

Radio Retailing

The Business Magazine of the Radio Industry

A McGraw-Hill Publication

NOVEMBER, 1928

STARTING IN

1869

in the electrical manufacturing and supply field.

ENTERING IN

1910

into the electrical house-keeping appliance field.

ENTERING IN

1920

into the sale of Western Electric receiving and broadcasting equipment.

... and now in **1928**

Graybar

(RADIO)

THE ONLY RADIO RECEIVING SET
BACKED BY 59 YEARS' ELECTRICAL EXPERIENCE

New Wave lengths. - Page 58.

LOW



MODEL 71 — Sandar
Table DYNAMIC. \$55

MODEL 61 — Balanced
Armature type. \$30.00

TONE



MODEL 65 — Sandar
Cabinet Junior. \$22.50

supremacy

IT'S the mellow bass—the rich low-tone reproduction—that sells radio today, as never before. That's why SANDAR—the *one* speaker especially designed for *low-tone* beautification—occupies a selling niche all by itself.

When you carry SANDAR you not only feature today's greatest self-selling speaker, but automatically employ—through its inimitable, mellow tones—a star salesman for your receiving sets.

Communicate NOW with your Sandar distributor. Ten new models—both Dynamic and Balanced Armature types—all invitingly priced.



MODEL 75 — End-
Table DYNAMIC. \$75

SANDAR

SANDAR CORPORATION, LONG ISLAND CITY, N. Y.
Division of Farrand Mfg. Co., Inc.

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HENRY W. BAUKAT,
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Merchandising Counsellor

Radio Retailing

The Business Magazine of the Radio Industry

WILLIAM ALLEY
Managing Editor

Editorial Staff
OVID RISO
HARRY PHILLIPS
C. GRUNSKY, San Francisco
PAUL WOOTON, Washington

Radio Retailing for NOVEMBER, 1928

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"It has been my pleasure to read 'Radio Retailing' since the first issue. I have secured a great amount of help and information from it. . . . I don't see how I could do business without it."
Marshall, Texas. PAUL L. CARRIGER.

"I wish to say that 'Radio Retailing' is almost indispensable to me in my business and I look forward to each new copy. It keeps one up-to-date and is most complete as a guide. The Service Department is also a very good thing and helps make clear those problems that are bound to come up."
Beverly, Mass. L. A. LAGASSE, Lagasse Radio Service.

"We are already subscribers to 'Radio Retailing' and find it a valuable and profitable help. But one copy is not enough and all the force wants to read it as soon as it comes in. Enclosed find money for another subscription."
Gadsden, Ala. W. E. MORROW, M. & A. Electric Co.

"We get a great deal of good information from 'Radio Retailing' and always recommend it to jobbers and dealers in the six states we cover in this field."
Atlanta, Ga. BROWER MURPHY, Murphy Company.

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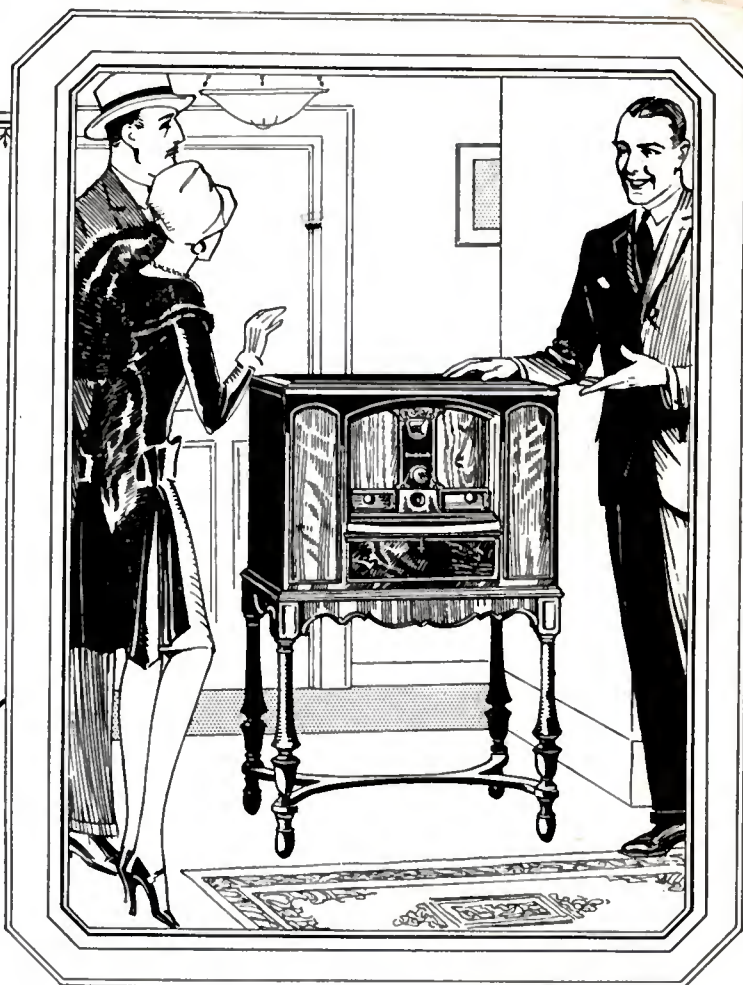
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McGRAW-HILL PUBLISHING COMPANY, INC., Tenth Ave. at 36th St., New York, N. Y.

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NEW YORK DISTRICT OFFICE, 285 Madison Ave.
Electrical World Electrical West Ingenieria Internacional
Engineering and Mining Journal Food Industries
Chemical & Metallurgical Engineering American Machinist
Electrical Merchandising Power Electric Railway Journal
Bus Transportation Engineering News-Record
Coal Age Construction Methods
Copyright, 1928, by McGraw-Hill Publishing Company, Inc.
Cable Address: "Machinist, N. Y."
Annual subscription rate is \$2 in United States and Canada.

WASHINGTON, National Press Bldg.
CHICAGO, 7 South Dearborn St.
PHILADELPHIA, 1600 Arch St.
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LONDON, E. C. 8 Boulevard St.



Why, I thought a Stromberg-Carlson cost much more!"

After the charm of Stromberg-Carlson tone has captivated your customers' ears; after the grace and rich beauty of the cabinet has won their admiration—then to find out that Stromberg-Carlson quality can be had at so low a price is the finest sales psychology.

The new Nos. 636 and 635 Receivers bring the Stromberg-Carlson line within reach of the average family. They vastly increase the opportunity for sales among the thousands who already know that "There is nothing finer than a Stromberg-Carlson."

Stromberg-Carlson models for A.C. and D.C. areas range in price from \$185 to \$1205 East of Rockies.

STROMBERG-CARLSON TELEPHONE MFG. CO.
ROCHESTER, N. Y.

Hear the Stromberg-Carlson Sextet over the NBC and 22 associated stations



No. 635 Stromberg-Carlson Treasure Chest. Operates on A.C. Tubes in 50-60 cycle areas. Uses 5 UY-227 A.C., one UX-171-A Output and one UX-280 R.C.A. Tubes. Price, less tubes and Speaker \$185.

No. 636. Art Console. Shown in main illustration. Same operating unit. Price, less tubes and Speaker \$245.

Prices quoted are East of Rockies

Stromberg-Carlson

Makers of voice transmission and voice reception apparatus for more than 30 years

UTAH



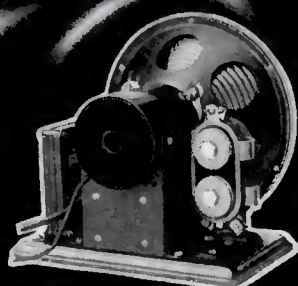
UTAH DYNOLA SPEAKER
 Equipped With 110 A. C. \$65.00
 Dynamic Unit
 Equipped With 6 volt \$55.00
 Dynamic Unit
 Equipped With 110 D. C. \$55.00
 Dynamic Unit

... let us have a quality speaker at the right price

So says the public... We present the Utah line, each speaker an answer to the public demand. No finer speaker at so reasonable a cost. That is real "price appeal"... The dealer who realizes this and stocks a full Utah line has found an amazing opportunity for profit.

Full information to select dealers upon request

UTAH RADIO PRODUCTS COMPANY
 1615 South Michigan Avenue
 CHICAGO ILLINOIS



A-100 DYNAMIC CHASSIS
 110 volt alternating current light socket supply for field excitation using Westinghouse dry rectifier \$40.00
 D-200 for 110 D. C. R-300 for 6 volt storage battery \$30.00



UTAH DYNAMIC MODEL 65 SPEAKER
 Equipped with 110 A. C. \$49.50
 Dynamic Unit
 Equipped with 6 volt D. C. \$39.50
 Dynamic Unit
 Equipped with 110 volt D. C. \$39.50
 Dynamic Unit

Pathé

REG. U.S. PAT. OFF.



MAGNETIC AND DYNAMIC SPEAKERS 1929 MODELS



W. DUFFIELD



Gothic Model
Cabinet type
Price, \$28.00



PATHÉ Speakers ring as true as the Cathedral Chimes—Finished in genuine Walnut they are designed to harmonize perfectly with the finest interiors and furnishings.

Our years of experience is your guarantee that when you buy a Pathé you

Buy the best

The Pathé Gothic as pictured above reigns supreme in its class—The Pathé Dynamic represents the latest developments in research and delivers the marvelous tone quality for which Pathé is famous.



Dynamic type 110 A. C.
operating on 110 volt
A. C., \$70.00

PATHE PHONOGRAPH & RADIO CORPORATION
114 East 32nd Street, New York, N. Y.



CHASSIS No. 3
Magnetic Chassis used for
installation in cabinet
with space for speaker.
\$16.00

P A T H É R E P R O D U C T I O N E X T R A O R D I N A R Y

Get it *Better* with a Grebe

Built for Permanence

TO the consumer the higher price of the Grebe radio carries the assurance of permanent satisfaction that experience has shown is not to be found in hastily constructed "bargains". To the dealer it means permanent good will and a minimum of bothersome servicing.

Every Grebe Synchrophase receiver has been accepted by trade and public as the highest standard of radio excellence—and has remained the standard for years after its introduction.

Send for Booklet RR

A. H. Grebe & Co., Inc.
109 West 57th Street, New York City
Factory: Richmond Hill, N. Y.
Western Branch: 443 South San Pedro Street
Los Angeles, Calif.
Makers of quality radio since 1909



Grebe Buckeye Console

This beautiful cabinet has been designed for the Grebe Synchrophase A-C Six or the Synchrophase Seven A-C. It has a speaker compartment which will accommodate either a dynamic or magnetic type speaker. List price (console only) \$62⁵⁰

GREBE
SYNCHROPHASE
TRADE MARK REG. U.S. PAT. OFF.
A-C Six
RADIO



No. 2249 Table

The trend toward "radio furniture" makes this table with speaker compartment a particularly desirable adjunct to every Grebe home. List price (table only) \$24⁵⁰



*Grebe
Synchrophase
A-C Six*



TRADE MARK
REG. U.S. PAT. OFF.

Announcing—

THE NEW AIR-COOLED RESISTOVOLT AUTOMATIC VOLTAGE CONTROLLER

DE LUXE MODEL and COMBINATION

When we announced the first Voltage Controller to the radio market, we thought that RESISTOVOLT was as nearly perfect as could be made. The question since has been not "shall we improve," but "can we improve" RESISTOVOLT. Yes! thanks to your confidence, enthusiasm, and constructive suggestions, our engineers have been spurred on until we are now able to announce this remarkable new *Air-Cooled Resistovolt*. Embodying new efficient principles of construction, in beautiful all-metal design, polished and lacquered, same dependable operation with enhanced appearance and new features of sales appeal.



