Terms

Quality Baffles

(M) This is better quality merchandise than is generally offered in wall baffles of this type. Costs a little more; worth a great deal more! Shaped and proportioned to give best possible acoustical results. Generous in size for good low frequency response. Made of well seasoned walnut veneers. Shipping weight, 7 pounds. **57 PT 07443—For 12-inch speakers. Each. \$4.95**

SILVERTONE ARISTOFONE



The Silvertone Aristofone represents the last word in electrical amplification for musical instruments. The Aristofone requires no specially constructed instrument with which to use it. You can use your favorite guitar, mandolin, violin or "bull" fiddle and equal results from special-built instruments.

Aristofone accommodates up to 4 different instruments at one and the same time—a valuable feature for string ensembles. Provisions are also made for amplifying the pickup of a standard velocity, dynamic or crystal microphone—opening up amazing possibilities for entertainers! Announcements and entertaining gags as well as vocal solos can be picked up by the standard microphone, while straight musical selections are picked up by the instrument microphones. Reed or brass instruments as well as the harmonica secure marvelous effects when so amplified. Reed organs and pianos are also suitable.

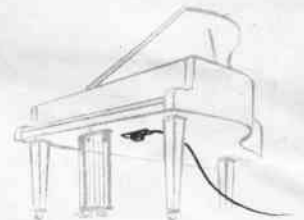
The very efficient Amperite Kontak Microphones described on Page 60, are used on the instruments! These small devices slip under the strings of the instrument, or may be temporarily held in place by adhesive tape. Two volume controls at top side of the amplifier case control instrument pick-ups, and standard microphone. The convenient location of the controls makes for ease of manipulation. Foot pedals (57PT 8209, Page 60) may be used to control instrument microphone if desired, or 57PT8207 microphones (Page 60) having a volume control built-in is suitable. Four Kontak Models SKH or KKH can be used simultaneously. Case is covered with a good grade of artificial leather. Size $8\frac{1}{2} \times 12\frac{1}{4} \times 17\frac{1}{2}$ inches. Eight-inch electro-dynamic speaker system has a 5-tube 8-watt amplifier which operates on 110-volt 60-cycle A.C.

57 PT 08960—Aristofone, tubes, case and speaker. No microphones. Shpg. wt., 19 lbs. **\$22.50**

57 PT 08961—As above with one Kontak model SKH microphone. Shpg. wt., 21 lbs. **\$29.50**

57 PT 08962—Same as 57 PT 08961 except with one Amperite foot pedal volume control included. Shipping weight, 25 pounds. **\$34.50**

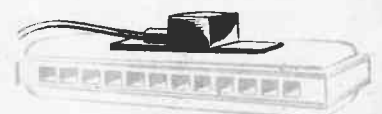
57 PT 08963—Complete DeLuxe Outfit consisting of Aristofone, tubes, four Kontak model KKH volume control microphones, one Velocity microphone as illustrated and one floor type microphone stand. Shipping weight, 41 pounds. **\$77.50**



SUITABLE FOR UPRIGHT
OR GRAND PIANOS



BRINGS OUT THE FULL RICH
OVERTONES OF THE VIOLIN



MAKES THE HUMBLE HARMONICA
SOUND LIKE A PIPE ORGAN

SEARS, ROEBUCK AND CO.