TIMES APPLIANCE CO., Inc.
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339 GARDEN ROAD
PALM BEACH, FLORIDA 33480

Wholesale Only

1925-1926

Radio Catalogue & Dealer's Guide

Introduction

Catalogues covering the following lines will be supplied upon request:

Westinghouse Heating Appliances               Westinghouse Safety Switches
  " Ranges                                      " Panel Boards
  " Fans                                       American Blower Ventilating Apparatus
  " Mazda Lamps                                 Free-Westinghouse Sewing Machines
  " Motors                                      Everhot Electric Cookers
  " Lighting Fixtures                           Electric Washing Machines
  " Fuses                                       Burgess Flashlights

Index: See last pages for alphabetical index of material.

Quotations: All quotations are F. O. B. New York warehouse. Merchandise will be delivered FREE to the following points:

North—to and including Mt. Vernon and Yonkers.
East—to and including Jamaica, L. I.
South and West—to and including Perth Amboy, New Brunswick, Dunellen, Summit and Paterson, N. J.

Any shipments from our warehouse to points beyond those named are F. O. B. point of shipment.

Terms: Net thirty days, 2% discount for cash ten days. Delay in payment of invoices promptly when due will result in no further shipments being made until such invoices are paid.
Price Changes: Prices are subject to change without notice. All orders are accepted with the understanding that goods will be billed at prices in effect on date of shipment.

Telephone Calls: The reversal of telephone charges on out of town calls will not be permitted. All telephone orders should be confirmed.

Patent License: All goods are sold subject to the terms and conditions in regard to patents and patent licenses which each separate manufacturer has in effect.

Truck Deliveries: All deliveries of packages that the truckman can be reasonably expected to carry on one trip from truck to customer's premises, shall be delivered to the customer's premises; deliveries that cannot be reasonably so transported to customer's actual premises shall be made on sidewalk at designated entrance to building.

Return of Materials: All goods are sold subject to manufacturer's guarantee and conditions. No good will be accepted for repair, adjustment, credit, or other reason unless written authority for the return has first been secured from our Repair Department.

Returned Material will be classified as follows:
1. For Repair:
   Defective merchandise within the terms of the manufacturer's guarantee will be repaired free-of-charge. All other repairs will be charged for at the usual rates.
2. For Replacement:
   We guarantee radio material sold by us to be free from electrical and mechanical defects. Defective material will be repaired or replaced at our option, but cannot be returned for credit.
3. For Credit or Exchange:
   No merchandise will be accepted for credit or exchange without approval of Sales Manager. Such returns or exchanges which are approved will be subject to a 10% restocking charge.

Claims for Shortages: All claims for shortages or errors in shipment must be made immediately upon receipt of goods. No such claims will be allowed unless received within five days of the delivery of the shipment. Any claims for goods damaged in transit must be submitted direct to the carrier.

The Times Appliance Company, Inc., will not be responsible or liable for any loss, damage, detention or delay caused by fire, strike, civil or military authority or by insurrection or riot, or by any other cause which is unavoidable or beyond its immediate control; nor in any event for consequential damages.

TIMES APPLIANCE COMPANY, Inc.

RADIOLAS, RADIOTRONS AND ACCESSORIES

Manufactured by

RADIO CORPORATION OF AMERICA

In presenting the De Luxe instrument of the RCA group of radolas, attention is drawn to the very fine appearance of the cabinet, the practical method of mounting the component parts, the simplicity of tuning control and the master achievement of present-day radio developments, i.e., complete operation from A.C. lighting circuits—eliminating all batteries.

Radola 30 embodies the new RCA eight-tube Super-Heterodyne, Radiola Loudspeaker Model 100 of the Cone type, the latter being driven by a rectifier-power amplifier unit termed a Multi-Rectron, which provides plate, grid and filament voltages for the entire combination.

Requiring no antenna, Radola 30 operates from a self-contained loop, and because of the sensitivity and selectivity of the new eight-tube circuit, it provides unusual performance under the most exciting conditions imposed by broadcast transmitting stations.

With the new RCA Cone Loudspeaker, the new power amplifier tube and the power unit, Radola 30 provides quality of reproduction hitherto unattained, and volume in excess of that ordinarily required. The volume can be increased or decreased to any desired degree without sacrifice of tone quality.

Radola 30 will prove the leader in the quality field among radio receivers.

RADIOLA 30, Complete, ready for A.C. operation

$15.00

Radola 28—a desk model of the new RCA eight-tube Super-Heterodyne, with sufficient space to accommodate all of the necessary dry batteries—represents a popular priced edition of the new RCA eight-tube circuit.

The radio mechanism of Radola 28 is precisely the same one that is employed in Radola 30, giving an unusual degree of selectivity and sensitivity. The new RCA uni-control tuning mechanism is employed, together with "straight line frequency" variable condensers giving equal spacing of all stations on the tuning scale.

Like Radola 30 and other Super-Heterodyne sets in the RCA line, Radola 28 requires no antenna or external connection and provides reception over extreme distances under favorable conditions on its attached loop.

When Radola 28 is dry battery operated, either Radiola Loudspeaker UZ-1229 or Model 104 is recommended. For those who desire increased volume, Radiola Loudspeaker Model 102 or 104 is recommended.

When Radola 28 is used with Model 102 Loudspeaker, the set itself is dry battery operated. The Loudspeaker is driven from the lighting mains. When Radola 28 is used with Model 104 Loudspeaker, the rectifier-amplifier unit (Multi-Rectron), which is a part of the Model 104 cabinet, may be connected to Radola 28 by a special cable furnished by the Radio Corporation of America, so that Radola 28 and the Loudspeaker itself are operated completely from A.C. lighting mains.

The novelty of placing super-power loudspeakers at a distance from the broadcast receiver is a practice which is meeting with universal popularity, when the improved quality and increased volume which these loudspeakers provide have been demonstrated. Even when operated by dry batteries, Radola 28 gives loudspeaker volume far in excess of that obtainable from storage battery operated receivers.

RADIOLA 28, with Radiotrons (less batteries and loudspeaker) ........................................ $260.00
RADIOLA 28, with Radiola Loudspeaker Model 102 .......................................................... 425.00
RADIOLA 28, with Radiola Loudspeaker Model 104 .......................................................... 505.00
RADIOLA 28, with Radiola Loudspeaker Model 100 .......................................................... 285.00
RADIOLA 28, with Radiola Loudspeaker Model 102 .......................................................... 400.00
RADIOLA 28, with Radiola Loudspeaker Model 104 .......................................................... 505.00
RADIOLA 25

is a second-harmonic, six tube Super-Heterodyne. This circuit is firmly entrenched as a permanent feature of the Radiola line. Experience has demonstrated that it meets every demand of the broadcast listener, with respect to selectivity, distance-getting capabilities, volume and distortionless reproduction.

Radiola 25 is equipped with the new Radiotron UX-120 dry battery power amplifier, thus giving volume in excess of the average type of radio receiver operated by storage batteries. Space is provided in the cabinet for housing all the batteries, the internal battery connections being appropriately tagged to simplify the procedure of connecting up dry cells.

The new RCA uni-control mechanism, with "straight-line frequency" condensers, is employed in this Radiola. Thus, for most purposes, local or long distant stations may be tuned in by a single tuning control. For increased sensitivity and long distance reception, this control may be operated as a double tuning control, thus giving the maximum refinement in tuning.

Radiola Loudspeaker Model UZ-1325 or Model 100 is recommended for Radiola 25 when dry battery operated; but, as in the case of Radiola 28, either the Model 102 or Model 104 Loudspeakers may be employed.

When Radiola 25 is used with Model 104 Loudspeaker, the rectifier-amplifier unit in the Loudspeaker cabinet may be employed to energize the plate, filament and grid circuits of the radio receiver, thus giving complete operation from the lighting circuit.

No antenna is required and the loop is mounted immediately on top of the case.

Radiola 25, with Radiotrons (1 ea. battery) ........................................ $165.00
Radiola 25, with Radiola Loudspeaker Model UZ-1325 .................. 183.00
Radiola 25, with Radiola Loudspeaker Model 100 ....................... 200.00
Radiola 25, with Radiola Loudspeaker Model 102 ....................... 305.00
Radiola 25, with Radiola Loudspeaker Model 104 ....................... 410.00

RADIOLA 20

a new five-tube, balanced radio-frequency receiver of the uni-control type, equipped with variable regeneration. This set is destined to prove a pacemaker among five-tube radio broadcast receivers.

The predominating features of this set are extreme sensitivity and great selectivity than that obtained by the average type of five-tube circuit. The sensitivity is such that radio reception is realized over very great distances with an antenna of relatively small length. Normal operation can be obtained from a single antenna wire, approximately 75 feet in length. Reception can be obtained from local stations and from stations located at considerable distances with a small indoor wire aerial. Provision is made to adapt the set to aerials of various lengths.

A particularly important feature of Radiola 20 is the uni-control method of tuning, the tuning condensers for all three radio frequency circuits being mounted on the new vertical drum control dial developed by the RCA. Thus, stations after station may be brought in on the loudspeaker entirely by turning this single tuning control from zero to its maximum position. Provision is made for marking the call letters of the stations, and once the positions are marked, the stations will always be located at that same spot.

Radiola 20 will more than equal the performance of the average type of five-tube, tuned radio-frequency receiver with the regeneration control set at zero.

The volume obtained from Radiola 20 with dry battery operation will exceed the anticipations of the broadcast listener, for it is designed to work with Radiotron UX-120 in the last audio stage. The freedom from distortion, the clarity of tone, and the outstanding value of the receiver will be noted from a single demonstration.

Like other Radiolas, Radiola 20 may be connected to the Model 102 or Model 104 Loudspeaker.

Radiola 20, less Radiotrons .................................................. $102.50
Radiola 20, with Radiotrons ................................................ 115.00
Radiola 20, with Radiola Loudspeaker Loudspeaker UZ-1325 .......... 133.00
Radiola 20, with Loudspeaker Model 100 ............................... 150.00
CABINETS

CABINET MODEL No. 220
For Radiola No. 20

Height 28 inches.
Width 20 inches.
Depth 17 inches.

List $25.00

Every prospect for a Radiola No. 20 is a good prospect for one of these attractive cabinets, because the cabinet is so very practical and useful in its appeal, yet inexpensive; allowing all batteries, wires, etc., to be concealed within the cabinet.

Mahogany finish to match Radiola No. 20.

CABINET MODEL No. 225
For Radiola No. 25

Height 28 inches.
Width 29 inches.
Depth 20 inches.

List $33.50

Improve the appearance of the Radiola No. 25.

This Cabinet is a beautiful piece of furniture, and is an excellent match for the design of the Radiola No. 25. Shelf on side for loud speaker and compartment for the Radio Corporation of America's Duo-Rectron Model AP 937.
**RADIOLA SUPER VIII**

The RADIOLA Super-VIII offers advantages to the purchaser wherever located, particularly in apartment houses and those thickly populated districts where there is not sufficient room to erect a multiplicity of antennas.

The RADIOLA Super-VIII will receive on its concealed loop more distant broadcasting stations than can be heard with most other sets which use an outdoor antenna. Due to its scientifically balanced circuit and its improved loud speaker, the quality of reproduction is far superior to any heretofore obtained.

The internal loop gives an additional freedom from interference in that it may be so tuned that it will not pick up the interfering station. Complete control of the loop by means of a knob on the panel simplifies its adjustment and permits of its being concealed.

The Super-Heterodyne circuit has undergone radical changes in the form of the RADIOLA Super-VIII. The six Radiotrons give results equal to other types of receivers employing eight or nine tubes. These Radiotrons are operated by dry cells, thereby eliminating the inconvenience of storage battery maintenance.

The ease and accuracy of tuning are two of the greatest features of RADIOLA Super-VIII. Removable cardboard discs are provided which may be clamped in place over each of the two tuning dials. As each station is first tuned in, a mark is made on the disc where the pointer comes to rest and the station's call letters are written at that point. Once located, any station may be repeatedly selected at the same point even though the set be removed to another locality.

**RADIOLA SUPER VIII—Complete with all Radiotrons, enclosed loud speakers and adapters for UX-120, everything except batteries** $150.00

RCA Radiola 26

Radiola 26, the popular portable Super-Heterodyne, meets particular requirements not met by any other type of radio receiver. It was designed for loop and antenna operation and for both portable and home use and therefore occupies a unique position in the RCA group.

Radiola 26 is a complete and self-contained portable six-tube SuperHeterodyne which can be carried from place to place and will provide reception over great distances. Inasmuch as it is a home set as well as a portable, it is always furnished with a battery box for home use which provides space for full sized batteries, which are more economical for home use where weight is no determining factor. For reception over unusual distances in home use, an antenna coupler is also provided. This device renders the sensitive Super-Heterodyne even more sensitive and enables reception over exceptional distances. Tuning is accomplished by a third station selector which is handily mounted on the front of the battery box.

In addition to fulfilling all these duties, Radiola 26 may be connected to Model 102 or Model 104 Loudspeaker. This gives it the unusually fine quality of reproduction and volume which these loudspeakers provide.

Radiola 26, with Radiotrons and Home Battery Box, complete and self-contained (less batteries) $225.00

**RADIOLA X**

Radiola X, using four Radiotrons WD-11, is a super-sensitive and highly selective broadcast receiver of the antenna type. The attractive mahogany cabinet contains everything necessary to operation—a built-in, new type of loud speaker, battery compartments—everything in fact, except the batteries and each necessary external as the antenna and ground.

The circuit consists of one-stage of tuned radio frequency, regenerative detector, and two stages of audio-frequency, the second stage of which is of the balanced type and employs two tubes. Four Radiotrons are thus made to do the work of five in this new receivers of unusual results.

Radiola X is the receiver for general use where the erection of an antenna is easily possible. It is non-radiating and is designed for a degree of selectivity that will prove a revelation to the purchaser—selectivity far beyond that of the average type of antenna receiver.

While an antenna receiver, Radiola X, differs in all respects from the usual type of receiver, which operates on an outdoor wire, it does not radiate, and therefore will not annoy one's neighbors. It incorporates a degree of selectivity that will prove more than adequate for all possible conditions of service. This selectivity is not obtained at the sacrifice of signal strength; on the contrary, sensitivity has been markedly increased by the development of an ingenious new circuit providing superlative performance.

**Points of Superiority**

Radiola X is a highly attractive article of furniture. It will blend artistically in any home surroundings. Placed on a table or stand, it will enhance the appearance of the living or music room while it serves its primary purpose as a limitless source of entertainment.

The "Regenoflex" circuit utilized in Radiola X renders the four WD-11 Radiotrons as effective in their sensitivity as the usual five tube receiver.

One filament rheostat controls all Radiotrons, so positive is this instrument in its operation that no individual or minute adjustments are required.