LIST PRICE
\$1.75

A MESSAGE AND A PROMISE TO THE TRADE

Not only to take the lead but to *keep* the lead on all new developments. That is our endeavor, and that is the feat so evident in our Resistovolt.

Competition is quick to spring up on successful items but the leader is the one who gives the most effort, the most careful mechanical job, the most exacting engineering study, the most features of sales appeal to help you sell a product.

With Resistovolt we created the demand for Voltage Controllers. With Resistovolt we took the lead in efficiency, in quality, in low quick-sale price. With the new Resistovolt we offer a product so far ahead that it is practically devoid of competition. Tie up with the leader—it will pay you in many ways.

TELEVISION

We were the first to broadcast the fact that Television apparatus in Kit form was available to the experimenter. I C A Television Kits took the lead immediately. Today they are hailed by dealers, experimenters and technical engineers as the finest apparatus obtainable. They have the lead, will they keep it? Yes! because amateur experimenters, broadcast stations, original inventors, and our own staff of engineers are working hand in hand with INSULINE CORP. for the future of Television. Tie up with the leader. Get on our mailing list for announcements. Write for our latest catalog. It will pay you in all ways, that we promise.

ANTENNAVOLT

The acme of engineering achievement: A combination of the New Air-Cooled Resistovolt Voltage Controller and a perfect light socket aerial, minimizing static, improving tone quality, increasing selectivity, sharpening tuning, at the same time protecting tubes and sets from excess voltage, line surges and damage from lightning. The construction and efficiency of this product is the talk of radio engineers!

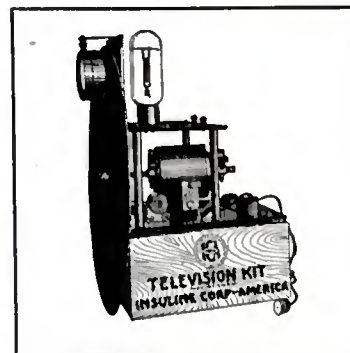


LIST PRICE
\$2.25

TELEVISION ICA KITS AND PARTS

Actual reorders from all points in the U. S. and Canada from Jobbers and Dealers prove the tremendous popularity of these I C A Complete Television Kits and Parts. A built up kit or our dealer's built up model will tie up with the nation-wide interest in Television.

Model G5 (complete with Television Tube and Television Amplifier) List \$65.00
Model B2 (Same as G5 less tube) List 52.50
Model B-1 (without amp. or tube) List 37.50
Model 45 (same as B-1 but with improved motor) List 45.00
Dealers Display Model (Model G5 completely assembled, built on metal stand) . . List 100.00
Also Discs, Television Lamps, Motors, Lenses, etc., etc.



LIST PRICES
\$37.50 to \$100

Jobbers and Dealers write for complete catalog and discounts.

INSULINE CORP. of AMERICA

RADIO—Standard Products Since 1921—TELEVISION

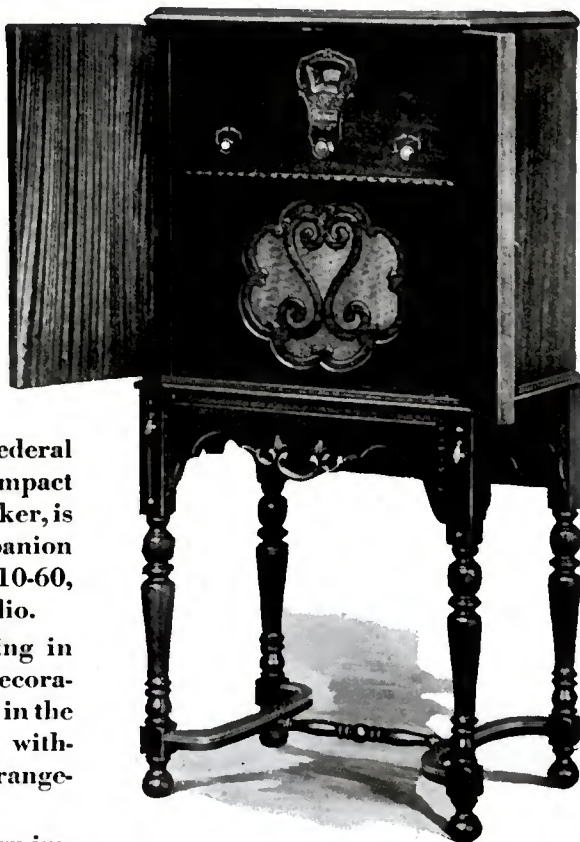
78-80 CORTLANDT ST., N. Y. C.

SONATRON RADIO TUBES

THE WORLD'S LARGEST
RADIO TUBE LINE



America's Finest Small Console



THIS new Federal H-40-60, a gracefully compact console with built-in speaker, is offered as a fitting companion to the new table model, H-10-60, America's finest small radio.

It is particularly appealing in that it will fit into any decorative setting and tuck away in the smallest nook or corner without necessitating the rearrangement of the furniture.

Its pleasingly artistic design immediately attracts the buyer. Its remarkable performance and deep, natural Orthosonic Tone quickly sells it.

Phone, wire or write for the Federal proposition to retailers.

FEDERAL RADIO CORPORATION
Buffalo, N. Y.

OPERATING BROADCAST STATION WGR AT BUFFALO
Federal Ortho-sonic Radio, Ltd., Bridgeburg, Ont.

Prices (without tubes)

Console Models
H-40-60 (60 cycle) \$185
H-40-25 (25 cycle) \$195

May also be had with Dynamic
Speaker

Federal Models from \$95 to \$925
(Prices slightly higher west of Rockies)

Federal Radio

ORTHO-SONIC*

Licensed under patents owned and or controlled by Radio Corporation of America, and in Canada by Canadian Radio Patents, Ltd.

* Federal's fundamental exclusive development making possible Ortho-sonic reproduction is patented under U.S. Letters Patent No. 1,522,470

FEDERAL RADIO CORPORATION,
1738 Elmwood Avenue, Buffalo, New York

Please send me complete details of the Federal proposition,

Name _____

Address _____

City _____

Which of these Famous CeCo Tubes will you choose?

A GENERAL PURPOSE type of tube for detector radio frequency or audio amplifier uses. Built in every type and variety to meet all ordinary set needs with the flawlessly beautiful reproduction only CeCo affords.

POWER AMPLIFIERS. A group of seven marvelous amplifying tubes which afford as great or as little volume as you desire. For loads from 3 volts to 450. Priced from \$2.50 to \$12.00.

RECTIFIER TUBES. For the conversion of alternating current into direct current, made in two types for use in A, B or C Eliminators or power packs.

FULL-WAVE RECTIFIERS handling plate voltage up to 300 volts with amazing efficiency.

HALF-WAVE RECTIFIERS for handling plate voltages up to 750, delivering a direct current of 125 millamps with minimum voltage drop.

SPECIAL PURPOSE TUBES. For obtaining the most perfect results possible in radio. These include

SPECIAL DETECTOR TUBE. Super-sensitive non-microphonic—non-critical to filament or plate voltages.

SPECIAL HIGH MU TUBES for resistance and impedance coupled audio amplifiers or in all audio frequency sockets.

SPECIAL R.F. TUBES for higher voltage amplification to build up weak signals without distortion.

SCREEN GRID TUBES, R.F. or A.F. Amplifier for use in special circuits. The high voltage amplification assures excellent results on DX.

THE CECO A. C. TUBES

The same remarkable results are available in the CeCo A.C. line as in the group of CeCo tubes designed for battery use. They include:

CECO A.C. DETECTOR AMPLIFIER TUBES (2½ volts separate heater 5 prong type). An all around superior tube for operation on A.C. through a step down transformer \$5.00

CECO A.C. AMPLIFIERS for unusually excellent results on the radio frequency or audio stages \$2.50

CECO A.C. "HIGH MU" AMPLIFIER for use in resistance or impedance coupled amplifiers on A.C.; affords marked increase in volume without distortion \$4.00

CECO A.C. SCREEN GRID TUBES—5 prong special heater type for Radio Frequency or Audio Frequency amplification; affords voltage increase from 30 to 60 per stage. Operates strictly on A.C. \$8.00

*"They Cost No More
~but Last Longer"*



POWER

CeCo Type J71-5 Volt
½ Amp. power Tube,
using the new oxide
filament. Price \$3.00

CECO

MEMBER
RMA

**PRONOUNCED
SEE - CO
RADIO TUBES**

*Steadier performance
—longer life*

THE acid test of any radio tube is the *performance!* And that is the big advantage you have in selling CeCo Tubes—their outstanding and proven performance!

The clearer tones—the greater sensitivity, and increased volume due in part to the exclusive CeCo method of evacuation, are the features that build CeCo sales volume for you because of the satisfaction they give your customers.

These factors, plus the longer CeCo dealer profit-margin, are a combination of selling advantages that build real sales and profits for you.

*Write for full particulars and information
about the attractive CeCo dealer proposition.*

CeCo MANUFACTURING CO., Inc.
702 EDDY STREET, PROVIDENCE, R.I.

The **PACENT**



ELECTROVOX

\$75.00

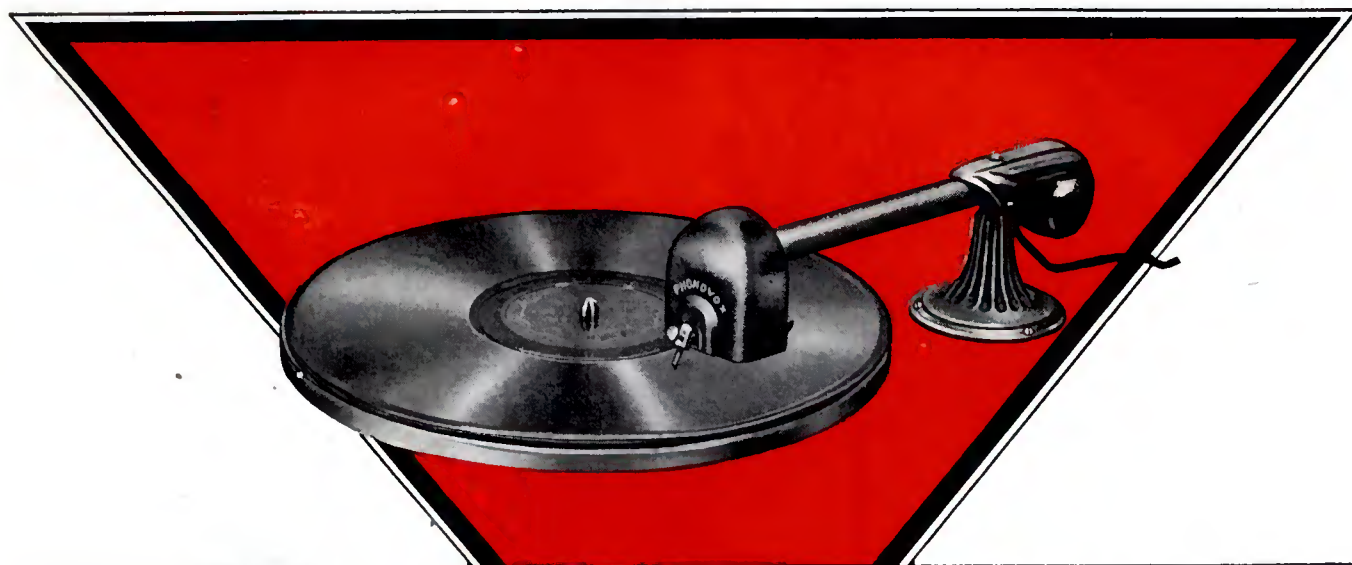
**Pay What You Will... Money Can't Buy Finer
Electric Phonograph Reproduction Than This!**

A COMPLETE electric phonograph—when plugged into a radio—giving all the purity of tone, the undistorted volume of an instrument costing hundreds of dollars—complete at \$75.

Encased in a handsome walnut cabinet and wound with the Pacent silent induction electric motor, it is in a class by itself. Demonstrate it to your customers every time you sell a radio set. Use it yourself for demonstrating speakers, sets, and records.

THE MODERN MUSIC REPRODUCER

The **PACENT**



PHONOVOX

\$13.50

A Great Opportunity for Quick Easy Profitable Sales

THE Pacent Phonovox, the first — and acknowledged the finest — pick-up on the market today is breaking all sales records — far and away the biggest selling, fastest selling piece of radio phonograph merchandise being sold. Beside its clear, flawless tone, its attractive appearance, its solid construction and simplicity, it offers many outstanding advantages which your customers are quick to see and appreciate.

If you're not handling the Phonovox write or wire your jobber today. You're missing plenty of quick, easy sales that belong to you. For further information, prices, etc., on the Phonovox and Electrovox, write to the

PACENT ELECTRIC CO., INC. • 91 Seventh Ave., New York City

*Pioneers in Radio and Electric Reproduction for Over 20 Years
Manufacturing Licensee for Great Britain and Ireland, Ig-anic Electric Co., Ltd., Bedford, England*

THE ELECTRIC PICK-UP • • FASTEST SELLER



... WE ARE NOT SELLING YOU ...

WE merely want to tell you about La Salle Tubes. We are not trying to sell you. Right now we couldn't even if we wanted to. Right now LaSalle is completely sold! But we want you to know something about LaSalle—so that when our increased facilities to produce more tubes are completed—so that when our laboratory principles in production are extended and we produce more tubes ... we will have a wider audience.

La Salle Tubes are the highest quality tubes made. Every tube is individually tested and fully guaranteed.

Our relation with jobbers ... is one of

absolute confidence. We serve only first line jobbers ... and we serve them 100%. We do not take on an account unless we can serve it 100%. Right now, we couldn't take on an account if it were the highest accredited type of jobber. It would mean—our present connections would suffer ... and we take care of the business we have and take care of it fully ... before we go after new business.

We therefore want you to know something about La Salle. We expect to be able to supply additional jobbers after our new factory is completed—and the same careful, laboratory principles in manufacture will prevail.

LA SALLE RADIO CORPORATION

143 West Austin Avenue, Chicago, Illinois
Division of Matchless Electric Company

LaSalle

HIGH VACUUM
RADIO TUBES



CERTAIN cathedrals in the Middle Ages took five *generations* of workers to complete construction. ¶ The length of time required to erect a great building even twenty-five years ago was much longer than it is today. ¶ What has caused the time-cut? ¶ Mainly tools, better tools. ¶ Today, the manufacturer who knows his job is providing dealers with improved tools for building turnover. ¶ In the radio industry Kolster has spent millions



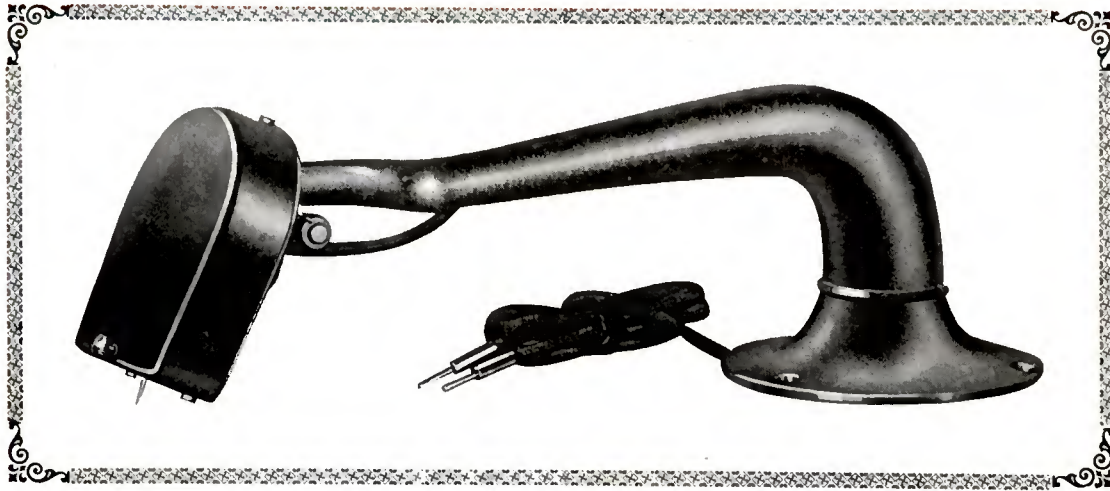
in advertising to give dealers *the tool of consumer good-will* which means selling-power. ¶ The Kolster Franchise is literally a selling tool. ¶ The longer you use it and the better you use it the more you will respect it and value it, and the finer and stronger will your own temple of business grow. For on all sides you hear "*Kolster is a fine set.*" ✱ ✱ ✱ ✱



COMMANDER BYRD selected Kolster Radio and Kolster Radio Compasses exclusively for his South Pole expedition. ¶ What finer tribute could be given to Kolster dependability?

Copyright 1928, by Kolster Radio Corporation

IT'S READY—



The Buckingham Electric Pick-Up

*Absolutely the finest electro-magnetic reproducing unit ever
offered to the radio and phonographic trade*

A unit of precision manufacture made with that fine regard to microscopic detail that is found only in the construction of fine chronometers and scientific instruments. Embodies the results of years of experience and experimental investigation to produce a pickup which combines high voltage output, low impedance and uniform response over a frequency spectrum far in excess of that required to faithfully reproduce anything that is audible to the human ear. The heart of the pickup, the permanent magnet, is the finest cobalt steel and each magnet is tested for retentivity and specially aged before used.

The main frame is an accurate die casting of special brass. This assures a perfect and permanent alignment of parts.

The armature is a solid piece formed from special magnetic steel and each armature is dynamically balanced—an exclusive Buckingham feature.

All internal metal parts are cadmium plated, while the external case and housing are finished in statuary bronze.

Each unit upon completion is set aside to age for not less than three weeks to assure molecular equilibrium in bearing and damping pad before final adjustments and tests are made. The armature is accurately centered by easily accessible means of adjustment. These points are of utmost importance to the discriminating buyer.

*Write or Wire Immediately
For Samples and Prices*

BUCKINGHAM RADIO CORPORATION
440 West Superior Street, CHICAGO, ILL.

Raytheon

LONG LIFE RADIO TUBE

RayX
280

RayX
171-A



RayX -171-A
POWER AMPLIFIER
5.0 Volts .25 Ampere
Plate
180 Volts (Maximum)
List Price \$2.75

For use in last audio stage only. New process long life oxide coated filament and rugged mechanical construction.

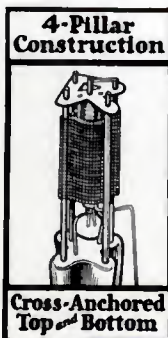


RayX -280
FULL WAVE RECTIFIER
5.0 Volts 2.0 Amperes
Plates
300 Volts AC
(Maximum)
.125 Ampere Output DC
(Maximum)
List Price \$4.25

Special rigid construction results in equal rectification for both halves of the AC wave insuring smoother current. Also provided with an extra heavy filament to insure longer life.

Raytheon Long Life Radio Tubes, like the Raytheon BH Tube, will be adequately advertised to the consumer with complete display and merchandising tie-ups for the dealer.

We call them healthy tubes because the Raytheon construction insures that there will be no weaklings but



uniform tubes that will give efficient, satisfactory service from the first to the last day of their extraordinary long life.

Raytheon filament type tubes are fully protected by a long list of Raytheon patents which appear plainly on the side of each carton.

Raytheon

LONG LIFE RADIO TUBE

Pioneering

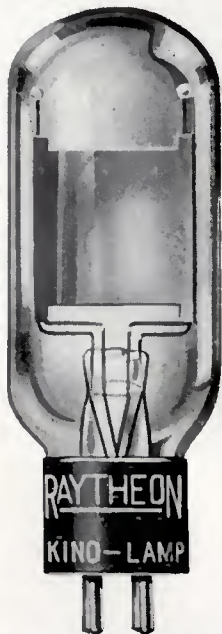
Raytheon

TELEVISION TUBES



Kino-Lamp

FOR RECEIVING



The first tube developed commercially to work with any system. Uniform glow over entire plate area without use of mirrors or ground glass, gives it perfect reproduction qualities. The Double plates mean Double life.

List Price \$7.50

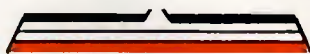
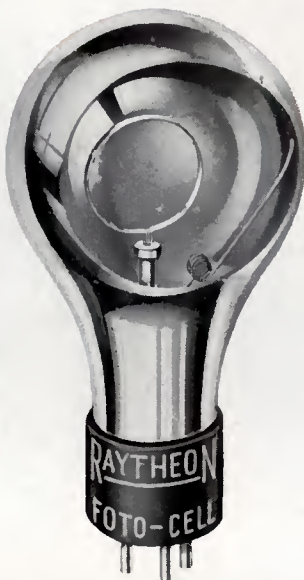


Foto-Cell

FOR SENDING



Available in both hard vacuum and gas filled extra sensitive types—each in three sizes.

Special tubes and prices on application.

Type 3 GS illustrated

List Price \$20.00

Raytheon Sustained Voltage

Raytheon Type B-H
The Standard Replacement Tube for "B" Eliminators
List Price \$4.50

IONIZED HELIUM
for Longer Life and Sustained Voltage

Raytheon Longer Life
Raytheon LONG LIFE RECTIFYING TUBE

Raytheon BH is the only replacement tube which can be used in over 100 different makes of "B" Eliminators.

There are millions of Raytheon BH tubes in use and millions will be replaced.

Be sure and get your share of this business.

RAYTHEON MANUFACTURING CO.
Cambridge, Mass.

Announcing "The Healthy Tubes"

Raytheon

LONG LIFE RADIO TUBE



IN designing radio tubes, Raytheon Laboratories have always been pioneers in the best sense of the word. And now Raytheon filament tubes for AC receivers set a new standard of performance by their improved construction which means a *longer* and *healthier* life.

Ray
227

Raytheon
LONG LIFE RADIO TUBE



Ray-227
DETECTOR AMPLIFIER
(AC Heater)
2.5 Volts 1.75 Amperes
Plate
180 Volts (Maximum)
List Price \$4.00

A rugged hum-free AC tube using new type of cathode element which heats up with remarkable rapidity and is able to stand voltage fluctuations without impairing its life.

RayX
226

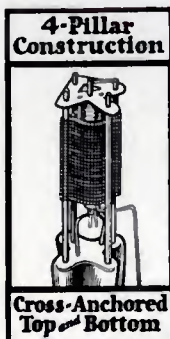


RayX-226
AMPLIFIER
(AC Filament)
1.5 Volts 1.05 Amperes
Plate
180 Volts (Maximum)
List Price \$2.25

Special process outside coated filament prevents possibility of any change in operating characteristics.

The difference between radio tubes is in their design and the care with which they are made. With Raytheon tubes, the careful, painstaking methods of the laboratory are used in both their design and making.

Note the sturdy "4 pillar" construction firmly anchoring the fila-



ment at 8 points instead of 2 as found in ordinary tubes.