Radiola X—Complete with four WD-11 Radiotrons, and built-in loudspeaker; everything except batteries and antenna $150.00

**RADIOLA REGENOFLEX**

RADIOLA REGENOFLEX incorporates all those features which are inherent to Radiola X, excepting, of course, the cabinet and built-in loud speaker. Offsetting these two points of difference, however, is the lower price of the Regenoflex, for those who may desire this remarkable receiver in that form.

It is a super-sensitive and highly selective broadcast receiver of antenna type. It employs four Radiotrons WD-11, which, in the new Regenoflex circuit, will give results equal to five, as used ordinarily. The only external connections to be made are the antenna and ground leads.

Radiola Regenoflex is a step beyond any existing type of antenna set, both in efficiency and performance, quality of loud speaker reproduction and sensitiveness, for it embodies the most highly developed engineering principles known at present to the art.

Radiola Regenoflex, with four WD-11 Radiotrons and Radiola loud speaker, but less batteries and antenna $120.00

Same as above, without Radiotrons and loud speaker, but less batteries and antenna $90.00
RADIOLA III

RADIOLA III is a high grade regenerative broadcast receiver employing two Radiotroncs WD-11. One stage of audio frequency amplification is provided, utilizing improved transformers for power amplification. Radiola III may be adapted to antennas of various lengths and a choice of two types of tuning circuits is afforded. One is a sensitive tuning circuit, for either local or long distance reception; and the other is a more selective circuit for use when local interference is present.

Radiola III will also be supplied upon request with one UX-120 tube and one UX-39E tube, together with two adapters, instead of WD-11 tubes. This new equipment makes it possible to use the latest development in tubes with this set, and secure very much greater volume.

To use the new tubes, it is not necessary to make any internal changes or connections to the set. A small resistance (approximately three ohms) should be placed in series with the plus "A" lead to balance the present phasor. The battery cable remains unchanged except that the plus "A" lead is placed 100 volts, plus "B" 40,90 volts and the "A" in series with the plus "A" lead is placed 100 volts, plus "B" 40,90 volts and the "A" in series with the plus "A" lead.

Details instructions and diagrams for the new connections will be furnished upon request.

Radiola III, including two Radiotrons and adapters as specified, and one set of head phones, but without batteries or loud speaker

$24.50

Radiola III Stripped

$16.00

RADIOLA BALANCED AMPLIFIER

In order that loud speaker performance may be had with Radiola III as well as local stations, the Radiola Balanced Amplifier has been produced. It has the same finish as Radiola III and is built in the same proportions.

Radiola Balanced Amplifier used with the UX-120 tubes, and the UX-39E tubes, will also be supplied upon request.

The same instructions as to battery connections apply to the Radiola Balanced Amplifier when used with these tubes, as to the Radiola III.

The Balanced Amplifier is equipped with the new tubes, when connected to Radiola III, using the new tubes, gives a truly wonderful performance exceeding by far the performance of this combination when used with WD-11 tubes.

Radiola Balanced Amplifier, including two dry cell Radiotrons and adapters...

$25.00

Radiola Balanced Amplifier Stripped

$18.00

RADIOLA III-A

Radiola III-A is Radiola III and Radiola Balanced Amplifier in one case. It is somewhat more portable and compact, for those who wish to purchase the two units together. Otherwise, it is pointed out for feature for feature identical with the Radiola III and Radio Balanced Amplifier.

Radiola III-A will be supplied when requested with size UX-199 tube, three UX-120 tubes and four adapters.

Radiola III-A when used with the new tubes is connected to its battery equipment in the same manner as Radiola III. Full instructions and diagram will be furnished on request.

Radiola III-A, when equipped with the new tubes, gives a truly remarkable performance of this set when used with WD-11 tubes.

Radiola III-A, including four Radiotrons and adapters, as specified, one pair head phones, except batteries and loud speaker

$49.50

Radiola III-A Stripped

$35.00

RADIOLA IN DE LUXE CABINET

Catalogue No. 33

A beautiful genuine walnut cabinet, 22¼" x 14½" x 14½" for Radiola III-A or for the combination Radiola III and Balanced Amplifier with built-in loud speaker and ample space for all batteries, including full size "B" batteries. The loud speaker unit consists of an aluminum tone arm and a three ply violin maple bell, smooth finished, assuring maximum quality and volume. The Radiola loud speaker unit is used. A hinged top permits easy accessibility to the battery compartment.

AND NOW UX-120 FOR GREATER VOLUME

In addition to the De Luxe Cabinet, and where increased volume is desired, we suggest the use of three of the new dry battery power amplifier Radiotrons, UX-120 in the first and second audio frequency stages of the III-A. The Balanced Amplifier, when carried separately with the III, will be equipped with the two UX-120 Radiotrons, while the Radiola III will have a UX-199 Radiotron in the first stage of audio frequency amplification. Tests of the III-A employing a UX-199 Radiotron as a detector and three UX-120 Radiotrons as audio amplifiers show a 100% increase in volume and a marked improvement in the quality of reproduction.

Special adapters when inserted in the WD-11 sockets of the III, Balanced Amplifier and the III-A will take UX-199 or UX-120 Radiotrons. It is not necessary to make any internal changes or connections to the sets. A small resistance (approximately three ohms) should be placed in series with the plus "A" lead of the III-A to supplement the resistance of the present rheostats. The battery cable remains unchanged except that plus "B" 20 volts is increased to 45 volts, plus "B" 90 volts to 135 volts and the "C" voltage to 22½ volts and the "A" to 4½ volts.

In the case of the III and the Balanced Amplifier combination, two UX-199's should be used in the III and two UX-120 Radiotrons in the Balanced Amplifier. As in the case of the III-A, a small resistance should be inserted in the plus "A" lead and suitable increases in the "A", "B" and "C" voltages to take care of the UX-199's and UX-120's.

"By using the UX-199 and UX-120 Radiotrons, the volume is so increased that the aerial may be considerably shortened allowing a greater degree of selectivity to be had when desired."

Radiola in De Luxe Cabinet, complete with Radiola III-A, or combination III and Balanced Amplifier, special adapters, one UX-199 and three UX-120 Radiotrons, and loud speaker unit...

$67.50
RCA LOUDSPEAKER 104

The new RCA Loudspeaker Model 104 is a revolutionary development in the loudspeaker field—revolutionary in performance and in mode of operation—marking a milestone in the amazing progress effected during the past four years in radio broadcasting.

Radioz Loudspeaker Model 104 is destined to prove the sensation of the radio industry, for it provides distortionless reproduction at volume equal to that of an orchestra or band playing at the broadcast transmitting station, and does this with fidelity of tone unequalled by anything hitherto produced.

Model 104 employs a rapid cone, which is energized by a powerful electro-magnet. The source of driving power for the cone is Radium UX-210, a super-power amplifier which permits very large volume without distortion.

To obtain the plate and filament voltages for the operation of the UX-210 amplifier tube, Model 104 Loudspeaker is equipped with a rectifier-power amplifier device, termed a "Multi-Rectron," which also provides grid plate and filament voltages for the operation of Radiola 25 and Radiola 28 when they are used with this speaker. The rectifier-amplifier unit embodies a new principle of operation which enables complete operation from 110 volt, 60 cycle A.C. source.

When Model 104 Loudspeaker is used to operate Radiola 25 and 28, rectification of voltages on the lighting mains in those cases is done by the new Radiotron Ballast Lamp UV-876. Regulation of the filament voltage for the UX-199 tube in the radio set itself is obtained by Radiotron UX-854 or a special resistance.

Radiola Loudspeaker Model 104 introduces to the broadcast listener an important point not achieved in ordinary types of loudspeakers, namely, faithful reproduction of the bass tones of the musical scale. It also reproduces the higher frequencies in the musical scale which are lost entirely in many loudspeakers.

The tone quality of the Model 104 is of such a character that the tone quality of the broadcast is reproduced by this speaker, with a fidelity of tone quality equal to, or in many cases, superior to, that achieved by any other type of loudspeaker.

RCA LOUDSPEAKER 100

This is another development of the Radio Corporation which is bound to gain popularity among broadcast listeners who desire improved tone quality and volume from present-day types of broadcast receivers. Model 100 in, as a matter of fact, the most powerful speaker, the Model 100 may be connected to the first audio stage of any Radiola or any other type of broadcast receiver.

The same amazing clearness and clarity of tone obtained from Model 104 are realized in Model 100, and it is the most powerful speaker, the Model 100 may be connected to the first audio stage of any Radiola or any other type of broadcast receiver.

RADIO Z UNI-RECTRON AP 935

The Uni-Rectron is the same rectifier-power unit that is included in the Model 104 Loudspeaker, may be connected to the first audio stage of any type of broadcast receiver, to supply a stage of super-power amplification, operated from a 110 volt, 60 cycle source. The result is a tremendous increase in volume, and a marked improvement in tone quality. The power of a broadcast receiver who desires increased volume and improved loudspeaker reproduction will find the Uni-Rectron the most highly perfected A.G. power driven amplifier yet developed.

Uni-Rectron, Model AP 935 with Radiotron UX-210 and Radiotron UX-216-B $165.00

RCA DUO-RECTRON AP 937

Another proof of RCA leadership is found in its new "Duo-Rectron AP 937. A device to supply plate voltages from a 110 volt, 60 cycle A.C. source, to provide the necessary plate voltages of 271V, 45, 90, and 225 volts. The maximum current output is 15 milliamperes.

As usual, RCA has gone further than design strictly a "D" battery eliminator. The simplicity in fitting voltage characteristics of devices of this type is in the interest of simplicity. Through the duo-rectron, the familiar problem of the filament at the outlet of the emitters is maintained practically constant at all current outputs, from the minimum to the maximum of 15 milliamperes.

A special design of the filter system, A.G. power driven, is the new "RCA Duo-Rectron AP 937 with Radiotron UX-874 and Radiotron UX-215 $185.00

RCA LOUDSPEAKER 100

In keeping with its reputation for leadership, the Radio Corporation of America has developed this radically new type of Loudspeaker for direct use with either dry battery or storage battery operated receivers. Model 100 Core Loudspeaker is a component part of the Model 102 and provides the same excellent audio quality, though not the same volume. It is unusually sensitive, and volume without distortion is obtained when it is used with such sets as Radiola 25, Radiola 28 and Radiola 28, or sets of similar audio output. This loudspeaker reproduces as exact tones the frequency which broadly are reproduced only as noise. It is these frequencies which are necessary to recreate voice and music with natural fullness and purity.

When used with a Radiola the audio frequency range of the combination is practically equal to the total range of the average radio transmitter.

RADIO Z LOUDSPEAKER MODELS 100 and 101 $25.00
TIMES APPLIANCE COMPANY, INC.

RADIOLA LOUDSPEAKER
Model UZ-1325

As a result of extended research and study of the science of reproducing voices and music, by the great laboratories at its disposal, the Radio Corporation of America offers the Radiola Loud Speaker.

An analytical investigation of the undesirable characteristics of former types of loud speakers led to many important discoveries. It was determined that the size of the diaaphragm, the area of the air chamber at either side of the diaaphragm, the shape of the horn and the material of which it was made, all had to be scientifically coordinated to achieve that high quality of reproduction which the Radiola Loud Speaker now embodies.

Unusually intelligent speech reproduction, faithful translation of the higher and lower notes of the musical scale and the reproduction of the complex tonal vibrations of the orchestra or the band are the outstanding features of this new device. It is a scientific achievement and an artistic revelation, giving forth the renditions of the artists in all their true beauty just as they are given in the broadcasting studio.

True and realistic reproduction upon demonstration is not the only good quality to be desired in a loudspeaker—continuity of perfect service is of equal importance to the owner. In the UZ-1325, sturdy construction of its horn and base, its extra large magnets, and its precise electrical construction insure years of perfect service with ordinary care.

All of the Radiolas put out by the Radio Corporation were designed specifically to fit the operating characteristics of this new Loud Speaker, thus giving more pleasing translation of broadcast entertainments than anything heretofore produced.

Radiola Loudspeaker UZ-1325

$18.00

RADIOLA LOOP ANTENNA
Model AG-814

In order that the Radiola Super-Heterodyne may utilize all of the advantages of the very best permanent receiver, while it is acting in that capacity, a new rotatable loop antenna has been designed for use with it to provide still greater distance reception.

Model AG-814 Loop Antenna greatly reduces maintenance expense of batteries and Radiotrons because the employment of the large loop enables the user to cover the same distance as secured with the smaller self-contained loop with less current.

Due to the large amount of research and development work expended on the design of this improved loop, various characteristics have been incorporated which have greatly increased the efficiency of the "pick-up" or the ability to efficiently abstract energy from the passing electro-magnetic waves and also in reducing to a minimum the losses which are usually present in the ordinary types of loops. For these reasons, a greater voltage is supplied to the Radiola Super-Heterodyne and increased signal strength results.

This is practically the only loop available that will permit both "Station Selectors" to have approximately the same setting for a given station. In other words, if a type of loop different from either the self-contained loop in the Radiola Super-Heterodyne or the AG-814 is employed, the inductance may be of such a value that the pointer of "Station Selector 1" will agree with the position of "Station Selector II".

It will be found that there are two positions, 180 degrees apart, at which the signal is practically invisible. This fact may be used to advantage in eliminating interference from undesired broadcasting stations. Should interference occur, just turn the loop slowly and the position will soon be found at which the desired signal comes in with a minimum of interference.

Loop Antenna AG-814 is "knocked-down" form, easily assembled without tools

$12.00

A.C. PACKAGE UP971
This package contains the necessary accessories to change the Radiola No. 25 from D.C. battery operation to A.C., 60 cycle, 110 volt operation when Radiola No. 25 is used with Model No. 104 Loud Speaker............. $35.00

A.C. PACKAGE UP972
This package contains the necessary accessories to change the Radiola No. 28 from D.C. battery operation to A.C., 60 cycle, 110 volt operation when Radiola No. 28 is used with Model No. 104 Loud Speaker............. $36.00

RCA ADAPTER UR556
By means of the RCA Adapter UR556, the UX140 Radiotron may be employed in the last stage of the Radiola Semi-Portable Superheterodyne or Radiola Super VIII, thus giving the high quality reproduction obtainable from the Radiola No. 25. Used in this way the Radiola Loud Speaker UZ1325 or the Model No. 100 Cone is recommended.

This adapter is equipped with binding posts to connect the extra "B" and "C" battery voltage required for the UX120 Radiotron.

RCB Adapter UR556

$1.50

RADIotron UX-120
Radiotron UX-120 is a new dry battery amplifier tube designed to provide increased loudspeaker volume and improve quality of reproduction from dry battery operated sets. It may be used only in the last stage of audio frequency amplification. With the output of this new Radiotron connected to a loud speaker such as the Radiola Loudspeaker UZ-1325, it will produce volume double that obtainable with Radiotron UV-201-A, used under the same conditions.

The Radiotrons 20, 25, and 28 are made with the RCA small UX sockets, so that no adapter is necessary in these cases.