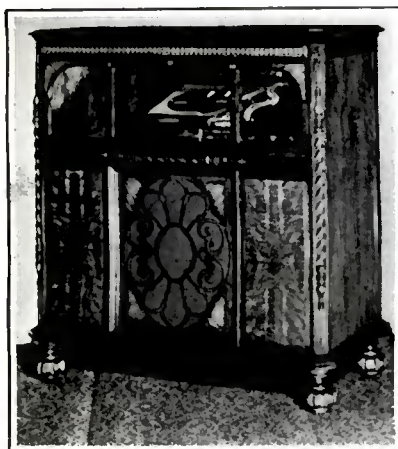
This is what keeps the filament in alignment, makes the tube non-microphonic and insures longer life. And because of this sturdier construction, Raytheon tubes stand voltage overload.

Raytheon
LONG LIFE RADIO TUBE

Presenting

The Orchestrope

The Musical Marvel of the age



In a few short months the Capehart Orchestrope rose from obscurity to a place of leadership in the automatic phonograph field. An innovation in the music world, it has been proclaimed by thousands as the greatest triumph in musical reproduction since the first phonograph.

At the shows, at the fairs, everywhere . . . people have marveled at its simplicity, its beauty, its adaptability and its reproducing genius.

If you have not heard the Orchestrope, arrange to do so today—You will be immensely pleased.

—Plays 28 records on both sides continuously, turning and changing them automatically. An entire evening's entertainment without any attention whatsoever.

What is the Orchestrope?

The Orchestrope is an all electric and completely automatic phonograph. It is very handsome in appearance, has unusually beautiful tone which is easily controlled to any desired volume.

How does the Orchestrope operate?

The Orchestrope is completely automatic and requires no attention whatsoever. Any type of program may be had by using the proper kind of records. It may be coin operated or otherwise. Auxiliary speakers are furnished where it is desired that the program be heard in different parts of a building simultaneously. The Orchestrope may be moved from one room to another with ease.

To whom is the Orchestrope Sold?

There is a tremendous potential market for the Orchestrope. Restaurants, hotels, clubs, dance halls, confectioners, drug stores, billiard rooms, theatres and show rooms are among the many customers who have so enthusiastically received the Orchestrope.

How is the Orchestrope Sold?

The Orchestrope is sold exclusively through dealers . . . every sale is a dealer sale. Exclusive franchises are granted to responsible dealers in each territory. The Capehart sales organization assists the dealer in the resale of the instruments. Some of America's foremost musical dealers are now Orchestrope dealers.

For further details wire or write immediately to Department A regarding our exclusive dealer franchise.

Capehart Automatic Phonograph Corp.
Huntington Indiana



FRESHMAN
YOUR ULTIMATE RADIO

The Latest Achievement in SIMPLIFIED RADIO

Dynamic Speaker Shielded Grid Tube

ON the page facing, you see the first receiver to use both the UX-222 Shielded Grid Tube and full Dynamic Speaker. Model QD-16 with its beautifully finished walnut cabinet, illuminated dial, and exclusive Freshman "Q" circuit, is the latest addition to "simplified radio". It is priced at \$149.50, less tubes.

Model N-12 Freshman cabinet radio is shown at the top of this page. It is furnished in either walnut or mahogany finish and includes the famous Peerless Dynamic Speaker which is operated by the UX-250 Super-Amplifying Tube. It is priced at \$195.00, either finish, less tubes.

"The little giant of the air", Model Q-15, is shown immediately beneath Model N-12. This is the first receiver using the new UX-222 Shielded Grid Tube and has proved its popularity by being displayed and sold throughout the country. It is priced at \$69.00, less tubes.

Table Model N-11, shown at the bottom of this page, is priced at \$115.00, less tubes, and is identical in chassis construction with Model N-12.

Write or wire immediately for further particulars and franchise application.



Prices slightly higher west of Denver

CHAS. FRESHMAN CO., INC.

NEW YORK - CHICAGO - LOS ANGELES - KANSAS CITY

FRESHMAN
YOUR ULTIMATE RADIO

It's the
Golden Tone
 of the
Gold Seal
 Radio Tube
 which makes it
 the Success
 it is today



Sweet tones—true to the broadcasting—just like those on the other side of the microphone—this fact alone makes radio fans want Gold Seal Radio Tubes.

This steady demand, topped with national newspaper advertising in your own territory—consistent—week after week, makes dealers want Gold Seal Radio Tubes for profits' sake.

MADE RIGHT
 PACKED RIGHT
 SOLD RIGHT



Gold Seal Electrical Co., Inc.
 NEW YORK AND CHICAGO
Also Manufacturers of Gold Seal Electrical Appliances

Gold Seal
 RADIO TUBES



Here is True Fidelity of Tone

*... insured by scientific design
and Precision Manufacture*

OF SCIENTIFIC design and construction—original with Webster, and different from any other on the market today—the Webster Electric Pick-up is built to a precision standard which assures supreme tonal perfection! Its true fidelity of tone and ability to capture the most delicate harmonious and intonations of the individual instruments has won the highest endorsement of the trade.

Master craftsmanship in every microscopic detail is responsible for its thrilling life-like reproduction! Every part is perfectly matched and delicately balanced. Absolute travel freedom of the needle in the record groove is insured by a frictionless stylus bearing.

The pick-up head, encased in a dead metal die cast housing, definitely eliminates annoying resonance. The built-in volume control in the Model 1-A is a distinct improvement, while the cantilever type supporting arm suspended in accurately fitting bearings does away with all annoying rattles.

Prove—by actual comparisons with other pick-ups—what elaborate attention to detail and precision manufacture mean in obtaining really pleasurable reproduction.

The superior action and quality of the Webster are instantly apparent! Two models are available in the Webster Electric Pick-up. Model 1-A, which includes pick-up head, supporting arm with a volume control incorporated in the base—an exclusive Webster feature—and necessary adapters, is priced at a list of \$17.50. Model 1-B includes pick-up head, separate volume control, and necessary adapters; the list price is \$12.50.

In no other pick-up on the market today will you find so much actual dollars-and-cents value.

This is a decided selling asset, for the customer instantly recognizes this value and quality



—and wants it. Practical sales assistance is supplied by a complete assortment of catalog pages, envelope enclosures, etc. Impressive self-selling counter display cartons are supplied for both models. One model 1-A or three Model 1-B to a carton allows a quick turnover, yet insures a constant stock. The regular wholesale and retail discounts apply.

There is an unusually substantial market for the Webster Electric Pick-up. Be sure to get your share of this new business! Many leading jobbers have already placed their orders for this exceptional pick-up. Order direct if your jobber has not yet secured his stock.



WEBSTER ELECTRIC COMPANY
RACINE, WISCONSIN

Two adapters and full instructions are packed with each model, so that pick-up is readily adaptable to either battery operated or A. C. sets.

Webster
 **Electric**
Pick-up



Champion
Standard Equipment Package
Chart

Correct Champion Equipment for the following Radio Sets; gear entered to give utmost satisfaction when used with sets indicated