The plate potential should be 135 volts, supplied by three blocks of 45 volt batteries, or six blocks of 225/220 volts. The negative grid or "C" battery required is 225/220 volts. A very large demand for Radiotron UX-120 throughout the nation is certain to develop.

Radiotron UX-120

$2.50

RADIotron UX-210
Radiotron UX-210 is a super power amplifying tube of exceptional merit designed to produce loudspeaker volume considerably in excess of that obtainable with present types of tubes. To obtain great volume without distortion from overload in the last stage of audio frequency amplification requires a tube of the capabilities of this new Radiotron. UX-210 will operate on a filament source of 0 to 8 volts, preferably 6350, and a plate voltage of 90 to 425. The grid bias or "C" battery varies from 435 to 335, depending upon the voltage of the "B" battery employed.

It is recommended that Radiotron UX-210 be operated from an AC source, from which the full voltage values may be more easily and economically obtained than from a battery supply. RCA supplies such a device in its Uni-Rectifier AP-925, which is a completely AC operated power amplifier stage of audio frequency and amplification, and employs a Radiotron UX-210 as the amplifier. UX-210 is also used in Radiola Loud Speaker Models 102 and 104. A wide market for its sale is anticipated shortly after its announcement, particularly from those who desire undistorted output from the loudspeaker.

Radiotron UX-210

$9.00

RADIotron UX-112
Radiotron UX-112 has been developed to meet a demand for increased loudspeaker volume and improved quality of reproduction in radio sets operated by storage batteries, where Radiotron UX-201-A is too low for the last stage of audio frequency amplifications.

As an audio amplifier, Radiotron UX-112 occupies a position midway between the dry battery microphone amplifier Radiotron UX-210 and the AC-operated super power amplifier Radiotron UX-210. It operates from a 6 volt filament source. The plate potential should be 135 volts, with a grid voltage of 225 to 220. UX-112 will find wide use among owners of present type of tube valve, storage battery operated sets.

Radiotron UX-112

$6.50
RADIOTRON WD-11
This tube attained instant popularity because of its economical operation on a single 1 ½ volt dry cell and its consumption of but 0.05 amperes. A single 2½ volt "B" battery unit will prove very satisfactory in the plate circuit for high frequency operation, though potentials up to 80 volts may be employed when used for radio or audio amplification. The proper operating filament terminal voltage (measured at the socket terminals) is 1.1 volts and the filament should glow at a dull red heat.
Radiotrons WD-11 are very stable in operation. The WD-11 may be used as a detector, as a radio-frequency amplifier, or as an audio-frequency amplifier.
The WD-11 is equipped with a special base which requires a WD-11 socket or WD-11 adapter. A rheostat of 6 ohms should be used.
Price $2.50

RADIOTRON WD-12
Radiotron WD-12 is identical to WD-11 except that WD-12 is designed to fit the standard socket. Like the WD-11 tube, Radiotron WD-12 is noted for its economy. The filament, which should glow neither brighter than a dull red, consumes only 0.05 amperes and operates on a single dry cell. The proper operating filament terminal voltage (measured at the socket terminals) is 1.1 volts.
The WD-12 is highly recommended because of its stable operation. It is an excellent detector and will give good volume either as an audio-frequency or radio-frequency amplifier.
Since Radiotron WD-12 is equipped with the standard Navy base this tube may be used in any set using standard sockets. It can also be used in the RCA standard sockets. It requires a rheostat of 6 ohms.
Price $2.50

RADIOTRON UV-199
UV-199 is the smallest of the Radiotron family and consumes only 0.06 ampere. It is an excellent detector as well as an audio-frequency and radio-frequency amplifier. Radiotron UV-199 contains a helix filament which operates at a temperature far below the melting point of the filament material. The socket terminal voltage is 2.5 volts.
The UV-199 is recommended for its high emission at low filament temperature, its quietness of operation and long life, together with its ruggedness and uniformity of operation. A rheostat of 25 ohms is recommended.
Price $2.50

RADIOTRON UV-200
UV-200 is a specially designed tube for detection purposes which embodies all the characteristics—stability, long life, uniformity—necessary for faultless performance.
Radiotron UV-200 is supplied with a standard base and can be used as a detector in radio circuits equipped with standard sockets. It is the ideal detector tube where uniform characteristics are required for critical receiving adjustments.
Voltages in excess of 25 or 30 should not be applied to the plate of Radiotron UV-200. The normal plate voltage is from 16 to 25.5 volts.
The normal voltage to be maintained at the filament terminals of UV-200 is 5 volts. A rheostat of 6 ohms is required.
Price $2.50

RADIOTRON UV-201-A
Radiotron UV-201-A is a high vacuum tube which, while an excellent detector, is intended to be used primarily as an amplifier for either audio or radio frequencies. It fits the standard socket and draws 0.25 amperes at 5 volts measured at the socket terminals. It operates from a 6 volt storage battery.
Radiotron UV-201-A has a very long life and the electron emission from the filament is exceptionally great. Like the UV-199, it has a thoriated tungsten filament.
Used with a one tube set it may be operated from four dry cells in series. Radiotron UV-201-A requires a rheostat of 8 to 12 ohms.
Price $2.50
THE ADJUSTABLE TABLE-TALKER
Catalogue No. 400

This is an improved Table Talker at the old low price.

It is built to meet the need for a Speaker that will sell easily to those customers in moderate circumstances. It gives the best quality of reproduction obtainable at the price.

1. It has a gooseneck horn which produces clear, more rounded and mellow tones.

2. The Table-Talker is only 18" high, and has a 10" diameter of bell.

3. It is finished in a pleasing shade of brown with a felt padded base, and is sold under the Brandes money-back guarantee.

4. The adjustment lever which controls the volume and the sensitivity of the speaker is located at the rear of the base.

5. No extra batteries are required for operation.

List Price ........................................... $18.00

Brandes - Experts in radio acoustics Since 1908
Brandes Products

CABINET SPEAKER
Catalogue No. 700

The new Cabinet Speaker is especially designed for well appointed homes. It has quality of tone, built into a beautifully simple cabinet, finely finished. It is of the correct size to fit on top of the average receiving set.

1. The unit used in the cabinet speaker is of the same construction as that of the unit of the large horn speaker Type H.
2. The horn is of special molded construction, providing 27½ inches of air column, which construction and length produce mellow rounded tones and unusual volume.
3. The cabinet speaker is 14 7/16 inches wide, 9 ¾ inches deep, and 9 5/16 inches high.
4. It is mahogany and finished to harmonize with all types of modern furniture.

List Price .................................................. $30.00

Brandes - Experts in radio acoustics Since 1908

Brandes Products

CABINET CONE
Catalogue No. 1,000

This is a cone type speaker encased in a beautiful cabinet of very attractive design. It is finely finished in dark mahogany and a splendid mantel or library table ornament.

The unit used is of special design. The magnets are very large; there is no diaphragm, but a small armature which reacts to the faintest impulses, thus reproducing extremely low and high tones. This armature is actuated on the push-pull principle which makes for greater volume over the entire range of the speaker and greatly improves quality.

The Brandes Cabinet Cone Speaker is 12 inches high, 9 inches wide, and 8 inches deep.

List Price .................................................. $38.00
PHONOGRAPh ATTACHMENT
Catalogue No. 800

Ever since the inception of radio the public has been in need of a phonograph attachment which would not be materially affected by moderate variation in the sizes of good phonograph horns, or the weight of their air columns.

For use with the horn of a phonograph, the unit of the cabinet speaker has been made available suitably encased for this application.

1. This unit has laminated pole pieces, a separate alternating magnetic flux path, a large diaphragm, and a thumb screw volume adjustment.

2. It is easily attached to the reproducer arm of the phonograph, by means of a flexible rubber connector.

3. The phonograph attachment is made adjustable by means of a thumb screw at the back which changes the position of the magnets in their relation to the diaphragm, providing maximum volume for nearby and distant reception.

List Price $10.00

Brandes - Experts in radio acoustics Since 1908

MATCHED TONE SUPERIOR HEADSET
Catalogue No. 100

Brandes Superior Headsets are matched in tone, which means that the two receivers reproduce exactly the same sound at the same instant.

1. They are light in weight and extremely comfortable, having hard rubber caps to give accurate setting of the diaphragm, improved acoustical quality, and add to the comfort of the wearer.

2. The cords are especially designed with twisted copper twist instead of copper braid, reducing losses, eliminating cord noises, and improving reproduction.

3. These headsets have a correct alternating current impedance of 11,000 ohms at 800 cycles.

4. The clutch on the headband allows comfortable adjustment to the head.

5. The featherweight headband is of steel wire, covered with seamless fabric.

List Price $4.50

NAVY TYPE HEADSET
Catalogue No. 200

The Navy Type Headset was designed for use in research work and laboratory experimentation where inductance and capacity would affect the character of the experiments. It proved so highly effective for avoiding capacity effects that Brandes offered it to the trade for resale to amateurs and radio experimenters who were having difficulty with headset cord capacity.

List Price $6.00

Brandes - Experts in radio acoustics Since 1908
Brandes Products

AUDIO TRANSFORMER

Catalogue No. 300

1. The development of a new audio transformer which amplifies without distortion over a normal frequency range of 200 to 4000 cycles per second with the high voltage amplification ratio of 1 to 5.

2. A transformer so designed that two stages of audio amplification may be employed without any way sacrificing quality.

3. Outside soldering terminal connections and a screw mounting base.

4. A completely shielded transformer.

List Price $4.00

Brandes - Experts in radio acoustics Since 1908

AMPLION

The Amplion is the creation of the originators and oldest makers of loud speakers—ALFRED GRAHAM & CO., LONDON, ENGLAND—who have licensed the THE AMPLION CORPORATION OF AMERICA to market and manufacture Amplions under GRAHAM patents. The Amplion, the world over, is a quality loud speaker.

AMPLION PEDIGREE

In 1885—Mr. Alfred Graham demonstrated the first practical loud speaker which the world had ever heard.

In 1889—Graham Loud Speakers, first used in the British Navy. Graham transmitters applied to phonographs for loud speaking reproduction. Demonstration given by Professor McKendrick at the Royal Society.

In 1896—Graham loud speaking naval telephones developed and adopted by the British Admiralty.

In 1898—Graham Waterlight Loud Speakers patented. Fitted on many warships and merchant vessels throughout the world. Graham Telephone Submarine Signalling System invented.

In 1900—Complete Graham Loud Speaker installations, on central battery plan, erected on warships as the sole means of communication abroad.

In 1906—The most extensive loud speaker naval installation to date made by Graham, including a station on the Great Western Ship, Graham exchange system fitted to British warship "Dreadnought."

Onwards—Graham Loud Speakers applied to all sorts and conditions of service in many countries and on many seas.

By 1919—No less than 12,000 Graham loud speaking installations in operation on ships alone.

In 1929—Long before other loud speakers were ever thought of. "AMPLION" Loud Speakers produced for wireless by Alfred Graham & Co. "AMPLION" trade mark registered.

In 1920—AMPLION adopted as standard equipment by leading makers of radio sets abroad.

In 1925—The AMPLION Corporation of America organized to import and market Amplions in this country.

In 1925—Amplion firmly established in popularity among the American music lovers, with sales exceeding expectations.
AMPLON

The "Floating Diaphragm"—Exclusive!

One of the outstanding exclusive features which account for the Amplon's supreme and permanent sensitivity, purity, clarity and natural tone, is the "Floating Diaphragm." This vibratory diaphragm is, first, composed of a special metal which experience has demonstrated superior to any other known design exclusively eliminates the passage of retaining screws through the diaphragm. Third, instead of being rigidly clamped in place, metal to metal, the Amplon diaphragm is cushioned and insulated from all contact with metal by its own. Permitting a diaphragm to touch metal, while it is vibrating, sets up additional vibrations in the metal case. This spoils reception by absorbing vibrations of the diaphragm so essential to perfect reproduction. It also causes distortion. This cannot occur in the Amplon Unit.) Fourth, the outer extremity of the rubber-insulated Amplon diaphragm rests on a narrow ledge, or "rattle" when extreme volume is desired. The result is that the Amplon diaphragm "floats," free from strain, stress or undue tension and free to vibrate in exact accord with the variations of current flowing through the operating windings of the electro-magnetic system. As a consequence, faithful and true reproduction is obtained throughout the entire musical range—without distortion, the outcome of many years of patient research and mature experience in sound reproduction. For example, in tuning the Amplon to a set, you do not disturb the position of the diaphragm by moving it, as in other units. Turning the Amplon adjusting knob moves the electro-magnets toward or away from the diaphragm! Another result of experience is that the Amplon does not deteriorate, or lose its sensitivity with use.

GUARANTEE

Amplon Units are so staunchly constructed that they should never require attention. Nevertheless, each unit is unserviced for one year, and if found defective will be repaired or replaced without charge (except for transportation). All Amplon Units are warranted against defects in materials or workmanship for a period of one year. Amplon Units are warranted against defects in materials or workmanship for a period of one year. If returned prepaid express or parcel post, to The Amplon Corporation of America, 280 Madison Avenue, New York City.

The NEW GOULD UNIPOWER

Gould Unipower is a single, compact unit that supplies continuous, unifiling current for the "A" circuit of the radio set. Unipower is supplied complete, with the master control switch, which is wired to it, and for installation on any radio set it is only necessary to attach the A-+ and A- wires to the set and plug the cord, which is provided, into a socket of the house-lighting circuit. The master control switch supplied with the Unipower makes its operation automatic. This switch is used to control both the radio set and the Unipower. When the radio set is turned on, the Unipower supplies a rich, noiseless current of constant voltage. When the radio is turned off, the master control switch connects the house-lighting current to the transformer and special Rokite rectifier which delivers a low, trickle-charge to the battery elements all the time the set is not in use.

Under normal operating conditions, Unipower will always supply adequate voltage to the set. If, however, through negligence, the owner fails to turn his radio set off over night or otherwise exhausts the Unipower battery cells, a push-pull switch is provided on the Unipower which enables the owner to temporarily increase the charging rate and so bring the Unipower back to full voltage.

Unipower is so compact in size that it can be installed in the cabinet of most radio sets. It has a patented, gas-tight cover and vent to extend outside the cabinet, making such installations safe. Unipower is absolutely noiseless in operation, has no tubes, bulbs, lamps, or other working parts to wear out and require expensive and frequent replacement. It needs no attention except the occasional addition of water perhaps three or four times a year, and is so designed that the charging current cuts off in case water is not added when needed.

Unipower does away with the expense of frequent dry battery replacement and all the inconveniences of ordinary storage battery operation. With Unipower, the first cost is practically the last, because the amount of house-lighting current used in operation is so slight that its cost will amount to only a few cents a month. Because Unipower delivers a constant, full voltage, it is possible to adjust the rheostats of the radio set at a point in which the tubes give most perfect reception. Operating the tubes under these ideal conditions does away with the possibility of overheating them when new dry batteries or freshly charged storage batteries are put on, materially lengthening tube life—a distinct economy.

Engineers concede that "A" battery failure is the most frequent cause of poor reception. With Unipower, a radio owner will know for the first time what perfect reception means. He will always have constant unfailing "A" current available at the click of a switch.

The new Unipower is built in two models—the AC-4 for operating sets using UV-199 tubes or their equivalent and the AC-6, for operating sets using UV-307-A tubes or their equivalent. Unipower is designed to operate on 60 cycle, 110-125 volt alternating house-lighting current.
The NEW GOULD UNIPOWER
for Radio Sets using UV 199 or other 3-4 Volt Tubes

AC-4 UNIPOWER
The AC-4 is very compact and may generally be installed inside the cabinet of the radio set—it will fit inside the Radiola Super VII or the semi-portable Radiola Superheterodyne and other sets providing similar battery space. The AC-4 may be used outside the radio cabinet. It is built in a handsome black rubber case with polished nickel-plated fittings so that it makes a distinct addition to any radio equipment. The AC-4 has a gas-tight cover with a vent-tube so arranged that it extends outside the cabinet, thus protecting the radio set from possible damage. Open type batteries should not be placed inside the cabinet with radio sets. The AC-4 Unipower is supplied complete with master control switch, wired and ready for use. It is carefully packed in cardboard carton and wooden packing case with master control switch, wiring, flushing tube, instructions, etc.

List Price $35.00

for Radio Sets Using UV 201-A or other 5-6 Volt Tubes

AC-6 UNIPOWER
The AC-6 is sufficiently compact to fit into the battery compartments of most cabinet sets but can be used outside, its dull, black surface and polished fittings making a handsome appearance. The AC-6 has a gas-tight cover with vent-tube so arranged that it extends outside the cabinet, thus protecting the radio set from possible damage. Open type batteries should not be placed inside the cabinet with radio sets. The AC-6 Unipower is supplied complete with master control switch, wired and ready for use. It is carefully packed in cardboard carton and wooden packing case, with master control switch, wiring, flushing tube, instructions, etc.

List Price $40.00

TIMES APPLIANCE COMPANY, INC.

The NEW Non-Automatic Special Heavy Duty UNIPOWER

AC-30 UNIPOWER
Supplies 6 volts for the “A” circuit; it is designed for operation on 110 volts or 125 volts alternating current, 60 cycle electric light circuit and should be employed on radio sets having a capacity of 120 amperes. The battery cells of this Unipower have a capacity of 120 amperes. The battery cells of this Unipower have a capacity of 120 amperes. The battery cells of this Unipower have a capacity of 120 amperes.

Connection to the power line is as simple as attaching an electric toaster or an electric iron. This assures the user of sets which have a heavy current draw a continual uninterrupted radio service.

Packed singly, accompanied by cord set for connection to lamp socket, and instructions.

List Price $55.00

Special UNIPOWER for Radio Test and Studio Equipment
Special Unipower assemblies are being used for a wide variety of test purposes and for the operation of a variety of radio sets in sales studios. Quotations will be made on Unipower Equipments for this purpose on request.

GOULD RADIO "A" BATTERIES
To the initial buyer of radio the Gould Storage Battery Company urges consideration of its Unipower but to those users who are already supplied with satisfactory charging devices and require more efficient battery equipment we recommend either of the following types of Gould Battery. If a low rate charger is employed we recommend the R6-80 battery. If a high rate charger is used we recommend the R6-120 battery.

The Gould record for dependability and long life established through more than two decades of service wherever storage batteries are used is ably maintained by the Gould Radio "A" Battery. It utilizes the famous Gould Dreadnought Plate of special design to meet radio requirements and is assembled in a hard rubber case with non-corrosive terminals and a carrying handle. Due to its substantial construction and freedom from corrosion the Gould Radio "A" maintains its good appearance as well as its efficiency for a very long time.

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<td>R6-40</td>
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<tr>
<td>R6-120</td>
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</table>
Gould Radio "A" BATTERIES

Gould "A" Special

To meet the demand for a small "A" Battery to be used in connection with rectifying devices, charging at less than one amperoe, a special Gould 6 volt unit known as the Gould Type R6-30 is supplied. This unit is assembled in a glass jar and has a capacity of 30 amperes hours.

List Price .......... $14.00

Gould Radio "B" BATTERIES

The Gould Radio "B" Battery is entering upon its fourth season. Close observation of the original Gould "B" units in use from the beginning failed to indicate any tendency to loss of capacity where the battery units are charged and flushed regularly. With proper care these batteries should last a decade.

The Gould Radio "B" can be purchased either in single units of 24 volts or in an assembly of four of these units, supplying 96 volts. It is assembled in a reinforced hard rubber case, each cell being grooved to hold the plates and separators firm, thus practically eliminating the chances of buckled and damaged plates, which might in an ordinary "B" result from excessive charging. Holding its voltage for prolonged periods because of the special Gould Negative Plate and entirely free from surface leakage of current (the source of "B" Battery noise) because of its good sized insulating bridges—the 24 volt Gould "B" Storage Battery, in every part of the country has set a new standard of "B" battery efficiency. It has a capacity of 2 amperes hours at discharge rates up to 50 mil. amps.

24 Volt "B" Battery .......... $8.50

96 Volt "B" Battery .......... $42.00

Gould "B" Charger

The Gould "B" Charger has been developed to enable users of the Gould Radio "B" Battery to recharge conveniently and efficiently. This charger is complete as received, including wiring, and is designed for operation on alternating current. The New Gould Electrolytic Salts provide a highly efficient electrolyte which require renewal once in six to seven hundred hours of charge.

List Price .......... $5.00

WESTINGHOUSE RECTICON BATTERY CHARGERS

RADIO AND PRIVATE GARAGE RECTICON OUTFITS

Complete Recticon

APPLICATION

In order to meet the needs of the radio enthusiast as well as the automobile owner a new design of two-amperes Recticon with a number of special features has been developed.

It will charge any combination of lead storage "A" and "B" batteries required for the radio set as well as 1 or 6 cell automobile battery. This wide range has been obtained without penalty to the automobile application, instead several distinct advantages over the older design. Style No. 30950, have been included in the new outfit.

Charging Rates—This Recticon will charge 1 or 2 cells of Radio "A" battery at approximately 1/4 d-c amperes, or from 3 to 6 cells of Radio "A" or automobile battery at the approximate d-c current of 2 amperes to 3 cells and 1 1/2 amperes to 6 cells. Intermediate current rates to intermediate number of cells. Batteries having a greater number of cells may be charged in sections. Also the provision for charging one or two cells will enable the user to fully charge one or more low cells without overcharging the others.

When connected for "B" battery charging, the outfit will deliver from 0 to 1/4 amperes to a range of 11 to 40 cells of lead storage "B" battery (one to four 11 or 12 cell batteries). Different sizes of lamps are used to vary the charging current. A table giving the size of lamp, number of cells and charging current is included on the instruction card.

An equivalent number of alkaline cells can also be charged at the same range of d-c current.

Economic—The cost of charging batteries with the Recticon is very low compared with the charge made by most public battery charging stations. In addition, the convenience with which the Recticon offers the private owner is well worth considering.

LIST PRICE AND RATINGs

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RENEWAL BULB

Style No. 424501

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WESTINGHOUSE RECTIGN BATTERY CHARGERS
HOME AND GARAGE RECTIGN OUTFITS

APPLICATION

PORTABLE Rectign outfits are for the use of the owner of a radio set or car who wants to charge his own batteries.

Although the 2-ampere Rectign is too small to put a full charge into a large size radio or starting and lighting battery in a single night, it is, nevertheless, to be recommended for giving a battery a soaking charge, in order to keep the sulphate from accumulating on the plates. Due to the low charging rate, this outfit will not damage the battery if left on for an indefinite period after the battery has become fully charged. Should the automobile battery become entirely discharged, the 2-ampere size, if left on for 12 hours, will put enough life into it to enable the car owner to start the car the next morning. This size outfit is also adaptable for charging storage batteries on motor cycles which use a smaller capacity battery than the average automobile.

Where a higher charging rate is required, in order to charge the battery in a shorter length of time, the 5-ampere outfit is recommended, but care must be used in the operation of this outfit as the 5-ampere outfit is not encased, and the batteries must be handled carefully.

INSTALLATION AND OPERATION

Because these outfits are portable, they may be set on any convenient place or on the running board of an automobile. To start the outfit, it is simply necessary to clamp the battery clips over the terminals and attach the alternating-current lead to a source of such current, and the charging will begin. To stop charging, turn off the alternating current and disconnect the battery.

FINISH-The case of a 2-ampere and 5-ampere Rectign is glossy maroon. This finish besides being attractive in appearance is durable and easily kept clean.

LIST PRICES AND RATINGS

Style numbers and list price include outfit complete with bulb.

<table>
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RENEWAL BULB

Style No. 357636

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RADIO B BATTERY CHARGING ATTACHMENT

APPLICATION-

All standard form "A" Rectigns, 2- and 5-ampere, are suitable for use with the radio "B" attachment. Except in odd frequency districts, the only demand will be in connection with Style Nos. 357536 and 360036 Rectigns.

DESCRIPTION-
The leads on the attachment are connected to the Rectign and to the radio. Leads are made in such a manner as to make it possible to adapt the outfit for charging either "A" or "B" battery by merely shifting the position of a brass link which bridges one or two of the three studs in the molded terminal board. No change is made in the original characteristics of the Rectign. The Automobile or Radio "A" battery can be charged in exactly the same manner and at the same current rates as prior to the addition of the "B" battery attachment.

RATING-One or two 11- and 12-cell Radio Lead Storage "B" batteries may be charged at one time at the approximate current rate of 13 amperes to one battery and 1 ampere to two batteries in series. All batteries of equivalent voltage may also be charged at the corresponding current rate. When a greater number than two batteries are used, they can be charged in sections of 12 or 24 cells.

ADVENTAGE-The change to adapt the Rectign for "A" or "B" battery charging can be made quickly. All that is required is to change the position of the brass link, which is located directly below the cover, so that the right or left pair of binding posts depending upon the type of battery to be charged.

STOCK NO. DESCRIPTION VOLTAGE LENGTH WIDTH HEIGHT PRICE

<p>| | | | | | |</p>
<table>
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</tbody>
</table>

“ASK ANY RADIO ENGINEER”
TIMMONS B-LIMINATOR

For Operation on Alternating Current, 110 Volt, 60 Cycle

The B-Liminator is adaptable to any set without rewiring in any form. It has three binding posts, the same as any "B" battery layout, a negative (minus) connection and two positive (plus) connections, one for the detector and the other for the amplifying voltage.

"PARTICULARLY GOOD" ON RADIOLA SUPER HETERODYNES

Its operation is simple, and when once adjusted to the requirements of the set it may be left alone. On the outside and at the front of the B-Liminator are two control knobs to regulate, respectively, the amplifying and detector voltage. The former is variable between 1 and 120 volts and the latter between 16 and 45 volts.

A special filtering device serves to eliminate any trace of AC hum.

The current consumption of the B-Liminator is eight watts at no load and about 8.5 watts at full load.

A compact device, measuring about 7x3x8 3/4 inches over all. Weighs about six and one-half pounds.

The B-Liminator includes the special Timmons rectifying tube.

List Price $28.50

TIMMONS B-LIMINATOR KIT

B-Liminator Kits are made up of the same parts that are used in the Timmons B-Liminator, now so enthusiastically endorsed by radio authorities and set users.

Anyone can assemble a B-Liminator Kit. Complete instructions come packed with each one.

The kit can be installed inside a radio set or on a separate panel and baseboard. Detector control gives voltages from 16 to 45; amplifier control from 1 to 120, with all in-between voltages. Operates on alternating current 110 volts, 60 cycle.

The B-Liminator Kit includes the special Timmons rectifying tube.

List Price $20.00
COOPER A-n-B ELIMINATOR

LIGHT-SOCKET RADIO-POWER

That day of days, when Radio batteries are no longer necessary, has arrived! Definitely and beyond any question the Cooper A-n-B delivers to your set the exact current it requires for best reception.

Attaching the A-n-B to your set and to the nearest light socket or baseboard outlet requires no skill—no technical knowledge. Any one who can connect Radio batteries to a receiving set can quite as easily attach the Cooper A-n-B.

The superiority of the A-n-B as a medium of power—its fitness as the proper successor to Radio A and B batteries—is best appreciated when it is borne in mind that the Cooper A-n-B was developed by Battery Engineers—men who have lived their commercial lives in battery laboratories—who have built batteries and who know the inconveniences and limitations of batteries for Radio use.

For more than a year tests have been made under all possible receiving conditions. These tests have been applied in laboratory, in homes—in all weathers, climates, seasons, and localities. The Cooper A-n-B delivers a power that is efficient, constant—and as steady as electric light.

The Cooper A-n-B will deliver day after day, month after month, and year after year, the same full measure of current for your set, whenever you pull the switch.

The Cooper A-n-B is Better than Batteries at their Best.