Make of Set	Model	Equipment Package	Make of Set	Model	Equipment Package
Apex	34	EQ1	Franklin	AC5	Special
Arborel	45	EQ2	Grobo	K28	EQ1
Arborel	55	EQ3	Grobo	K29	EQ2
Arborel	65	EQ4	Grobo	K30	EQ3
Arborel	75	EQ5	Grobo	K31	EQ4
Arborel	85	EQ6	Grobo	K32	EQ5
Arborel	95	EQ7	Grobo	K33	EQ6
Arborel	105	EQ8	Grobo	K34	EQ7
Arborel	115	EQ9	Grobo	K35	EQ8
Arborel	125	EQ10	Grobo	K36	EQ9
Arborel	135	EQ11	Grobo	K37	EQ10
Arborel	145	EQ12	Grobo	K38	EQ11
Arborel	155	EQ13	Grobo	K39	EQ12
Arborel	165	EQ14	Grobo	K40	EQ13
Arborel	175	EQ15	Grobo	K41	EQ14
Arborel	185	EQ16	Grobo	K42	EQ15
Arborel	195	EQ17	Grobo	K43	EQ16
Arborel	205	EQ18	Grobo	K44	EQ17
Arborel	215	EQ19	Grobo	K45	EQ18
Arborel	225	EQ20	Grobo	K46	EQ19
Arborel	235	EQ21	Grobo	K47	EQ20
Arborel	245	EQ22	Grobo	K48	EQ21
Arborel	255	EQ23	Grobo	K49	EQ22
Arborel	265	EQ24	Grobo	K50	EQ23
Arborel	275	EQ25	Grobo	K51	EQ24
Arborel	285	EQ26	Grobo	K52	EQ25
Arborel	295	EQ27	Grobo	K53	EQ26
Arborel	305	EQ28	Grobo	K54	EQ27
Arborel	315	EQ29	Grobo	K55	EQ28
Arborel	325	EQ30	Grobo	K56	EQ29
Arborel	335	EQ31	Grobo	K57	EQ30
Arborel	345	EQ32	Grobo	K58	EQ31
Arborel	355	EQ33	Grobo	K59	EQ32
Arborel	365	EQ34	Grobo	K60	EQ33
Arborel	375	EQ35	Grobo	K61	EQ34
Arborel	385	EQ36	Grobo	K62	EQ35
Arborel	395	EQ37	Grobo	K63	EQ36
Arborel	405	EQ38	Grobo	K64	EQ37
Arborel	415	EQ39	Grobo	K65	EQ38
Arborel	425	EQ40	Grobo	K66	EQ39
Arborel	435	EQ41	Grobo	K67	EQ40
Arborel	445	EQ42	Grobo	K68	EQ41
Arborel	455	EQ43	Grobo	K69	EQ42
Arborel	465	EQ44	Grobo	K70	EQ43
Arborel	475	EQ45	Grobo	K71	EQ44
Arborel	485	EQ46	Grobo	K72	EQ45
Arborel	495	EQ47	Grobo	K73	EQ46
Arborel	505	EQ48	Grobo	K74	EQ47
Arborel	515	EQ49	Grobo	K75	EQ48
Arborel	525	EQ50	Grobo	K76	EQ49
Arborel	535	EQ51	Grobo	K77	EQ50
Arborel	545	EQ52	Grobo	K78	EQ51
Arborel	555	EQ53	Grobo	K79	EQ52
Arborel	565	EQ54	Grobo	K80	EQ53
Arborel	575	EQ55	Grobo	K81	EQ54
Arborel	585	EQ56	Grobo	K82	EQ55
Arborel	595	EQ57	Grobo	K83	EQ56
Arborel	605	EQ58	Grobo	K84	EQ57
Arborel	615	EQ59	Grobo	K85	EQ58
Arborel	625	EQ60	Grobo	K86	EQ59
Arborel	635	EQ61	Grobo	K87	EQ60
Arborel	645	EQ62	Grobo	K88	EQ61
Arborel	655	EQ63	Grobo	K89	EQ62
Arborel	665	EQ64	Grobo	K90	EQ63
Arborel	675	EQ65	Grobo	K91	EQ64
Arborel	685	EQ66	Grobo	K92	EQ65
Arborel	695	EQ67	Grobo	K93	EQ66
Arborel	705	EQ68	Grobo	K94	EQ67
Arborel	715	EQ69	Grobo	K95	EQ68
Arborel	725	EQ70	Grobo	K96	EQ69
Arborel	735	EQ71	Grobo	K97	EQ70
Arborel	745	EQ72	Grobo	K98	EQ71
Arborel	755	EQ73	Grobo	K99	EQ72
Arborel	765	EQ74	Grobo	K100	EQ73
Arborel	775	EQ75	Grobo	K101	EQ74
Arborel	785	EQ76	Grobo	K102	EQ75
Arborel	795	EQ77	Grobo	K103	EQ76
Arborel	805	EQ78	Grobo	K104	EQ77
Arborel	815	EQ79	Grobo	K105	EQ78
Arborel	825	EQ80	Grobo	K106	EQ79
Arborel	835	EQ81	Grobo	K107	EQ80
Arborel	845	EQ82	Grobo	K108	EQ81
Arborel	855	EQ83	Grobo	K109	EQ82
Arborel	865	EQ84	Grobo	K110	EQ83
Arborel	875	EQ85	Grobo	K111	EQ84
Arborel	885	EQ86	Grobo	K112	EQ85
Arborel	895	EQ87	Grobo	K113	EQ86
Arborel	905	EQ88	Grobo	K114	EQ87
Arborel	915	EQ89	Grobo	K115	EQ88
Arborel	925	EQ90	Grobo	K116	EQ89
Arborel	935	EQ91	Grobo	K117	EQ90
Arborel	945	EQ92	Grobo	K118	EQ91
Arborel	955	EQ93	Grobo	K119	EQ92
Arborel	965	EQ94	Grobo	K120	EQ93
Arborel	975	EQ95	Grobo	K121	EQ94
Arborel	985	EQ96	Grobo	K122	EQ95
Arborel	995	EQ97	Grobo	K123	EQ96
Arborel	1005	EQ98	Grobo	K124	EQ97
Arborel	1015	EQ99	Grobo	K125	EQ98
Arborel	1025	EQ100	Grobo	K126	EQ99
Arborel	1035	EQ101	Grobo	K127	EQ100
Arborel	1045	EQ102	Grobo	K128	EQ101
Arborel	1055	EQ103	Grobo	K129	EQ102
Arborel	1065	EQ104	Grobo	K130	EQ103
Arborel	1075	EQ105	Grobo	K131	EQ104
Arborel	1085	EQ106	Grobo	K132	EQ105
Arborel	1095	EQ107	Grobo	K133	EQ106
Arborel	1105	EQ108	Grobo	K134	EQ107
Arborel	1115	EQ109	Grobo	K135	EQ108
Arborel	1125	EQ110	Grobo	K136	EQ109
Arborel	1135	EQ111	Grobo	K137	EQ110
Arborel	1145	EQ112	Grobo	K138	EQ111
Arborel	1155	EQ113	Grobo	K139	EQ112
Arborel	1165	EQ114	Grobo	K140	EQ113
Arborel	1175	EQ115	Grobo	K141	EQ114
Arborel	1185	EQ116	Grobo	K142	EQ115
Arborel	1195	EQ117	Grobo	K143	EQ116
Arborel	1205	EQ118	Grobo	K144	EQ117
Arborel	1215	EQ119	Grobo	K145	EQ118
Arborel	1225	EQ120	Grobo	K146	EQ119
Arborel	1235	EQ121	Grobo	K147	EQ120
Arborel	1245	EQ122	Grobo	K148	EQ121
Arborel	1255	EQ123	Grobo	K149	EQ122
Arborel	1265	EQ124	Grobo	K150	EQ123
Arborel	1275	EQ125	Grobo	K151	EQ124
Arborel	1285	EQ126	Grobo	K152	EQ125
Arborel	1295	EQ127	Grobo	K153	EQ126
Arborel	1305	EQ128	Grobo	K154	EQ127
Arborel	1315	EQ129	Grobo	K155	EQ128
Arborel	1325	EQ130	Grobo	K156	EQ129
Arborel	1335	EQ131	Grobo	K157	EQ130
Arborel	1345	EQ132	Grobo	K158	EQ131
Arborel	1355	EQ133	Grobo	K159	EQ132
Arborel	1365	EQ134	Grobo	K160	EQ133
Arborel	1375	EQ135	Grobo	K161	EQ134
Arborel	1385	EQ136	Grobo	K162	EQ135
Arborel	1395	EQ137	Grobo	K163	EQ136
Arborel	1405	EQ138	Grobo	K164	EQ137
Arborel	1415	EQ139	Grobo	K165	EQ138
Arborel	1425	EQ140	Grobo	K166	EQ139
Arborel	1435	EQ141	Grobo	K167	EQ140
Arborel	1445	EQ142	Grobo	K168	EQ141
Arborel	1455	EQ143	Grobo	K169	EQ142
Arborel	1465	EQ144	Grobo	K170	EQ143
Arborel	1475	EQ145	Grobo	K171	EQ144
Arborel	1485	EQ146	Grobo	K172	EQ145
Arborel	1495	EQ147	Grobo	K173	EQ146
Arborel	1505	EQ148	Grobo	K174	EQ147
Arborel	1515	EQ149	Grobo	K175	EQ148
Arborel	1525	EQ150	Grobo	K176	EQ149
Arborel	1535	EQ151	Grobo	K177	EQ150
Arborel	1545	EQ152	Grobo	K178	EQ151
Arborel	1555	EQ153	Grobo	K179	EQ152
Arborel	1565	EQ154	Grobo	K180	EQ153
Arborel	1575	EQ155	Grobo	K181	EQ154
Arborel	1585	EQ156	Grobo	K182	EQ155
Arborel	1595	EQ157	Grobo	K183	EQ156
Arborel	1605	EQ158	Grobo	K184	EQ157
Arborel	1615	EQ159	Grobo	K185	EQ158
Arborel	1625	EQ160	Grobo	K186	EQ159
Arborel	1635	EQ161	Grobo	K187	EQ160
Arborel	1645	EQ162	Grobo	K188	EQ161
Arborel	1655	EQ163	Grobo	K189	EQ162
Arborel	1665	EQ164	Grobo	K190	EQ163
Arborel	1675	EQ165	Grobo	K191	EQ164
Arborel	1685	EQ166	Grobo	K192	EQ165
Arborel	1695	EQ167	Grobo	K193	EQ166
Arborel	1705	EQ168	Grobo	K194	EQ167
Arborel	1715	EQ169	Grobo	K195	EQ168
Arborel	1725	EQ170	Grobo	K196	EQ169
Arborel	1735	EQ171	Grobo	K197	EQ170
Arborel	1745	EQ172	Grobo	K198	EQ171
Arborel	1755	EQ173	Grobo	K199	EQ172
Arborel	1765	EQ174	Grobo	K200	EQ173
Arborel	1775	EQ175	Grobo	K201	EQ174
Arborel	1785	EQ176	Grobo	K202	EQ175
Arborel	1795	EQ177	Grobo	K203	EQ176
Arborel	1805	EQ178	Grobo	K204	EQ177
Arborel	1815	EQ179	Grobo	K205	EQ178
Arborel	1825	EQ180	Grobo	K206	EQ179
Arborel	1835	EQ181	Grobo	K207	EQ180
Arborel	1845	EQ182	Grobo	K208	EQ181
Arborel	1855	EQ183	Grobo	K209	EQ182
Arborel	1865	EQ184	Grobo	K210	EQ183
Arborel	1875	EQ185	Grobo	K211	EQ184
Arborel	1885	EQ186	Grobo	K212	EQ185
Arborel	1895	EQ187	Grobo	K213	EQ186
Arborel	1905	EQ188	Grobo	K214	EQ187
Arborel	1915	EQ189	Grobo	K215	EQ188
Arborel	1925	EQ190	Grobo	K216	EQ189
Arborel	1935	EQ191	Grobo	K217	EQ190
Arborel	1945	EQ192	Grobo	K218	EQ191
Arborel	1955	EQ193	Grobo	K219	EQ192
Arborel	1965	EQ194	Grobo	K220	EQ193

A.R. This chart subject to revision periodically to conform to changes in set design

CHAMPION RADIO WORKS, INC., DANVERS, MASS.

Champion

Originates a New, Profitable Way to Merchandise Tubes

Champion Standard Equipment Package.

Complete combinations of proper types of tubes for all the popular receiving sets, packed in sealed boxes, ready for you to sell with the new radio sets you install. No need to assemble, unpack or repack a lot of separate cartons. The sealed Champion package is your guarantee and your customer's.

In addition, each tube is accompanied by a printed

certificate, signed by the manufacturer, guaranteeing satisfaction or money back. This is the first guarantee of its kind ever issued by a tube maker.

When you see a Champion dealer you see a *progressive* dealer! Send at once for full information and a copy of the convenient Champion Standard Equipment Package Chart showing the correct combinations of tubes for all popular makes of radio sets.



TUNE IN!

Champion Radio Programs are broadcast over stations:

KDKA ... Pittsburgh
WBZ Springfield
WBZA Boston
WSYR ... Syracuse
WIAD Philadelphia
KYW Chicago

RADIO TUBES

the Makers Guarantee

CHAMPION RADIO WORKS, Inc.
DANVERS, MASS.



The Craftsmanship of Experts

Not only have we put the finest American Walnut into this striking highboy cabinet but it has also been designed and built by men who have spent their lives making fine furniture. The Warwick is worthy of their efforts and the name of Cary. Door panels are of beautifully matched Burl Walnut—the finish, hand-shaded and hand-rubbed.

Cary Cabinet Corporation
Springfield, Missouri

Cary

CABINETS



**Profit By This Great
Name—Known to Millions
Nationally Advertised**

Now you may take on a line of radio furniture bearing a name fully as well known to the public as the greatest name in Radio—Berkey & Gay, synonymous with the finest in furniture for over 75 years . . . The greatest furniture stores in the country compete for the rights of selling furniture bearing this famous

name. It represents to the public the last word in design, the utmost in fine workmanship and finish, reliable value through and through . . . We offer you a complete line of styles to fit most of the popular sets, varied in design to suit any interior or personal taste, carefully finished, beautifully made—a line that will sell easily, turn your capital rapidly and assure you pleased customers and a permanent business.

LEARN ALL ABOUT BERKEY & GAY RADIO FURNITURE
For full particulars write, wire or phone the Radio Allied Manufacturers Corporation, 1340 South Michigan Ave., Chicago, Illinois—Radio Furniture Sales Division of the Berkey & Gay Furniture Company.

BERKEY & GAY *Radio Furniture*



ANOTHER TRIUMPH

De Forest

PERFECTED AUDIONS

A GAIN Dr. Lee De Forest has written a new page in Radio History! Just as his startling invention of the radio vacuum tube back in 1906 made possible the birth of Radio, as an industry—so has his *new perfected* Audions made possible, today—a greater and more economical enjoyment of radio reception.

The acid test of *performance* tells the story. And that is where the *new perfected* De Forest Audions easily demonstrate their greater clarity—

their increased sensitivity—their added volume and of prime importance—the *greater number of entertainment hours*.

Exclusive filament chemical treatment—stauncher mechanical construction and a much higher vacuum are the three outstanding factors responsible for the matchless performance of the *new perfected* De Forest Audions.

Made in all popular types, both for A.C. and D.C. Write for full particulars about the bigger profit-margin dealer proposition.

ON THE AIR Every Sunday between 10:00 and 10:30 p.m. (E. S. T.)—The “De Forest Audions”—over the 22 stations of the Columbia Broadcasting System.

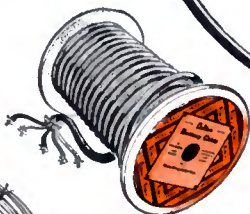
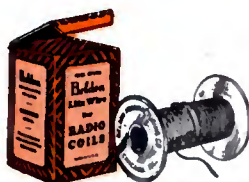
DE FOREST RADIO COMPANY JERSEY CITY, N. J.