List price without tubes .......................... $85.00

Necessary Equipment
2—2 Amp. Recticon Bulbs, list each ............. 4.00
1—Special 2 element "B" Tube, list ............... 2.50
Total List ........................................... $95.50

FACTS ABOUT THE COOPER A-n-B

Operates on 110-115 volt, 60 cycle A. C. only.
Attaches to any outlet, light socket, wall fixture or baseboard.
Transforming ordinary alternating lighting current, the A-n-B delivers, with variable control, up to two Amperes A current, from 0 to 135 volts B current, and from 0 to 35 volts Detector current.
Operates with two 2-ampere rectifying tubes, (either Tungar or Recticon) and one 2 element Radio type tube.
Once adjusted to deliver proper amount of current for the particular set, no further regulation of the A-n-B is necessary.
Costs about one cent an hour for current to operate a five tube set.
Will operate any commercial type of Radio receiving set without change in wiring.
Weighs fifty-three pounds—no more than the average "set". A storage battery, and the dimensions, 15½" long, 9½" high, and 10½" wide (including dials and binding posts), permit placing it in any console cabinet that is intended to receive batteries.
Enclosed in a beautiful crystalline black steel cabinet—a sightly addition to any Radio receiving set.
Will operate at maximum 8 UV 201-A Tubes (or equivalent); or 10 UV 199 Tubes (or equivalent).
There is nothing to deteriorate or wear out except Bulb and Tubes.
Eliminates batteries and contains no batteries.
BRACH COMPLETE AERIAL OUTFITS

All parts conform to National Board of Fire Underwriters requirements

DE LUXE SENIOR TYPE 223 ANTENNA OUTFIT
Includes all the necessary parts as illustrated together with type 223 outdoor vacuum arrester. Full instructions in simple language in each outfit. This package contains:
1. 1 type 223 Vacuum Outdoor Lightning Arrester.
2. 100 ft. 7-strand No. 22 gauge hard-drawn copper wire.
3. 50 ft. No. 14 white insulated weather-proof wire.
4. 25 ft. No. 18 cotton covered interior wire (for hooking up).
5. 2 Brass Low Loss Crystal Insulators.
6. 2 Screw Eyes.
7. 2 Porcelain Nail-It Knobs.
8. 12 Insulated Staples.
9. 1 Brach Insulated Window Lead-In.
10. 2 Fahnestock Ground Clamps.
List Price .......................... $9.50

DE LUXE JUNIOR TYPE 210 ANTENNA OUTFIT
Includes all the necessary parts as illustrated together with type 210 indoor vacuum lightning arrester. Full instructions in simple language in each outfit. This package contains:
1. 1 type 210 Vacuum Indoor Lightning Arrester.
2. 100 ft. 7-strand No. 22 gauge hard-drawn copper wire.
3. 50 ft. No. 14 white insulated weather-proof wire.
4. 25 ft. No. 18 cotton covered interior wire (for hooking up).
5. 2 Brass Low Loss Crystal Insulators.
6. 2 Screw Eyes.
7. 2 Porcelain Nail-It Knobs.
8. 12 Insulated Staples.
9. 1 Brach Insulated Window Lead-In.
10. 1 Fahnestock Ground Clamp.
List Price .......................... $8.00

STORM GUARD TYPE 330 ANTENNA OUTFIT
Includes all the necessary parts for erecting a complete aerial, including a Storm Guard Non-Air Gap Lightning arrester. Full instructions in simple language in each set. This package contains:
1. 100 ft. 7-strand No. 22 gauge hard-drawn copper wire.
2. 50 ft. No. 14 white insulated weather-proof wire.
3. 10 ft. No. 18 cotton covered interior wire (for hooking up).
4. 2 Large Porcelain Insulators.
5. 2 Screw Eyes.
6. 2 Porcelain Nail-It Knobs.
7. 2 Fahnestock Ground Clamps.
8. 12 Insulated Staples.
9. 1 Brach Insulated Window Lead-In.
10. 1 Storm Guard, type 230, Outdoor Lightning Arrester.
List Price .......................... $14.50

STORM KING TYPE 300 ANTENNA OUTFIT
Includes all the necessary parts for erecting a complete aerial, including a Storm King Non-Air Gap Lightning arrester. Full instructions in simple language in each set. This package contains:
1. 100 ft. 7-strand No. 22 gauge hard-drawn copper wire.
2. 50 ft. No. 14 white insulated weather-proof wire.
3. 10 ft. No. 18 cotton covered interior wire (for hooking up).
4. 2 Large Porcelain Insulators.
5. 2 Screw Eyes.
6. 2 Porcelain Nail-It Knobs.
7. 1 Fahnestock Ground Clamp.
8. 12 Insulated Staples.
9. 1 Brach Insulated Window Lead-In.
10. 1 Storm King, type 300, Indoor Lightning Arrester.
List Price .......................... $4.50

BRACH RADIO PRODUCTS

BRACH-STAT COMPLETE
Brach-Stat—An automatic filament control eliminating hand rheostats for all amplified circuits.

For Use With
W. D. 11 and 12 Specify Code A—11 or 12 Volt Battery
U. V. 201 A or Similar Specify Code C—6 Volt Battery
U. V. 199 or Similar Specify Code C—11 or 12 Volt Battery

Brach-Stat with mounting .......................... $1.00
Brach-Stat only ...................................... .75
Mounting ............................................. .25

BRACH UNIVERSAL MOUNTING
Universal Mounting—Moulded Base
List Price .......................... $0.25

BRACH FIXED CRYSTAL
Brach Fixed Crystal—A tense tested fixed crystal insuring perfect reception.

Fixed Crystal with mounting .......................... $1.00
Fixed Crystal only .................................... .75
Mounting ............................................. .25

BRACH GRID LEAK UNMOUNTED
Accurate Ratings—Permanency
Brach Grid Leak—5,000 Ohms .......................... List Price $1.00
Brach Grid Leak—12,000 to 25,000 Ohms Inclusive—List Price .75
Brach Grid Leak—10,000 to 15 Meg Ohms .......................... List Price .50

PURATONE AUDIO COUPLER
Puratone Audio Coupler is complete with condenser and resistors mounted. These Audio Couplers have been found to be superior in many respects to the standard audio transformers by reason of greater purity of tone. In ordering, specify whether for 1st, 2nd or 3rd stage.
List Price .......................... $3.00

LOW-LOSS CRYSTAL INSULATOR
Brach Low Loss Crystal Insulator is of high dielectric value and will not absorb water or accumulate dust or dirt. Large flanges increase surface insulation and provide drip points for rain, snow or ice. Tenacity strength far in excess of requirements.
List Price .......................... $0.30

GROUND CLAMP
Brach Ground Clamp is equipped with Fahnestock terminal, easy to install and provides a permanent and reliable means of connection.
List Price .......................... $0.15

WINDOW LEAD-IN
Brach Window Lead-In provides the simplest method for bringing the aerial into the building and avoids cutting of holes in walls. It is provided with Fahnestock phosphor bronze spring clips for securing to window sill and is suitably insulated.
List Price .......................... $0.20
BRACH SOLDERING ACCESSORIES

BRACH SOLDERALL
This is a complete metal solder and flux combined. A small quantity applied to the joints to be soldered when heated will flow and unite the parts the same as wire or bar solder. Furnished in collapsible tubes.
Price Per Tube ........................................... $0.25

ROSIN CORE SOLDER
This consists of a tube of pure solder with a core of resin. Furnished in 5 lb. packages, straight lengths 18" long. The most convenient means of handling Rosin Core Solder.
Price per pound ........................................... $0.15

PEERLESS FLUX
Peerless Flux is a non-corrosive soldering flux for convenient quick soldering. Comes in 2-ounce cans.
Price Per Can ............................................. $0.15

BRACH ELECTRIC SOLDERING IRON
Brach Electric Soldering Iron is known as a product of exceptional quality. Each iron comes with a broad guarantee and unless specified will be furnished with a 1/8" radio pencil tip. Other sizes of tips can be furnished if specified.
List Price ................................................ $2.50

TIPS
Radio Pencil Tip Size 1/8 Inch.
List Price—each ........................................ $0.50

Commercial Tip 9/16 Inch.
List Price—each ........................................ $0.50

TIMES APPLIANCE COMPANY, Inc.

BREMER TULLY PARTS AND KITS
The superior qualities of B-T design and workmanship are never questioned.

The value of such public confidence cannot be over-estimated—and the dealer who concentrates on B-T products is assured of rapid, proven-building turnover.

In addition he secures the added prestige and good will which follow the recommendation of a line of parts and circuits that has never included an item that was not an outstanding success.

B-T parts are at once the envy and the despair of all competitors.

B-T Laboratory Type Low Loss Condenser
A masterpiece of mechanical construction, with resistance losses lower than "laboratory standards." The method of die-casting aluminum rotor and stator is exclusively B-T, resulting in absolute rigidity, permanent seating and yet light in weight and requires no counter-balance.

The "Lifetime" bearing is unequalled in radio. It "grips" the shaft instead of pushing against end of rotor, and is easily adjustable to any degree of friction that suits the user, without endangering plate alignment.

Pure Redwood insulation is used, rotor is connected by noiseless pigtail and mounting is single hole, or combination.

When used with proper Inductance Type L gives true straight line wave length. The finest acting and appearing condenser made.

Code No. Capacity No. Plates List
L-7 .000125 (or 125 M.M.F.) 7 $4.25
L-13 .00025 (or 250 M.M.F.) 13 $4.50
L-17 .00035 (or 350 M.M.F.) 17 $4.75
L-23 .0005 (or 500 M.M.F.) 23 $5.00
L-35 .0008 (or 800 M.M.F.) 35 $6.00

Straight Line Frequency
Certain users prefer condensers giving so-called "straight line frequency" variation. It should be understood that this is possible only with an inductance designed to suit the condenser.

The B-T Type SLF stations space channels uniformly over the dial when used with B-T coils, and possesses all the superior refinements of Type L described above.

Code No. Capacity No. Plates List
S.L.F.-13 .00125 (or 250 M.M.F.) 13 $5.50
S.L.F.-17 .0035 (or 350 M.M.F.) 17 $5.75

Multiple Condensers (Straight Line Wave Length)
The Double Condenser is a necessity in circuits designed for simultaneous tuning. B-T Multiple Condensers are of the same superior construction as the B-T Single Condenser. Compensating "trimmers," an exclusive feature of this instrument, insures perfect balance of the two units at all times.

Code No. Capacity (each unit) No. Plates (each unit) List
LD-13 .0025 (or 250 M.M.F.) 13 $9.00
LD-17 .0035 (or 350 M.M.F.) 17 $9.50
Note: Type LD-17 is used with all B-T Torosteal Inductances.
BREMER TULLY PARTS AND KITS

Nameless Circuit

The B-T "Nameless" Circuit, using the original B-T Air Core 3-circuit Transformers, is too well known throughout the world to need further description. A highly efficient circuit providing oscillation control over complete range.

The "Nameless" Kit No. 3 includes 3 L-13 Condensers, 3 Nameless condenser with dial, a complete set of blue prints and instructions. Price $25.00

B-T Three-Circuit Tuner

The 3-circuit Tuner, an original B-T development, reaches its highest form in this bank wound, skeleton frame, adjustable primary product. A tuner of unquestioned merit for use in one to four-tube sets.

Type B, for broadcast reception (200 to 566 meters with L-13 Condenser) $5.00
Type S. W., for short wave reception (50 to 150 meters with L-13 Condenser) 4.00

B-T Air Core Transformers

Two-circuit, bank wound skeleton frame transformer, similar to above described tuner but without rotor. The adjustable primary provides for volume or selectivity. The best unit for adding radio frequency to a 3-tube set.

AC-1 Transformer (Fixed Primary) $2.50
AC-3 Transformer (Adjustable Primary) 3.50

B-T Short Wave Outfit

A short wave outfit with interchangeable coils covering 125 to 25, 25 to 50, 50 to 100, 100 to 200 meters, with base and rotor.

Short Wave Outfit $6.00

B-T Mikro-Mike Condenser

The B-T Mikro-Mike Straight Line Capacity Condenser gives accurate and permanent adjustment from 0.5 to 30 M. F. Change in capacity is uniform over complete range with indicator to show relative adjustment. Used in B-T patented circuit or wherever a highly accurate capacity capable of minute adjustment is needed.

Type M. M. Condenser $0.90

B-T Universal Socket

B-T Universal Socket eliminates use of adaptors and consequently recurring trouble caused by poor design. Accommodates all new UX base tubes, as well as UX 200 and UX 201A.

A gripping side contact spring direct from wiring to tube prongs makes positive self-cleaning contacts. Accidental spring break prevents burning. Side contact displacement is impossible. A wide separation of contact springs gives lowest possible capacity. Type UL Socket.

Type UL Socket $0.75

B-T "Torostyle" Transformers

When used in efficient circuits the toroidal style Transformer reduces pick-up of local signal as well as inter-coupling and stray feed-back effects. It is a product where the utmost in design and balance is required to insure selectivity and oscillation control. The B-T "Torostyle" Transformer has all that the many years of research and successful experience in inductance design of the B-T organization can put into it.

The attractive appearance of this coil commands instant attention.

Seven binding posts are arranged for easy wiring and short leads. Covers full broadcasting wave length range with B-T 30003 Condenser. Used in B-T patented "Counterphase" and other circuits.

Code No. List
TA (Antenna Coupler) $4.00
TC (For Intermediate & F. Stages) 4.00
Te (For Four-tube Sets) 4.00

KITS FOR BUILDING B-T "COUNTERPHASE"

(Containing B-T "Torostyle" Transformers and Multiple Condensers)

The B-T "Counterphase" circuit, covered by exclusive patents, provides for oscillation control over the complete broadcast range, enabling the operator to tune his set to the highest peak of efficiency on either high or low wave lengths.

In combination with the "Torostyle" Transformer, this circuit also provides a method of putting the 6th tube where it belongs—namely, as a third stage of radio frequency.

Balancing double condensers reduce tuning controls to two.

A special exclusive B-T Double Resistance Unit controls oscillations thru a patented bridge method. This control is turned in one direction for sensitivity or in the other direction to secure any degree of volume required.

Full schematic and pictorial blue prints, with complete instructions are provided. A cable "wiring form" for radio frequency stages greatly simplifies wiring.

B-T "Counterphase" Kit No. 6 contains the following parts: 1 TA and 3 TC "Torostyle" Transformers, 2 L-17 Condensers, 3 Mikro-Mike Condensers, 1 Dual Resistance, 1 wiring form, 1 set blue prints and instructions.

(Operates on short indoor antenna.)

B-T "Counterphase" Kit No. 4, same as foregoing except two stages of radio frequency and intended for operation on outdoor antenna; 1 TA and 2 TC Transformers, 1 L-17, 2 L-17 and 2 M. M. F. Condensers, 1 Dual Resistance, 1 Wiring Cable, 3 sets blue prints.

Blue prints and instructions for either 2 or 6-tube "Counterphase" circuit, showing detailed steps, schematic and pictorial diagrams with operating suggestions.

List
B-T "Counterphase" Kit No. 6 (List Price separately) $42.45
B-T "Counterphase" Kit No. 5 (List Price separately) $32.80
B-T "Counterphase" Kit No. 4 (List Price separately) 28.60
B-T "Counterphase" Kit No. 3 (List Price separately) 20.20
B-T "Counterphase" Kit No. 2 (List Price separately) 13.00
B-T "Counterphase" Kit No. 1 (List Price separately) 4.45
B-T "Counterphase" Kit No. 0 (List Price separately) 3.00

TIME APPLIANCE COMPANY, INC.
**BREMER TULLY PARTS AND KITS**

### B-T Variable High Resistances

Many new circuits use variable, non-inductive high resistances. B-T Resistances possess new and patented features that make them the best obtainable.

A circular resistor element is mounted in a circular bakelite base. Variable engagement is secured by a show which slides over a yielding disk, but does not wear against the resistance, consequently continued service does not cause noisy action or change in resistance.

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Maximum Resistances</th>
<th>List</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHR-2</td>
<td>2,000 ohms</td>
<td>$2.00</td>
</tr>
<tr>
<td>VHR-50</td>
<td>50,000 ohms</td>
<td>2.00</td>
</tr>
<tr>
<td>VHR-100</td>
<td>100,000 ohms</td>
<td>2.00</td>
</tr>
<tr>
<td>VHR-300</td>
<td>300,000 ohms</td>
<td>2.50</td>
</tr>
</tbody>
</table>

### E-T Volume Control Or Modulator

Similar in appearance and construction to Potentiometer but with 50,000 ohms non-inductive resistance. Used in audio circuits for noiseless adjustment of volume and improvement of tone qualities.

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Maximum Resistances</th>
<th>List</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC-500</td>
<td>500,000 ohms</td>
<td>$2.00</td>
</tr>
</tbody>
</table>

### B-T Non-Inductive Potentiometer

A variable high resistance similar to that described on the preceding page but with three terminals. Slider connects to center terminal and varies at either outer terminal to maximum resistance. Steep, noiseless, and without after effect.

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Maximum Resistances</th>
<th>List</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-400</td>
<td>400 ohms</td>
<td>$1.75</td>
</tr>
<tr>
<td>P-3000</td>
<td>3000 ohms</td>
<td>2.00</td>
</tr>
</tbody>
</table>

### B-T Tuning Control

An attractive appearance combined with the highest degree of efficiency. A 12 to 1 ratio provides positive control with a smooth easy action. There is no pull or side strain on the condenser shaft to cause wear on bearings and consequent impaired plate alignment. The same dial works with either right or left turning condensers. A reversible, erasable disc is calibrated on one side in wave lengths for use with B-T Type L and LD Condensers in conjunction with B-T Inductors. The reverse side is for marking station call letters. This is the only dial that reads in fractional degrees, if desired.

List Tuning Control (Black and Gold Finish) $2.50

### B-T Euphonic Audio Transformer

The B-T "EUPHONIC" (meaning "pleasing to the ear") is an Audio Transformer of unsurpassed merit. Nothing on the market today regardless of size will give better amplification or tone qualities, its superiority being particularly noticeable on low notes.

It shows the best constructional improvement in years. The special mounting features and plating of terminals allows mounting without side up in each position as well eliminate all crooked wires—helping greatly to prevent bowing and distortion.

<table>
<thead>
<tr>
<th>Type</th>
<th>Ratio</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 210</td>
<td>2.2 to 1</td>
<td>$0.00</td>
</tr>
<tr>
<td>Type 410</td>
<td>47 to 1</td>
<td>2.75</td>
</tr>
</tbody>
</table>

### Dubilier DEVICES

#### THE MICADON TYPE 691

The original Micadon, while accurate to a high degree, was not flexible, in so far as only one type was available. The newer Micadons have been constructed with a view towards facilitating their assembly in modern radio sets either factory built or home made.

The Dublier Micadon is unquestionably the world's most popular unit of capacity because the Dublier Company has been quick to add needed conveniences and has maintained the high quality which has made the Dublier Micadon the standard condenser of radio.

Below are listed capacities and prices of the type 601 Micadon as shown above.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>List Price</th>
<th>Capacity</th>
<th>List Price</th>
<th>Capacity</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>.0005</td>
<td>$2.35</td>
<td>.001</td>
<td>$4.35</td>
<td>.0025</td>
<td>$2.35</td>
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<td>.35</td>
<td>.0012</td>
<td>.40</td>
<td>.002</td>
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</tr>
<tr>
<td>.0025</td>
<td>.35</td>
<td>.002</td>
<td>.40</td>
<td>.005</td>
<td>.35</td>
</tr>
<tr>
<td>.005</td>
<td>.25</td>
<td>.0025</td>
<td>.40</td>
<td>.006</td>
<td>.25</td>
</tr>
</tbody>
</table>

Standard Package: 50 of one capacity (packed in units of 10)

Below are modifications of the Standard Micadon Type 601, equipped with special mounting clips. Each type shown will be made to order in any capacity desired. Capacities carried in stock are listed under each.

Prices: 10c. advance for 601T-601G over list prices shown for 601 plain.

**Micadon Type 691T** has adjustable clips which clip over transformer and other binding posts. Stocked in Capacities .0005, .001 and .002.

**Micadon Type 601G** has clips to hold fixed grids—leaks (Grid-Leaks not supplied with Micadons). Stocked in Capacities .0001, .00025 and .0005.

Standard Package: 50 of one kind and capacity (packed in units of 10)
THE BY-PASS CONDENSER

This condenser is used as a by-pass for the radio frequency currents around the high internal resistance "B" battery. Because of this reduced resistance, louder signals may be obtained. It is also used to control the fluctuating current delivered by a partly run down "B" battery, thus insuring a uniform flow of current and the elimination of noises.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>.25</td>
<td>.75</td>
</tr>
<tr>
<td>.5</td>
<td>.90</td>
</tr>
<tr>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td>2</td>
<td>1.75</td>
</tr>
<tr>
<td>4</td>
<td>3.75</td>
</tr>
</tbody>
</table>

Standard Package: 10 of one capacity

FILTER CONDENSERS

These condensers have been especially designed for use in the filter circuits of Battery Eliminators as the ordinary By-Pass Condenser is not suitable for the high voltage loads occasioned by line surges. The safe and efficient operation of Battery Eliminators demands proper condensers able to withstand the high voltage loads encountered under service conditions. These new Filter Condensers are built for this purpose.

DC Max AC Max

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity</th>
<th>Test Voltage</th>
<th>Voltage Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>765</td>
<td>1 Mfd</td>
<td>800</td>
<td>110</td>
</tr>
<tr>
<td>766</td>
<td>2 Mfd</td>
<td>800</td>
<td>110</td>
</tr>
<tr>
<td>767</td>
<td>4 Mfd</td>
<td>800</td>
<td>110</td>
</tr>
<tr>
<td>768</td>
<td>1 Mfd</td>
<td>2000</td>
<td>420</td>
</tr>
<tr>
<td>769</td>
<td>2 Mfd</td>
<td>2000</td>
<td>420</td>
</tr>
<tr>
<td>770</td>
<td>4 Mfd</td>
<td>2000</td>
<td>420</td>
</tr>
</tbody>
</table>

STANDARD PACKAGE 10

DUBLIER CONDENSER

4377 Bronx Boulevard

& RADIO CORPORATION

New York, N. Y., U. S. A.

THE BY-PASS CONDENSER

DUBLIER DEVICES

CONDENSERS—TYPE 577 and 589

Dubleier condensers types 577 and 589 are preferred where low losses and accurate capacity condensers are essential. They are suitable for use in laboratory standards in precision circuits and for low power C. W. transmitters.

Type 577 is designed for use in radio and audio frequency circuits; for receiving equipment (especially superheterodyne); self-rectifying circuits, d. c. and other tube transmitters.

An excellent grid, plate, by-pass and antenna series condenser.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Volt</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>.0001</td>
<td>1.000</td>
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<tr>
<td>.0025</td>
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<td>1.000</td>
<td>2.25</td>
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<tr>
<td>.01</td>
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<td>2.50</td>
</tr>
<tr>
<td>.015</td>
<td>2.50</td>
<td>2.75</td>
</tr>
</tbody>
</table>

TYPE 577A

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Voltage</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>.001</td>
<td>2.000</td>
<td>$2.55</td>
</tr>
<tr>
<td>.0025</td>
<td>2.000</td>
<td>2.25</td>
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<tr>
<td>.005</td>
<td>2.000</td>
<td>2.25</td>
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<tr>
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<td>2.250</td>
<td>2.25</td>
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<tr>
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<td>2.50</td>
</tr>
<tr>
<td>.02</td>
<td>2.500</td>
<td>2.75</td>
</tr>
</tbody>
</table>

Standard Pkg. of 577 or 577A—10 of one capacity.

DUBLIER DEVICES

THE METALAX

These Resistances, the results of extensive research, are accurate and constant at all times. Their production involves a principle of manufacture that is entirely new and worthy of mention.

An extremely thin coating of metal, possessing properties of resistance not found in any other type, is deposited on a glass rod of thread-like proportions. This is then hermetically sealed in a glass capsule. Due to this "filament" the Metalax is absolutely noiseless in operation under all service conditions.

In size the "Metalax" is slightly smaller than the standard type which makes it particularly adapted for use with the Micronad 640A in resistance coupled amplification. But it may be used with equal efficiency in any grid mounting.

Metalax may be obtained in all standard values and can be used wherever a fixed resistance is called for.

<table>
<thead>
<tr>
<th>Resistance</th>
<th>List Price</th>
<th>Resistance List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000 ohms</td>
<td>.65</td>
<td>3000 ohms $3.60</td>
</tr>
<tr>
<td>2500 ohms</td>
<td>.65</td>
<td>2500 ohms $3.40</td>
</tr>
<tr>
<td>5000 ohms</td>
<td>.65</td>
<td>5000 ohms $3.40</td>
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<tr>
<td>7500 ohms</td>
<td>.65</td>
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</tr>
<tr>
<td>10000 ohms</td>
<td>.65</td>
<td>10000 ohms $3.40</td>
</tr>
<tr>
<td>15000 ohms</td>
<td>.65</td>
<td>15000 ohms $3.40</td>
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<tr>
<td>20000 ohms</td>
<td>.65</td>
<td>20000 ohms $3.40</td>
</tr>
<tr>
<td>25000 ohms</td>
<td>.65</td>
<td>25000 ohms $3.40</td>
</tr>
</tbody>
</table>

Standard Pkg. 50.

THE DURTRAN

The Dublier Durtran is an excellent radio frequency transformer that functions over the entire telephone band on wavelengths from 225 to 550 meters with an amplification constant of over twenty.

All raw materials used are carefully inspected and tested to insure uniformity of production. The Durtran is assembled under careful supervision and is individually tested for stability and degree of amplification over the wavelength band of 225 to 550 meters.

This care in manufacture insures accuracy, durability and satisfaction in use.

List Price $4.60

Standard Package 10.

THE DUTEC

A sensitive synthetic crystal which will not oxidize from age or exposure. Every point on the surface is sensitive. The Dutec will bring in the broadcasting stations with remarkable clarity and volume.

List Price $3.30

Standard Package 100.

DUBLIER CONDENSER

4377 Bronx Boulevard

& RADIO CORPORATION

New York, N. Y., U. S. A.
THE MICADON TYPE 640

The Micadon Type 640 has been designed to meet the demand for a highly efficient microcondenser of larger capacity and higher voltage test than the Micadon Type 602.

This condenser is made in capacities from .00025 to .02 microfarads and is adapted for use in any radio circuit where low loss microcondensers are required. The larger capacities are especially suitable for use as by-pass condensers in super-heterodyne and other circuits.

Capacities and List Prices of Type 640

<table>
<thead>
<tr>
<th>Capacity</th>
<th>List Price</th>
<th>Capacity</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00025</td>
<td>.040</td>
<td>.0005</td>
<td>.060</td>
</tr>
<tr>
<td></td>
<td>.005</td>
<td>.01</td>
<td>.100</td>
</tr>
<tr>
<td>.001</td>
<td>.45</td>
<td>.004</td>
<td>.55</td>
</tr>
<tr>
<td></td>
<td>.05</td>
<td>.015</td>
<td>1.50</td>
</tr>
<tr>
<td>.002</td>
<td>.45</td>
<td>.006</td>
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</tr>
<tr>
<td></td>
<td>.07</td>
<td>.016</td>
<td>1.75</td>
</tr>
</tbody>
</table>

Type 640G with clips for mounting resistance unit is stocked only in capacity .00025 mfd. List Price $50. Any special capacity of the Micadon Type 640G will be made to order. Prices on application.


THE DUBLIER DUCON

The Dublier DUCON is a safety device which enables you to use the house wiring as an aerial.

The DUCON makes it possible to have a very efficient aerial by connecting a radio set with the electric-light wires. It is simply screwed into the light socket as an ordinary electric bulb is.

No matter what set is used, either a crystal or an elaborate tube outfit, the Dublier DUCON will usually be found to greatly improve reception.

An additional advantage of the DUCON is that an aerial is ready for instant use in every room in the house—wherever there is a lamp socket. The DUCON uses no current and may be used on any lighting circuit, whether alternating or direct.

It reduces to a minimum the annoyance of static electricity, disturbances from high-power lines and all other interference.

The DUCON is absolutely shockproof and practically indestructible.

The DUCON is sold on a money-back basis.

Listed by the National Board of Fire Underwriters.

List Price $1.50

DUBLIER DUCON
4377 Bronx Boulevard

& RADIO CORPORATION
New York, N.Y., U.S.A.

HOYT ELECTRICAL INSTRUMENTS
FOR RADIO SERVICE
Pocket Types—Watch Case Construction—2" in Diameter—Nickel Finish

TYPE 1
An ammeter, range 0-35 amperes, built for determining the amperage of a dry cell when meter is placed directly across terminals.

TYPE 11
A voltmeter, range 0-50 volts, with red markings at 22-5 and 45 volt points. This meter has high resistance, is accurate and is absolutely reliable for B battery testing. Scale hand calibrated.

TYPE 21
A voltmeter, ranges 0-35 amperes and 0-30 volts, which make possible the accurate testing of "A" batteries and dry cells.

TYPE 31
A voltmeter, ranges 0-35 amperes and 0-50 volts, a new meter produced to answer the insistent demand for testing B batteries and dry cells, with one instrument.

Two-inch Panel Voltmeter—Moving Vane Type

This meter is supplied in a single range for testing A batteries or as a double range instrument for testing both A and B batteries. There are one or two pushbutton switches coming through the front of the meter so that readings can be made by simply pressing a switch.

Double range voltmeters are built with three terminals: A+, B+, and a common negative. They are not to be used on sets in which the A+ is connected to the B+ except with an additional switch.

Single Range
0-10 volts
Double Range
0.30 and 0.100 volts
0.75 and 0.150

Finish
Black enamel

Price $3.25
Price $4.75

(Type double range meters B battery scale and switch button are red.)

The Hoyt line is complete—meters are designed in every respect, carefully calibrated and fully warranted to give accurate tests. Packed in single boxes, 12 boxes to a carton.
HYOT ELECTRICAL INSTRUMENTS
FOR RADIO SERVICE
Miniature Switchboard Types

Peep-Hole Meters
This meter is designed to fit any radio panel peep-hole. The barrel, where it fits into the hole, is 25/32" in diameter and the overall diameter is 1 1/2". It should be mounted permanently in the set for determining the current drawn by tubes—or, if desired, on either 'A' or 'B' batteries, as the ranges which can be supplied readily permit such hook-ups.

<table>
<thead>
<tr>
<th>Ammeter</th>
<th>Voltmeter</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 A</td>
<td>0-4 volts</td>
</tr>
<tr>
<td>0-2 A</td>
<td>0-6 volts</td>
</tr>
<tr>
<td>0-5 A</td>
<td>0-10 volts</td>
</tr>
<tr>
<td>0-7 A</td>
<td>0-12 volts</td>
</tr>
</tbody>
</table>

Price $3.00

For higher voltage readings multipliers are supplied with 10-volt meter as follows:

<table>
<thead>
<tr>
<th>Multiplier</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 to 1 (Total 30 volts)</td>
<td>$0.75</td>
</tr>
<tr>
<td>5 to 1 (Total 50 volts)</td>
<td>$0.75</td>
</tr>
<tr>
<td>10 to 1 (Total 100 volts)</td>
<td>$1.25</td>
</tr>
</tbody>
</table>

Panel Meters—Moving Coil Type
For most accurate electrical testing, meters built on the moving coil principle are essential. To our knowledge type 17 meter is the smallest of this class, and can be supplied self-contained in the following ranges:

<table>
<thead>
<tr>
<th>Amperes</th>
<th>Volts</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-0.1 milamps</td>
<td>0-0.1 milvolts</td>
</tr>
<tr>
<td>0.1-0.5 amperes</td>
<td>0-1.0 volts</td>
</tr>
<tr>
<td>0.5-1.0 amperes</td>
<td>0-1.5 volts</td>
</tr>
<tr>
<td>1.0-10.0 amperes</td>
<td>0-30 volts</td>
</tr>
</tbody>
</table>

Price $7.00

Burton & Rogers Radio Products
TUBE FLASHER

For Direct or Alternating Current
Any Cycle

Flashing radio tubes is not new—it is a process recommended by the tube manufacturers and has been successfully by radio jobbers and progressive dealers for some time.