NEW YORK
ST. LOUIS
DALLAS

CHICAGO
DENVER
LOS ANGELES
DETROIT

PHILADELPHIA
ATLANTA
KANSAS CITY

PITTSBURGH
BOSTON
MINNEAPOLIS



For Bigger Profits push the Complete Belden Line

The Complete Belden Line has a radio accessory for every popular radio need. Since the very inception of popularized radio, throughout its phenomenally rapid evolution, changing needs of radio enthusiasts have been anticipated with Belden Quality Materials.

In addition, Belden advertising in leading publications such as the Saturday Evening Post, Popular Science Monthly, Radio News, Citizen's Radio Call Book and many others has carried the story of Belden Quality to millions of homes in every corner of the country.

Accordingly Belden Products are favorably known and standard for aerial kits, aerial wire, battery cords, lightning arresters and other radio needs. From coast to coast the black and orange striped Belden cartons are accepted by consumers as a guaranty of quality.

The tremendous popularity of the Belden Radio Accessory Line means big profits for Belden dealers. Order Belden Radio Accessories from your jobber today and cash in on this popularity.

Belden Manufacturing Company

2308-A S. Western Ave. • Chicago, Ill.

*Specify
Belden*

Compare This Speaker with Any Other

*Selling at
TWICE
its Price!*

THIS is the time for action—not words. We have an astonishing new speaker, in tone quality and volume, undoubtedly as fine as anything you've ever heard—with a retail list price of only \$15.00, and a most liberal margin of profit for Dealers and Jobbers!

All we ask you to do is to hear the new Quam speaker—**TODAY**. You'll be convinced in a moment that this is the speaker which will bring you the kind of business you want, and plenty of it! Perfect for A. C. and battery operated sets.

*Beautifully Finished, Convenient Size
Performance Plus!!*

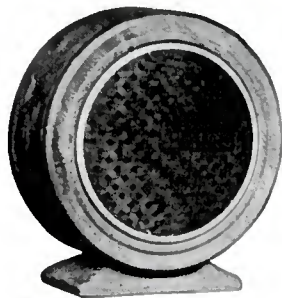
DEALERS—Wire us today for samples, if your local jobber has not as yet been supplied.

JOBBERS—Wire us today for sample shipment, if you have not already done so.

MODEL-B
\$15.00
LIST PRICE



Beautiful clock-type Speaker, attractively faced in gold silk, with sturdy gold bronze lacquered steel base and frame, only 9½ inches in diameter. Convenience—beauty—and performance plus!



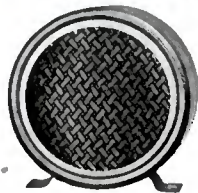
Model A—List Price \$17.50

Attractive lacquered steel base and frame of gold bronze finish, sturdily built, faced in gold silk, size 13 inches in diameter—lasting beauty!

MANUFACTURERS—Send today for samples of units shown below.

ACTION NOW will bring you volume business with the new Quam Speaker during the entire big selling season. Use the coupon, **TODAY!**

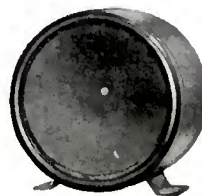
Prices slightly higher west of the Rockies.



Model 1



Model 3



Model 2

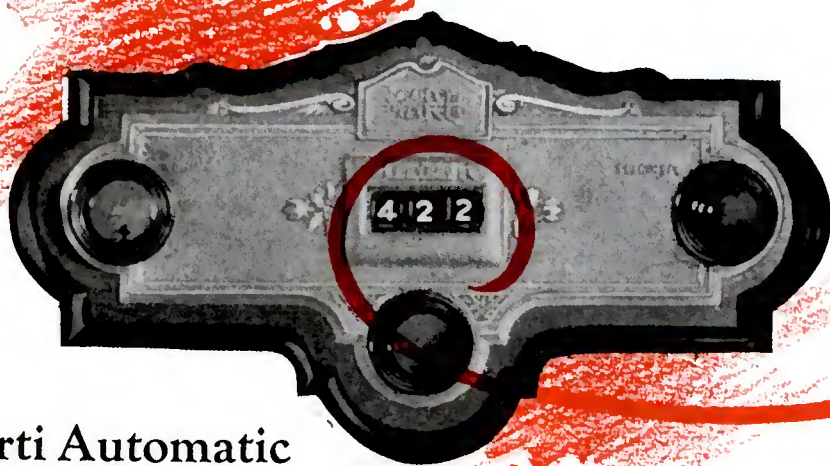
Units fitted exactly for attractive cabinets. Model 1 has unit and cone complete in lacquered steel drum with silk screen. Model 3 is unit complete with cone and mounting bracket. Model 2, unit complete with cone, in lacquered steel drum but without silk screen. All priced right for manufacturers' use.

**QUAM RADIO
CORPORATION**
9703 Cottage Grove Ave.
Chicago, Ill.

The New
QUAM
CONE SPEAKER

Quam Radio Corporation,
9703 Cottage Grove Ave., Chicago, Ill.
Send samples at once of Models B, A, 1, 2, 3.
(Check those desired.) This does not obligate me to buy.
Name
Address

Let this new tuning feature
make sales for you!



The Marti Automatic Meter Selector registers the station wave length

The station wave length in the daily paper today, tomorrow, a year from now is always your Marti log. Just set the indicator by means of the selector button on the right to that wave length. In comes the desired station clear and true. It works just like the mileage indicator on your motor car. No more blind groping on confusing dials with hair-line adjustments.

It is as fool-proof as it is accurate. It's lots of fun to tune in because it is entirely automatic. What is more, you are not limited to a few stations. The entire range from 200 to 550 meters is at your beck and call, local or long distance. When wave lengths change on November 11th, just consult the daily paper and set the indicator to the new figures. No other adjustments to be made.

In selling Marti sets, just let your prospect tune in on a few stations. That one experience in registering wave lengths instead of hunting for them will go a long way toward making the sale.

Everything in the set is of the best, PEERLESS Dynamic Speaker, fine workmanship throughout, and beautiful walnut cabinet. In appearance, tone quality, volume, selectivity and distance, Marti is among the finest.

Send for information regarding franchises in territories still open.

MARTI ELECTRIC RADIO CO., Inc.

East Orange,
New Jersey, U. S. A.
Opposite Ampere Station
Lackawanna, R. R.

New York Show Rooms
225 West 34th St., New York City.

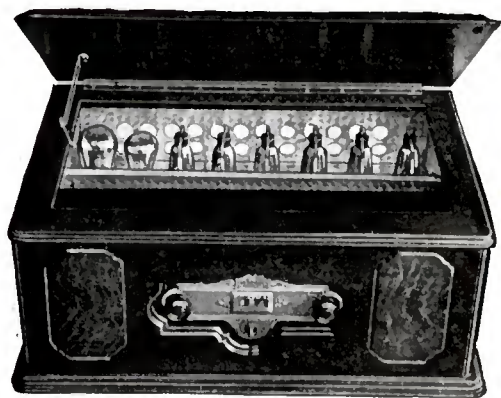


Table Model. 7 tubes, three stages of tuned radio frequency amplification, three stages of resistance coupled audio with 210 power tube. (281 rectifier.) Phonograph "pickup" jack. Built in socket for Dynamic Speaker. Cabinet, two-tone Walnut.

List Price, \$195, Less Tubes

WAVE LENGTHS OF STATIONS AT A GLANCE IN METERS

WNYC	520
WEAF	492
WJZ	454
WHN	394
WPAP	394
WQAO	394
WMCA	370
WLWL	370
WGRS	349
WRNY	326
WPCH	326
WABC	309
WROQ	309
WODA	294
WOV	294
WAAM	268
WNJ	268
WGCF	268
WLTH	256
WERJ	256
WBBR	256
WEVD	246
WQBB	246
WAAT	246
WHAP	238
WOR	422
WMSC	238
WBNY	238
WSGH	227
WBBC	227
WKBQ	219
WKBO	219
WCOU	219
WIMK	211
WCDA	211
WCOH	211
WSDA	207
WMRJ	207
WHPB	207
WLBX	204
WBS	204
WNRQ	204
WBNK	200
WWEL	200
WIBI	200
WBMS	200



The Marti Console

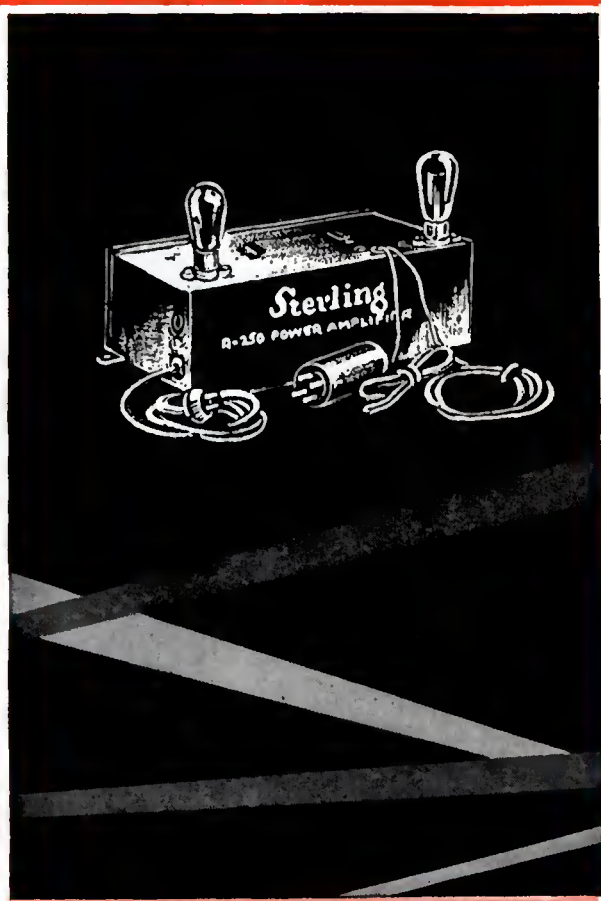
Console Model. Two-tone Walnut. Phonograph "pickup" jack. 7 tubes, three stages of tuned radio frequency amplification, three stages of resistance coupled audio with 210 power tube.

List price including PEERLESS
Dynamic Speaker \$350, Less Tubes

MARTI
ELECTRIC POWER RADIO
MARTI



DYNAMIC



AMPLIFIER

Service-free!

Service ruins the disposition of all concerned. It costs money and customers. Avoid it. Buy and sell dynamic speakers on the basis of *dependability*.

The powerful Sterling Dynamics employ time-tried and proven design. Our engineers concentrated on refinements, one of which makes the Sterling superior to all others on ordinary amplification. You play *safe* when you sell Sterling Dynamics. 110 volt, 60-cycle chassis shown, \$40 list.

For Dynamics!

The super-power tube is the remedy for what's ailing when the customer complains about the Dynamic Speaker you sold him. This new Sterling power amplifier employs the 250 super-power tube—and think of it—**only \$38 list.**

If you have any sets in stock with ordinary amplification, add this amplifier and watch them sell.

Old customers who have good sets will want it, too.

Write for the Complete Sterling Catalog

Sterling

23 Years of Precision Manufacturing



Compare!

Your customers want, first of all, good tone quality from their radios. Sell them Vari-tone Speakers for their present sets. The reproduction and volume of the Vari-tone is actually *better* than that of many dynamics on ordinary amplification. Remarkably engineered.

To sell more low-priced radio sets equip them with the Vari-tone. Model R-2, as illustrated, only \$25 list. Also available in stripped chassis and boxed chassis models at \$14 and \$18 list.