The BURTON & ROGERS TUBE FLASHER has been developed for consumer use—so that the radio operator can flash his own tubes and keep his set working at maximum efficiency at all times.

Price $7.50

1. It can be used on either DIRECT OR ALTERNATING CURRENT, ANY CYCLE.

2. The operator merely presses a button for 45 seconds—releases it—and leaves the tube in the socket for 10 minutes—COULD ANYTHING BE MORE SIMPLE?

3. The equipment is attractive in design, with bakelite top and bottom—5" x 3 3/4" x 3 3/4"—equipped with 5 feet of cord and plug for attachment to any socket, either A. C. or D. C.

4. It is packed in a substantial cardboard carton with an attractive label and weights (packed) 1 lb. Standard shipping package holds 12 TUBE FLASHERS, and with each package is a supply of envelope stuffers and two display brochures.

The "Why" of Flashing Worn-Out Tubes
The modern "dull-emitter" low current-consumption radio tube, like the type 201-A or 199, depends for its efficiency upon a coating of rare metal, thorium, upon the surface of the delicate filament.

In the manufacture of the tube, the filament is impregnated throughout with thorium. During the process of exhaustion the filament is flashed and this builds up a very thin smooth coating of thorium on the surface.

A thorium-coated filament when heated to a dull red will emit electrons in a vacuum as well as an ordinary metal filament at a white heat.

After the tube has been used for a long time, especially if it has been burned too brightly, or with excessive plate current, this thorium coating is evaporated, and lost.

"Flashing" the tube will boil out more thorium from the interior of the filament and the ten-minute run at a lower current then coats this smoothly over the filament. If the filament cools, even for a fraction of a second, between the flashing and the 10-minute run, the coating cracks, and will soon fall off.

That is why it is essential not to allow the filament to cool between runs.

The Burton-Rogers Tube Flasher does not allow the filament to cool. It cannot. Its operation is automatically correct.
Belden Aerial and Wiring Products

Belden Aerial Wire

This improved wire for outside aerials consists of individual enamel-coated Belden Wire. The smaller stranded wire is perfect for high frequency use, and the larger stranded wire is ideal for long runs. Each size of wire is listed below.

No. 600
Belden Aerial Wire 7 x No. 22 Belden bare Wire, 100 ft. Each $1.00
No. 14 Belden Solid Wire, 100 ft. Each $0.80
No. 7 Belden Timed Wire, 100 ft. Each $0.90
No. 16 Belden Timed Wire, 100 ft. Each $0.75
No. 7 Belden Bare Copper Wire, 100 ft. Each $0.70
No. 14 Belden Solid Copper Wire, 100 ft. Each $0.58

Belden Liter Wire—High Frequency Cable

The scientifically correct conductor for high frequency currents. Ideal for winding transformers, filtering, and other applications where maximum conductivity is required. Each size of wire is listed below.

No. 602
Belden Liter Wire 3 x No. 26 Stranded Belden Wire with 2 strands of Green Tinsel silk. Equivalent to No. 21 B. & S. Gauge. Max. diameter 0.041 inches. $1.00
16 x No. 28 Belden Timed Wire with 2 strands of Green Tinsel silk. Equivalent to No. 21 ft. & S. Gauge. Max. diameter 0.045 inches. $1.00
16 x No. 28 Belden Timed Wire with 2 strands of Green Tinsel silk. Equivalent to No. 21 ft. & S. Gauge. Max. diameter 0.047 inches. $1.00
16 x No. 28 Belden Timed Wire with 2 strands of Green Tinsel silk. Equivalent to No. 21 ft. & S. Gauge. Max. diameter 0.049 inches. $1.00

Belden Loop Antenna Wire

A special flexible wire on small metal spools for winding loop dipoles. Furnished in 3 ft. Spools on 12 ft. spools at attractive prices.

No. 601
Belden Loop Antenna Wire 5 x No. 30 Copper Wire, 3 ft. Each $0.15
60 x No. 38 Spool of 125 ft. Cotton ... $9.50
60 x No. 38 Spool of 125 ft. Rayon (artificial silk) over all $1.75

Belden Radio Replacement Cord

These are 5-ft. long, and 1-lb. speaker cords for replacement of worn cords.

No. 617
Belden Radio Replacement Cord 1 Cord in Carton ... $2.00
Double Cord in Carton ... $3.50

Belden Genuine Italian Tubing

Just the thing for the builder who wants every wire covered. This genuine Hi-Dielectric Italian Tubing is packed in 25 cases, approximately 4 ft. long, to a carton. Standard size 2 mm. Furnished in yellow and black.

No. 612
Belden Genuine Italian Tubing Yellow tubing per carton of 25 lengths ... $5.00
Black tubing per carton of 25 lengths ... $5.50

Belden Insulated Hook-up Wire

For connecting switch points, transformers, and other connections where an insulated conductor is desirable. Construction: No. 14 solid copper wire insulated with one cotton and one silk braid and varnished. 100 ft. coil $2.40

No. 604
Belden Insulated Hook-up Wire 50 ft. coil in carton ... $1.15
100 ft. coil in carton ... $2.20

Belden Lead-in and Ground Wire

A popular seller. Copper Wire, stranded, small gauge, suitable for cutting and soldering. Stock is available in 15, 25, and 50 ft. lengths. Approved for use in buildings.

No. 603
Belden Lead-in and Ground Wire 50 ft. coil ... $1.15
100 ft. coil ... $2.20

Belden Timed Hook-up Wire

For connecting cabinets, aerial or ground, or connections within the set. Stranded bare copper wire, sized to No. 14 B. & S. Gauge, insulated with cotton wrap, code rubber, dressed cotton outer braid or Rayon (artificial silk) outer braid. 25 ft. coil to a carton or on 1000-ft. spools.

No. 607
Belden Timed Hook-up Wire Red or black cotton, 25 ft. in carton ... $0.38
Red or black Rayon, 25 ft. in carton ... $0.50
Bare rubber, 25 ft. in carton ... $0.25
DALE'S GUIDE

NEW textile has been added to our annual catalogue this year for the purpose of placing before our most creditable, or some of the fundamental policies which have been adopted by many successful retail dealers. The articles have been secured from authoritative sources, and we believe represent the best ideas of thirty or forty years of retailing. We wish to express our appreciation and thanks to all of those who contributed the articles to make this department of interest and value to the dealers.

ARRANGEMENT OF STORE

By M. CLEMENTS
Managing Editor, Radio Retailing

FOR inspiration, when thinking of store arrangement and equipment, we need only hear in mind the principles of modern merchandising so well typified in those giants of retailing—the Woodward and Farenheit systems of stores. In this display and convenience to customers is the predominating thought. It might be considered by some that the comparison of five-and-ten cent stores with radio stores is far fetched. Nevertheless, the basic merchandising principle is the same in both, that is to sell goods, they must be shown.

Equipment that is designed for atmosphere-creating effect only, is devoid of excuse for its existence. Equally useless are a lot of boards arranged as shelves and carrying boxes and packages containing articles of merchandise which never come to light unless some customer happens to ask for a particular item concealed therein. On the other hand, equipment that displays the merchandise and thereby creates desire to possess, will sell goods to the consuming public and is a live asset that works every minute that the store is open. A store that is attractively arranged need not be burdened with expensive fixtures built for looks and not for utility. Fixtures should be to the merchandise so emphatically that prospective customers will not see anything but the article they are interested in.

Store engineers have made comprehensive studies of various layouts and have found that the best arrangement thus far devised is one that affects the customer pleasantly, giving him the feeling of ample elbow room, yet is compact and extremely orderly. This effect can be secured by leaving ample floor space just inside the door. Where entering customers will not jostle those leaving and when inside, will not feel ill at ease for fear of pushing some article off display tables or show cases. Even small rooms can be made to appear more roomy by the proper arrangement.

A store that is not considered deep enough can be made to look deeper if the aisle leading from the door is straight through to the rear. One that is extremely narrow and long can be made to appear wider and not so deep if a borse shoe arrangement of show cases is placed in the middle. This should be set well back from the entrance with two aisles running back about half way. The rest of the way the fixtures should be placed so that there is but one aisle to the rear.

Drug and hardware stores are going for so strong for modernized equipment that some of these stores are now recognized as models of efficiency and appointments. The same kind of treatment so successfully used in these stores can be easily applied to radio stores.

It will probably be charged that too much stress has been laid on the absence of displays of small items in the stores but it must be taken into consideration that good will is built like a brick house—one brick (sale) at a time—on a solid foundation. The many small sales with their good building possibilities must therefore be taken into consideration and no opportunity lost to get people accustomed to coming into the stores.

Every store, no matter how small and insignificant it may seem, should be sampled and displayed in such a manner that it will make selection simple for the uninstructed.

Stock should be designed primarily to assist in the merchandising of the store. It should be made as attractive as possible at a minimum cost, but must not detract from the article on display. People like to go to stores that are exhibitions of the type of merchandise—where they can look to their heart's content.

A study of the subject will convince the most skeptical dealer that equipment is for him just like a bench and tools to a mechanic. Given a good set of tools a good mechanic can do a good job, but given a poor set of tools, he can at best do but a mediocre job. The right kind of store fixtures will do much towards getting the radio store in its rightful place among high-class retail businesses.

BUYING AND SELLING POLICY

contributed by the THINKING MACHINE WORLD

UNDER this subject is contained the prime factors in the conduct of the dealers' business, for it is through the function of buying and selling that the profits are made or lost. Therefore, a careful analysis of this subject on the part of the retail merchant is paramount.

One of the most important questions that arise is the combination particularly in the case of standard merchandise and dealing with repulsive houses where fixed prices are maintained. However, the more the subject is gone into the more it becomes apparent after all that the first essential objective is to purchase the proper merchandise for resale, for without proper buying proper selling is impossible. Therefore, the first step in the process is the selection of highly salable merchandise. Next in importance is the quantity to be ordered. Good buying does not necessarily mean over buying, but it does mean the purchasing and maintaining of a complete and ample line of the merchandise carried. Of course, the present day method of quick delivery service by responsible distributing houses has materially helped in the maintenance of complete stocks, but the wise dealer is the one who will have the merchandise on hand when the customer calls. Thirdly, but perhaps the most important point to be considered in careful buying is the selection of the proper supplier. In purchasing from a reputable distributor the dealer secure more than the actual merchandise specified on the order blank. He receives the wholehearted co-operation of a highly trained staff of experts—experts not only in the technicalities of radio but in radio merchandising as well. He receives the backing of a strong organization. While he is actively engaged on the firing line he knows, figuratively speaking, that reinforcements are not far behind. Although only briefly surveyed it may be easily seen that the buying policy of the retailer merits much attention.

Co-ordinated with the buying policy is the selling policy. Upon the selection of proper merchandising methods is dependent the growth of the sales volume. The selling of reputable merchandise demands the employment of high class selling methods. Through the foregoing statement would seem obvious to the great majority of dealers, it is not amiss to point out that the most successful commercial enterprises have been built upon the ethical merchandising of reputable products. Neither time nor space permits going into details upon the various angles of salesmanship. Each individual dealer must work out his own way, but it is of the utmost importance that no one set rule would apply. The most important point to be stressed in the selling policy would seem to be aggressive selling. After a careful study and analysis of the field and an intimate knowledge of the prospect an aggressive follow-up system is of prime importance to the dealer. He is now wont for business to come to him and not vice versa. The experience of thousands of dealers has demonstrated that the retailer who uses every means within his power to develop business and goes after it is the dealer who is doing business while his competitor is idle.

The retailer of radio is engaged in a great industry. A great future lies before him. The field is fertile. The face of the industry is so big that business men have yet to realize the depth and breadth of the industry. While there is still there is the assurance that intensive effort is bound to yield results. It is in the buying and selling policy that success in the future lies. Dealers should therefore, review their buying and selling policies not only now but at frequent intervals so that they are abreast with the current state of the industry. The height of the superstructure of profits is gauged by the dependability of these foundation policies.

"STOCK AND TURN-OVER"

By CURTIS A. WESSEL
Editor, The Phonograph & Talking Machine Weekly

THE questions of adequate stock maintenance and satisfactory sales turnover are so vital to the success of any retail business that a clear understanding of their importance will best be had by tracing their effect in some of the outstanding merchandising enterprises of the time. I have hundreds of friends in the trade all over the country and am aware that, when a conspicuous example of sales success is cited, the most frequent rejoinder among small or beginning merchants is, "Well, of course, they've got lots of money." I am not saying that this is the reason, but it is safe to say that business men who have become successful have the assurance that intensive effort is bound to yield results. It is in the buying and selling policy that success in the future lies. Dealers should, therefore, review their buying and selling policies not only now but at frequent intervals so that they are abreast with the current state of the industry. The height of the superstructure of profits is gauged by the dependability of these foundation policies.

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of goods, a card-index perpetual inventory system will perform save him from. Finally, a cardinal rule in mass-
merchandising is to place the responsibility for buying upon the oldest instead of the least capable man in the place.
This is very logical, for no matter how much money good salesmanship brings over the counter, worthless buying can instantly result in a vast loss and usually faster than it arrives. A faulty order is a loss, and a slip can be assigned to the 
store and the cost and the responsibility for paying their money, in such small sums as are needed for routine 
merchandise, is the most inefficient person about the store. Now we hear that Johnny or Kate evidently has 
not got enough ability to sell what is needed, but about the cost to others that he is all right to take out the 
stock and telephone to the jobber's for whatever is needed. In contrast to this, remember that the buyer in 
a department store is always the most experienced and best-paid man in the section; salesmen's earnings 
may at times run above his but if a deal is to be paid to him the year, they are on a lucrative basis to watch out for the department store.
The chain-stores followed or accompanied the department store very closely in development of super-stock-
age and super-turn-over methods and have probably excelled the department stores in acceleration of turn-over.
A great chain of tobacco stores is credited with turning its stock as often as fifty-two times a year at many 
points, Jan, the name or the store in that month. The switching of the stock in the large and small business it has not been uncommon for the dealer to turn his stock over every month.
It should be remembered that for profit and accounting purposes, a financial turnover is what is wanted, not 
physically a physical turnover. It might be very difficult to move every particle of goods on hand into con-
sumption within a very short time as, for example, once a month. But if the gross proceeds of a month's sales exceed the inventory value shown on hand at the first of the month, it may fairly be figured that the turn-
over has been bad. Whenever this ratio slips behind, the business is losing ground. In the physical aspect of 
the thing, there will always be a few items that do not clear as fast as others and keeping careful 
the reader's saying, "Gosh, but that doesn't apply to me." On the other hand, where can we seek successful principles of stock turnover? The name of the store is the eating and any merchant, 
modest in resources though keen in ability, who applies big-business methods will shortly find himself 
in the ranks of big business and may wonder how he got that way.