Profits!

If a customer has a good D. C. radio, retain his good will by advising him to "electrify" it with Sterling Power Units. Then you're sure to sell him his next set and make *two* profits.

And have you ever figured the low cost of Sterling's *dependable* line of test equipment—and the important part proper equipment plays in satisfying customers? The Universal A. C. and D. C. Tube Tester shown costs the dealer only \$21 net.

THE STERLING MANUFACTURING COMPANY, CLEVELAND, O.

Best by Test
Over 11,000,000 products in use

THEY NEVER DISAPPOINT!



SX-200-B
An eighth-ampere super-sensitive Caesium Vapor tube intended for use as a super-sensitive detector tube in company with SX-201-B.

SY-222-AC
A shielded grid amplifying tube for operating directly from the A.C. lines for cathode heater power.



EACH new Sylvania Radio Tube must fully demonstrate its right to existence. It must fill a well-defined need of the industry—as well as any other radio tube on the market. Months of patient research and exhaustive tests have convinced the Sylvania engineers that SX-200-B, SX-201-B and SY-222-AC fully meet these requirements.

You may stock them and recommend them to your customers. You can do so with complete assurance that they—like all Sylvania Radio Tubes—will give dependable service and faithful reception.

Behind Sylvania quality is an advertising and merchandising campaign that is helping to make real profits for all Sylvania Radio Tube dealers. It will be to your advantage to write for this plan, today.

SYLVANIA PRODUCTS CO.
EMPORIUM, PA.



SX-201-B
An eighth-ampere amplifier and detector tube with a low filament consumption.

Sylvania

RADIO TUBES

THEY NEVER DISAPPOINT IN PROFITS AS WELL AS PERFORMANCE

McGraw-Hill Publishing Co., Inc.
JAMES H. MCGRAW, President
EDGAR KOBAX, Vice-President

Radio Retailing

The Business Magazine of the Radio Industry

EARL WHITEHORNE
Editorial Director
WILLIAM ALLEY
Managing Editor

Vol. 8

NOVEMBER, 1928

No. 5

Now— the SELLING Starts!

DURING the past few months the radio trade has experienced its busiest season of the year. It has been a most satisfying "seller's market." The political campaign now just closed sent the public to radio stores clamoring for apparatus. Now the campaign is ended. And the selling will begin.

Since September, dealers, jobbers and manufacturers enjoyed unusual prosperity. Business has climbed steadily to a peak that was reached just before election. This seasonal peak has not come, in previous years, until just before Christmas. What may be expected, therefore, in the two months right ahead?

The trade may confidently look for several definite developments. It may expect a decided trend from a "seller's" to a "buyer's" market. It may expect the public to stop pouring into radio stores as it has in the weeks just past. It may expect to find it necessary to begin its energetic specialty selling this season long before it has been found necessary in the past. For, while the radio industry should experience no serious depression before Christmas, it will certainly not enjoy any continued expansion of the pre-election boom.

IF PRESENT indications are to be believed, the retail trade will have to get out of its stores and SELL, or holiday business this year will not equal or surpass, that of former seasons. For the election has pushed the peak ahead. Much holiday buying has been anticipated in order to enjoy the campaign broadcasting. But from now until Christmas the public will have to be sold. They will not come a-buying. Therefore, the January and February specialty selling campaigns should begin now. In the past, the first of the year has been the turning point in the market. But this year, conditions are different and quite unusual. Sales campaigns must be inaugurated *before* Christmas.

The dealer cannot afford to ignore this trend. He must plan his sales campaign immediately. He must put it into practice well before December first. He must line up his prospects. He must plan his advertising. He must prepare his direct-mail selling. He must enlarge his sales staff. He must put every possible ounce of effort behind an intensive campaign if he is to get his usual share of Christmas business.

THE merchant who puts forth this extra ounce of effort between now and Christmas should find his holiday business at least as good as usual. But the dealer who permits this opportunity to lapse may be sitting in a quiet store during the Christmas shopping weeks, wondering where all the people have disappeared to.

It's going to be a "buyer's market" for the next six weeks. But if the retail trade reverses its usual procedure and gets its specialty selling campaigns under way *before*, not after, the holidays, there will be plenty of good business, nevertheless.

NOVEMBER						
S	M	T	W	T	F	S
..	..	..	..	1	2	3
..	..	..	6	7	8	9
..	5	..	..	15	16	17
..	..	..	..	..	23	24
..	..	..	..	..	30	..

DECEMBER						
S	M	T	W	T	F	S
..	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..



Rooms on upper floors, because of their distance from the receiver, need extra speakers.

By
G. O.
Shepherd



EVERY home with a radio set provides an opportunity for the sale of an extra speaker for use in rooms distant from the receiver. And every new set sold should have a second speaker for the same purpose.

With sales at this time trending definitely toward consoles with the speaker built in, the time has never been more opportune for the radio industry to make a forceful, concerted, effort to impress the buying public with the advantage of having "Two Speakers for Every Set."

Every front porch, kitchen and bed-room provides a need for the additional speaker. It will be profitable for you to canvass old customers with this idea in mind, as well as impressing it on new set-purchasers as the reason for buying two speakers with the set.

But there are *many* good reasons for the additional equipment. The convenience of having an extra speaker with any set which has a fixed reproducer is so apparent that its advantages will be readily appreciated by the purchaser. Especially if there is a sick person in the family, another speaker is badly needed, and its benefits will even serve to hasten recovery.

Then in the summer, the main reason for the loss of interest in radio is the fact, that with one set and one speaker, those who would enjoy the many fine radio programs that are on the air each evening would have to sit

indoors to do so. The simple addition of a long extension cord and another speaker will serve to keep any family interested in radio, right through the summer months.

Boarding houses, especially the better-class places, are excellent opportunities for the sale of several speakers. In fact, with the many speaker outlet devices which are on the market today, the home or public institution can be wired for radio reception and at a very low cost. These outlets match, in size and appearance, the regular power outlets you have in your home and with them you can plug a speaker instantly into the circuit from any room. The aggressive radio dealer will see, in this field alone, an unusually profitable area for sales development.

We reiterate: *one speaker is not enough.* And once you've sold a set, you've opened the door to another sale. Follow this advantage up. We've been in many radio stores. In almost all of them, we have noticed a meagerness of stock. Console sets—they *have* speakers, so it is not necessary to stock extra ones for them! Sets

that are for table installation—you'll find a speaker for each set. But extra speakers—well they just don't seem to have any. Maybe there are a few around somewhere, mostly kept for demonstration purposes, but no real stock from which to make a selection. If the customer makes the surprising demand for *two* speakers, it is most likely that the extra one will have to be ordered!



*For the
KITCHEN*

SPEAKER

No home is so small that two speakers cannot be used to advantage. It is time for the dealer to sell two speakers with every set and another speaker to all old customers.

Bear in mind the fact that, unless one takes into consideration the small additional cost of longer hours of use, the added speaker imposes no extra burden of expense other than its own initial cost. It is true that where the set, because it is within doors is used but an hour or two a week in the summertime—the speaker that can be hooked up and used out on the porch or lawn may increase the cost of operation by a few cents on the monthly light bill. But this item of cost is small and need not figure as important in the sales argument. You can sell *ten extra* speakers to every *eleven* sets sold out of your store.

Sell another speaker and you cement the friendship that should exist between you and



For the PORCH



For the BEDROOM



For the DEN

your customer. Why? Simply because if you leave it up to him to think up the idea, and if you wait for him to drop into your shop to see if another speaker will work on his set, you'll probably convince him that your interest extended just about one inch beyond the point of actual sale. Go to him with the idea—after he has successfully met all payments on the initial contract—and he'll appreciate your thoughtfulness.

Of course there are buyers who can well afford the additional equipment at the time they buy the receiver itself. As to selling this type of customer, you'll have to use your own judgment. The idea of following up the installment buyer is advanced here simply because he is the biggest buyer of radio and to try to sell him this extra speaker would only complicate the business of making the sale of the receiver. To group these buyers for a follow-up call just after their last payment has been made is to do several things at once.

In the first place, a call at that time will, in a way, flatter the recipient, convincing him that his business is worth something to you. The very fact that he has had his radio set long enough to complete the payments on it assures you that he has become thoroughly accustomed to having radio entertainment in his home and that he would not be without it. Maybe, in the months that

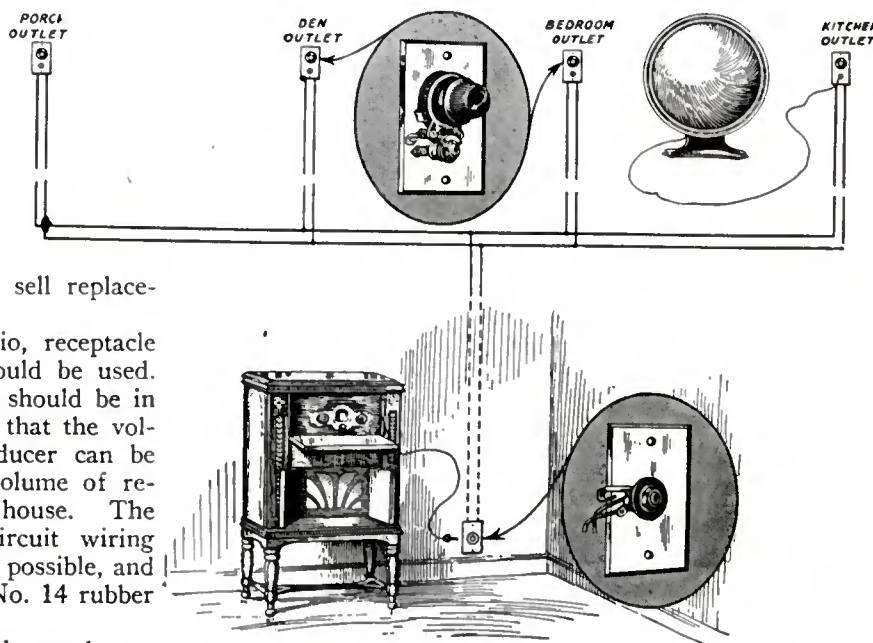
How to Wire a Home for Extra Speakers

A CAMPAIGN to sell extra speakers with each set will open new sales fields for the dealer. Every extra-speaker customer will also need plugs, wire, conduits, receptacle jacks and volume controls. Also, he may want you to make the installation for him and this is an opportunity to sell replacements.

In wiring a house for radio, receptacle jacks with volume control should be used. The volume control resistance should be in series with the reproducer, so that the volume of any individual reproducer can be varied without affecting the volume of reproducers elsewhere in the house. The standard practice for open-circuit wiring should be followed as much as possible, and the wire should be No. 16 or No. 14 rubber and cotton covered.

Where wires are run through metal conduits, only one wire should be run, the grounded conduit being used for the other connection. Otherwise, an undesirable capacity effect will be had, which will prevent the system from operating satisfactorily. All receptacle jacks are wired in parallel to the main circuit, which goes to the output of the receiving set.

For an ordinary size house, if a 171-A power



tube, using 185 volts, is in the last audio stage this will furnish ample volume from the ordinary 6-tube tuned radio frequency receiver to operate four or five reproducers with a fair amount of volume. It is also desirable to use reproducers of approximately the same type or quality, in order that the impedances are well matched.

have elapsed since the sale was made, his circumstances have improved so that he is a logical prospect for a newer and better set.