CAREFUL CREDITS ARE THE BASIS FOR A GOOD COLLECTION SYSTEM

By GABY LITTLE

As soon as the average dealer begins to extend credit facilities to his customers, he is confronted with the 
collection problem, and unless he promptly applies corrective measures, it is more likely than not to prove

costly. It goes without saying that the easiest way to solve the collection problem is not to have any collections at 
all, but to treat no one. But in this case, as in most others, the easiest way is not the best.

When it is remembered that the average income of an American family is less than $1,000, and that seventy-
five per cent of the public is on the move at least once a month, the financial turnover even of the most successful dealer is such that a dealer, to sell even a small percentage of his prospects, must extend some credit facilities to them.

Do not let this collection problem be by no means a necessary evil. An ounce of prevention is worth a pound of cure, and if a dealer will be as careful in extending credit as he is in losing money he will find little difficulty in making collections when they fall due.

A good hotel clerk will cash thousands of checks during the course of a year and only in rare instances will one of these checks turn out to be a bad one. The check is not a bad one, the man who travels with many travelers is a good risk. A man who travels abroad and with little luggage is a poor risk. And so on.

In the same way, a dealer can size up a customer who asks for credit. He may well ask for the 
recommendation of someone known to him, or the recommendation of a prominent citizen, the name of the cus-
tomer will be all he knows of some other firm which has granted credit, if the name is only a few of 
the questions a dealer may ask, questions which no honest customer will hesitate in answering, if correctly 
approached.

If a dealer cannot assure satisfactory answers to questions such as these, and still persists in granting credit, 
he deserves to lose. He does not need a collection system. He needs another business.

But suppose that due to precautions a customer who has been given credit does not meet his bills when 
they fall due, as is sometimes the case with even the most careful dealers. Then what is the procedure?

is the answer. Can these three steps be open to the dealer. He can sue. He can sue and he can wait. Which is the right thing to do depends entirely upon the individual circumstance. If the customer

ACCOUNTS AND STATEMENTS

The Nerves and Sinews of your Business

Contributed by JOHN MACINTYRE,
Sec'y, Electrical Board of Trade of New York.

OUR "ACCOUNTS RECEIVABLE" next to actual cash in your cash drawer or Bank is the most 
valuable thing in the life of your business. Apart from the question of the responsibility of the customer 
whose name appears at the head of these bills, the question of how much attention you give them is the 
one that comes first of all. You have to make a prompt and a correct settlement of these bills.

To be real assets must be rendered promptly, be correct in detail, be specific in character and terms, and state a time for payment.

There should be nothing written or printed on the bill form that leaves any room for question between you 
and your customer, in respect to the goods or transactions covered by the bill. Loose methods in handling 
mailing or sending monthly statements, lead to unnecessary delays, expensive letter writing, telephone 
calls, and needless talk which in turn lead to concessions in settlements and strained business 
relations with customers.

All bills should be rendered promptly, so that the customer has the opportunity of checking while the tran-
saction is fresh in mind and thus have no excuse for not meeting settlements as indicated thereon. A little more 
firmness (by retailer and especially) in making collections observer the terms of payment will mean more financial ease 
for your customers and satisfaction to you and your customers. A greater opportunity for good will and growth 
and a greater opportunity to secure good will and growth for your customers.

A sound practice for every merchant is to go over his Accounts Receivable at least once a week, note 
their condition, and follow up all delinquents for immediate payment. There should be no hesitancy in 
keeping after even the best of your customers for prompt payment. Your customer’s business needs it, your ability to maintain your own credit and conduct your business successfully depends upon 
your having this money in a liquid condition. Therefore, there is no more important part in your business 
that calls for or should have your individual time and attention than the condition of your Accounts Receivable.
When you neglect your Accounts Receivable, you are handing out your own money or have handed over the dollars of your creditors to these customers of yours and are allowing them to endanger your reputation and credit by taking their own time to return the amounts thus given out.

If your usual terms to customers are thirty days, when this period has elapsed and bills remain unpaid it is your duty to take prompt and decisive action either by interviewing or notifying the customer in writing that you expect the overdue payment to be made within a certain specified time, giving a date when you will look for payment. If they become sixty days old, they have cost you considerable additional money and are weaker as assets.

Remember that under these conditions you are losing interest on the money, you are probably yourself paying out interest and discount fees to obtain money to replace the money represented by these bills, or you are incurring your creditors by non-payment of your own bills. All the time there is going on the additional cost of bookkeeping, and the time that you are personally devoting or having someone else devote to collecting the account, the cost of rendering statements and writing letters, all of which is coming out of your pocket without any possibility of receiving payment thereof. These factors are what detract from the actual value of book accounts receivable. It is especially necessary, therefore, that every business man should give close and personal attention to the condition of these accounts.

Statements of accounts when rendered should be clear and definite as to the payment dates of the items therein, also as to any special discounts or credits. They should be promptly followed up if customers fail to comply with the conditions specified. Most people who are enabled to credit, can and do deserve the terms of those who thus serve them, because they know and understand the value of credit and its obligations.

Prompt settlements make good friends and worth while accounts, therefore do not hesitate to courteously but firmly insist on payments when they are due.

The appearance of your bills and statements also have much to do with your customers' mental attitude and action. A clean cut bill form, neatly but clearly filled out, and easily readable, commands attention and impresses the average man or woman, whereas poorly printed, badly created and indifferently made out bills annoy and irritate the receiver and oft times makes him feel the whole transaction is no better than the appearance of that paper.

What applies to your own, Bills Receivable applies to your Bills Payable which are the other fellow's receivables.

Incoming bills should be carefully checked as to items charged, prices and terms, any differences or discrepancies noted or not in accordance with your understanding, should be taken up at once for correction and not be used as an excuse later for holding up payments or making claims. Such practices do not build up confidence or reputation—therefore treat your incoming bills as you hope and expect your customers to treat yours—this simple practice is sound business and has aided materially in building up thousands of successful business men in the past and will continue so to do in the future.

THREE CARDINAL VIRTUES NEEDED IN RADIO TIME SALES

Dealers Find No Profit in Large Volume Unless Principles of Instalments Policy Are Watched

By A. W. CALDER

The Talking Machine Journal

O NCE of the most common complaints we have found from radio dealers is that they do an excellent business during the year, but when they total up their profits they find the perfect vacuum that Nature and the salesmen abhor. For twelve months they ring up sales on a busy cash register, sales which seem to give a wide spread of profit, but the accountant shakes his head over the books. Why this paradox of good sales and small profits? Where is the leakage? Mr. Radio Dealer, check up your instalment paper. Remember that the wider the meshes of a net, the smaller the chances of frightening the fish, but the greater an opportunity of fish catching slipping away. The easier the instalment policy, the smaller the sales resistance, but greater the loop-holes for loss.

From our inquiries throughout the trade, we have found that the dealers who are actually making money, regardless of their volume of business, are the dealers who are backing up their sales efforts with a sound time payment plan. The advantages of such a kind of time payments are so obvious that we do not need to tell them, but methods are various and only a few are profitable.

Every time you make an instalment sale, remember that you can't figure on a cent profit until you have collected the last dollar and deducted all the expenses of collection. From the sale you have a road to trip to profit that leads past overhead charges, collection expenses, service costs and loss from returned goods. Your
TIMES APPLIANCE COMPANY, INC.

Do not forget, assuming you are in a good location, that you are not only paying rent for the square footage of your store, but, more important still, you are paying a premium for the window display space in front of your store and you are paying too much rent, no matter what the price, if you are not using this window up to its highest possibilities.

Advertising Hook-Up

Sometimes an enterprising merchant in a medium sized Western city took the trouble of investigating the local circulation of certain national magazines.

He found that the six leading magazines had a combined circulation of 5,000 copies in a city of less than 30,000 population.

When he took into consideration the general acceptance that good magazines have an average of 4 readers per copy, which in this case would be 20,000 readers, and subtract the number of small children and others who have little or no buying power in the city above referred to, you will quickly see that nearly every person of any consequence in the city was very likely a reader of at least one of these six magazines.

During the month of this investigation, the merchant found that there were as many as 20 articles advertised in these magazines which he held in stock, and if advertising has any value at all, he assumed that the 20,000 readers in his city would be influenced by some of this advertising and want to buy the goods.

How are they to know where to buy them as the advertising merely said “See your dealer.”

Seeing the importance of looking up his own store with this advertising, this merchant began to feature in his store windows and on his counters each month the goods advertised in these six magazines which he held in stock, and the results were astounding.

Isn’t it obvious that if readers were impressed by magazine advertising sufficiently to want certain goods that if the dealer features that merchandise right at the time the advertisements appear that he will attract all this prospective business.

A study of successful retail merchants, with a few exceptions, shows that they are alert to this idea of using their windows and counters in harmony with the advertising activities of national advertisers. If this week’s advertisement is featuring a newspaper campaign in a local city, the retailer who links his window to this campaign will be the one to cash in. Putting a window display of this sort into a window would be almost as effective as putting the merchant standing at the edge of his curb and yelling everyone that passed by that he had the merchandise on sale which they saw advertised in last night’s paper or in this month’s magazine.

The more intensively you can use all of these elements of window advertising—frequent change, timeliness, sales appeal, advertising hooked up and imagination, the better for your business, but this is especially true of advertising hooked up because in this instance you are virtually “bidding your customers in.”

The national advertisers of this country are hiring the best intelligence, the finest ability and the most proved experience to help make their merchandising plans successful, and when you cooperate with them by repeating their appeals in your windows, you are virtually using the cream of their efforts to focus the value of real merchandising efforts right into your own place of business.

IMAGINATION

Webster’s Dictionary defines the word IMAGINATION as “the exercise of creative power” and for the purpose this is an ideal definition.

By taking two images and bringing them into relationship, it is possible to make a man think about a thing where otherwise he may not get a definite suggestion.

For instance, a window full of tool chests at Christmas time may not arouse in a passerby any interest at all. In another passing, this same tool chest may suggest just incidentally the use of tools or the possibility of a tool chest as a gift.

Some people are naturally quick-minded, but most people must have their thinking done for them.

Realizing this, the enterprising window display man who knows the power of imagination would introduce into a tool chest window various suggestions to make the passerby want a tool chest in general and then some tool chest particularly advertised.

This might be accomplished in various ways. The best way, perhaps, is showing the goods in use. A real live boy in the window making a boat out of the tools in the chest would attract every boy in the neighborhood, create a desire for the tool chest in the heart of everyone who saw it and give each one an insight into the various uses of the different tools.

Of course, it is not always practicable to have a live display, also this is the ideal.

However, remarkable results can be secured by illustrations, and this is where the average retailer falls down.

Not being able to afford expensive drawings, artistic creations and other costly material for the best window displays, many dealers are satisfied with humdrum windows which show a lot of goods but mean nothing.
The more enterprising retailer does the best thing, which is to intelligently utilize the materials furnished by the manufacturers whose goods he carries.

Imagination, in the last analysis, means imaging, showing the satisfactions and advantages to be gotten out of merchandise, showing the various uses of merchandise and bringing all these factors into relationship.

It has been said, every since the beginning of selling, that the retailer's front window is his best means of getting business. If this is true, it may be also said that the potentialities of window display can be multiplied at least tenfold by substituting for the ordinary stocky window full of goods, some specific imagination—compelling human interest that attracts attention, arouses interest in the merchandise, creates an actual desire for it and last, but not least, brings the prospect in with a determination to purchase.

We have summed up these 5 articles, the fundamentals of window merchandising—namely, frequent change, timeliness, sales appeal, advertising hook-up and imagination.

Successful retail merchants are agreed on the proposition that there is no subject in sales promotion worthy of more intensive study and cultivation than that of getting business as a means of scientific and intelligent window display.

One-third of your rent, at least, represents the value of your window, depending of course on the character of location. There are some merchants who value their window at 50% of the rent. But whatever the amount, it is well to remember that the true value of the window as far as increased sales are concerned, is in direct ratio to the quality of the window displays used in that window to attract the attention of passersby and influence them in the sale of your merchandise.

ADVERTISING—Newspaper, Billboard and Car Card

BY WALTER A. SCHILLING
Managing Editor, The Radio Dealer
New York City

"Send Your Message Home"

ABOUT this season the dealer is anxious to know what medium is the best in which to send his message. The buying public will know that he is in the job. Suggestions for advertising during the past summer to the effect that billboards, programmes and car cards would be exceedingly effective has opened a question for discussion which in reality can be very easily settled.

It is probably enough to believe that the above mediums are not being given a fair trial because the average radio dealer is so busy with the work of the summer and the coming fall season that he has little time to consider the matter. He may, however, believe that some medium can cover a wide territory, and while the cost is something to be considered it is also reasonable to believe that in many cases they in all probability may be found very effective. If the average radio dealer wants to reach the greatest number of prospective buyers of radio apparatus, etc., he will do well to consider the radio sections in the home town newspapers.

Many are now blossoming forth with attractive tabloids, while all others hold to the regular page size of their respective newspapers devoting a certain amount of space to the cause of radio. Programmes of the various stations for the ensuing week are featured. As vital as broadcasting itself, the publishing of radio programmes sells the merchandise. A nationally known advertising agency man in a recent address at a sales conference numbered a thousand or more distributors for a certain well-known radio line stated: "Gentlemen, remember the programmes sell the merchandise."

The dealer whose advertising appropriation must, perform, be limited the most logical medium to consider is the daily newspaper. Several issue daily radio sections while others content themselves to a once a week radio effort. In many cases the space used in this type of media will bring more real results dollar for dollar expended than will car cards, billboards and other more or less questionable mediums from the standpoint of results, dependent naturally on the amount the dealer has on hand for advertising purposes.

ADVERTISING—Direct Mail

The First Consideration is a Good Mailing List, Which Must Be Kept Up-to-Date

BY ALAN SIMS
(Courtesy of The Radio Dealer)

DIRECT-BY-MAIL advertising has many advantages:
First, it reaches directly the man or woman the dealer wants to reach.
Secondly, it delivers a personal letter and appeal, a personal touch.
Third, the contact between the dealer and the recipient of the letter may be made as personal as the advertiser desires.

Fourth, the opportunity of reaching and making the consumer read the dealer's message is there, depending only and entirely upon how the letter or literature is compiled, what is said, how it is printed or typewritten, and how it is mailed. All of these conditions cield above depend entirely upon the intelligence and accuracy with which the direct-by-mail campaign is planned and operated.
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