Also, since we take it for granted that he is a pleased customer, you will find him a good source of leads to

new business. No doubt, if he has neighbors with whom he is friendly, he will tell you which of them might be interested in the purchase of a radio. All of these things you can ascertain simply by deciding to go after set-owners with the idea of selling them *another* speaker.

Model Radio Home Has a Speaker in Every Room

THE latest application of "a radio speaker in every room" is to be found in the radio and electrical model home built by Cooper Brothers, of 56 Main Street, White Plains, New York. The house is an attractive two-story building located at Smith Avenue and Prescott Road.

Altogether there are two radio sets and seven speakers in the house.

The living room is at the right of the vestibule, and here, built into a little archway, is the main receiving set. It is a 7-tube receiver with automatic tuning device. Directly beside the set is the volume control and pilot light which indicates when the set is in operation. The set has a built-in dynamic reproducer and in the wall adjoining, high above the mantel fireplace, is another magnetic-type speaker, built in flush with the wall.

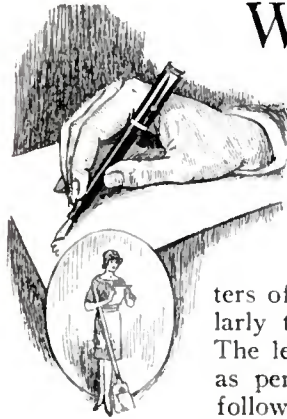
Similar built-in-the-wall speakers are located in the dining room, kitchen, and the two bedrooms. Every speaker has its own volume control and the accompanying pilot light which shows when the set is on. In the main room, the program can be switched from the built-in speaker to the wall speaker at will. When the last speaker in the house is turned off, it automatically shuts off the set.

Down in the basement, in which the men's den is located, there is another 6-tube receiver and speaker, on which the master of the house can receive his own selected program. It is located directly over the electric fireplace and supplies a magnetic speaker which is also built flush into the wall.

In the next issue of *Radio Retailing*, photographs and further details of this model radio house will be published.

Some Good Ideas from the Coast

Long Hand Letters Receive Attention



answer is not received within a reasonable time.

WHICH letters in the morning's mail are opened and read by the average housewife? Certainly the letters on personal correspondence stationery, written in long hand. R. O. Roberts, of the Hopper-Kelly Company of Tacoma, has found that it pays to take the trouble to write personal letters of this kind to prospects, particularly those in the better-class homes. The letters are made as informal and as personal as possible and then are followed up by a telephone call if an

Telephone Survey Provides Radio Prospects

ONE radio merchant in a Rocky Mountain community who was building up a list of prospects found excellent results from a telephone survey of the city. His method was to call up and ask for the householder by name. He then explained that he was making a radio survey of the community and asked whether or not the family possessed a radio. This was followed by a question asking how long they had owned it and the make, as well as the type of program they were most interested in. The merchant did not give his name unless it was asked for. The result of a day or two of telephoning was to build up an excellent prospect list for mailing.



Courtesy Cards Bring Leads

IN ORDER to cash in on the personal contacts of the hundreds of employees of the May Company department store of Los Angeles, the radio department of that company has issued "Special Courtesy Cards" which are available for the use of all employees. These cards come in neat little envelopes, three in number. They provide space for the name of the person being introduced

and his address as well as the name and address of the person giving him the card.

To the prospect, therefore, this card serves as a letter of introduction; to the sender, it is the certificate to a special commission in case the prospect is later sold.



A Window Which Opens Up

A FLEXIBLE window arrangement which permits its adaptation to any type of weather and to day and night treatment is that adopted by Cline's of San Luis Obispo, California. The left-hand window of this store has a flooring at the level of the main display room of the store, while the frame work of the window itself is removable. Thus, on nice days or on summer evenings, the entire window front can be removed and a demonstration staged. Even when no active demonstration is going on, the open store front tempts people to come in and make inquiries.



In addition to all its other advantages, this method of building the window has the inherent value of being unusual and thus attracts attention.

But its greatest usefulness is in the greater convenience it affords for staging demonstrations more efficiently.

Sells Trade-Ins Through Dealer in Second-Hand Cars

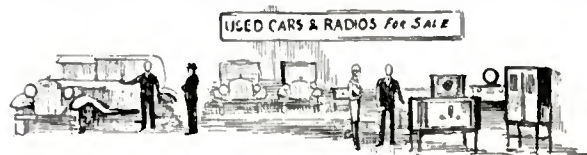
A VERY satisfactory way to dispose of a trade-in has been found by the Ernst Hardware Company of Seattle. This firm, which does no demonstrating of radio, either in the home or in the store, has found that trade-ins provided a problem which did not respond exactly to this treatment. A used set was an unknown quantity to the customer and he could not buy it on its stated merits without a trial.

Rather than to disrupt the very satisfactory system of over-the-counter merchandising which has for some years been a practice of the radio department, another outlet was sought. It proved possible to make an arrangement with a dealer in second-hand automobiles by which he took over all sets taken as trade-ins for the cash allowance made, providing this was sufficiently small.

The system has worked very well for both parties. The automobile dealer has found that the two lines combine very well and that the radio sets are readily disposed of at quite a satisfactory profit.

The hardware company, on the other hand, has its shelves clean at all times and moreover, is freed of all expense of reselling. It does not have the comebacks which are inevitable with used sets, even if not guaranteed, and it is enabled to maintain its rule of no demonstrating without concessions.

On this principle \$60,000 in radio was sold last year.



The MAIL

Invades

*An
Analysis by*

The
Montgomery
Ward retail
catalog con-
tains 734
pages, and
33,000 items

MERCHANTS in every trade have been watching and discussing the growth of the chain-

store movement. Year after year, more and more chains have been appearing, and spreading out across the country. Grocery chains, tobacco chains, drug chains, five-and-ten-cent chains and chains selling confectionery, clothing and many other lines have come and prospered until today there are 17,000 Atlantic and Pacific stores, 1,600 Woolworth stores, 892 Penney stores and 460 Liggett drug stores, and many smaller chains, all doing business in active competition with the independent retailer, mostly selling cash and carry, at low prices. The radio dealer has been an interested observer but his business has not been affected in the past. Now comes his turn. For Montgomery Ward and Sears Roebuck, the great Chicago mail-order houses, have embarked upon a program that has as its objective the establishment of perhaps four thousand so-called "junior department stores" throughout the country, and these stores will sell radio.

The story behind these new projects is interesting.

The farmers bought automobiles and began to come to town more. The farmer's wife likes to shop like any other woman. So she commenced to do a lot of buying in town on Saturday nights. This was business that used to go to the mail-order houses, and the volume of their sales began to fall off. To meet the situation they established display stores in many shopping centers in the farming country. Here the farmer could see the catalog goods and make comparisons. But he wasn't satisfied just to look at them, he wanted to buy on the spot without the bother and delay of ordering by mail. And the mail-order house found itself compelled to meet the situation by making these display stores real stores. So Montgomery Ward is now opening two or three stores each

week and will have more than 180 by the end of the year. Sears Roebuck has now 168, at last report. Montgomery Ward is opening up in communities under 100,000 population. Sears Roebuck is selecting more large cities. It is estimated that there are about 1,500 towns of 5,000 people or over where such chain department stores can be profitably operated. Montgomery Ward plans to set up 1,500 stores and Sears Roebuck are apparently shooting for 2,500.

Now the question before the radio industry is this—Will four thousand such stores selling radio at low prices set up an unmeetable competition for the independent merchant? And how can we tell? And what should we do about it?

The editors of *Radio Retailing* have naturally been watching this situation closely and with keen interest. Until these stores were sufficiently developed in their practice, there was no basis for judgment. But a few weeks ago, the time seeming to be ripe, three members of the staff took an automobile trip into three states in which five towns were visited where there are in operation typical stores of one or both of the big mail-order houses. The largest of these towns has a population of

ORDER *Chain*

the Radio Trade—WHAT will it MEAN?

S. J. Ryan and
Earl Whitehorne

75,000, the smallest 15,000. One is a mining town. Two are small industrial cities with a large agricultural country surrounding. Two are predominantly agricultural. They were ideal selections for they are just the kind of trading centers that provide the most substantial retail business of the country.

We visited the Sears Roebuck and Montgomery Ward stores, explained our interest and were cordially welcomed. The policy and methods of the stores were frankly discussed. We then called upon the competing local merchants in the department, hardware, music and electrical stores and on the local power company. We talked it over with them. We brought away some very definite impressions. These impressions are, of necessity, in the nature of advance appraisals, for the reason that all these stores have been established within the year, and in some cases for only a few months or weeks, the more recent stores being the most appealing.

No proof is yet available of what their competition is going to mean to the independent dealer. But the character of this competition can be seen and analyzed, for the benefit of the radio trade. And whether or not Montgomery Ward or Sears Roebuck have opened up yet in his town, the wise dealer will face this problem now, because unless the program falters, the mail-order chain store will be a factor in his business before very long. The "set-up" is about like this—



Views of a typical Montgomery Ward store

1. Small department stores, of about 50-foot front, with two or three floors and basement, are being opened just out of the high rent shopping center—a few blocks down from the Busy Corner or perhaps on a parallel street. These stores are stocked with catalog merchandise; in the Ward stores with about ten per cent of the catalog line, or say, 3,300 items. The store has a chain atmosphere, with open displays and a great variety and jumble of merchandise. The first impression is of cheapness—many display cards featuring price—near the door, toilet goods on one side, millinery on the other, or overalls or suit cases or shoes—women's stockings and underwear in front of the door, with an electric clothes washer or a radio or phonograph cabinet placed conspicuously. The arrangement and assortment of stock varies with the store. One will have twice as much "women's ready-to-wear" as another, or a more extensive men's clothes display, or more furniture, or harness or plumbing fixtures or electric wiring materials. The local manager selects his stock to suit the community. But in every case, low price is the appeal.

2. On the opening of the store, invitations are sent to the catalog customers in the surrounding country, ads are run in the local papers and the store is thronged on the first day and night. One Montgomery Ward store, for example, had 30,000 catalog customers located within a five-mile radius. Thereafter only a moderate amount of advertising is run—10-inch, 3-column ads, with mail-order type copy, featuring a diversity of merchandise.

3. Goods are sold at catalog price plus freight, with easy payments on household equipment of any value, low down-payment and a year to pay, and about ten per cent added for time. Delivery

practice varies. Some managers will deliver free on a large order by local truckman. Some will call the truck but the customer pays. The bulk of sales is on the cash and carry basis. On easy payment sales, when a contract is signed references are verified by telephone, before goods can be taken away.

4. The largest selling line is automobile tires, batteries and accessories. Next in importance in these stores is radio, electric clothes washers, vacuum cleaners and other appliances.

5. The radio is given a prominent location, usually on the main floor. A variety of radio cabinets and reproducers are displayed, bearing the chain-store trade name. Montgomery Ward call their's the "Airline" and it is best described by quoting from their catalog—which is typical—

Airline Highboy Console, 7-tube one dial A.C. set complete with all equipment ready to operate. Cash price \$203.50. Easy payment price \$219.75, \$12 down, balance in eight monthly installments.

Same unit in other models down to \$81.25 cash price, \$12 down on easy payments.

Airline 7-tube, one dial, battery operated set, cash price without equipment or speaker \$54.75. Easy payment price \$60.50, \$12 down balance in eight monthly payments.

Airline 8-tube, one dial, A.C. set in four console models priced \$235, \$198, \$184, \$162.50, and a small cabinet at \$99.75, cash price without speaker or equipment.

Airline 6-tube, one dial, battery operated set \$38.95 cash price without equipment or speaker, easy payment price \$43.75, \$12 down.

6. Ward's policy is also typical. No demonstrations are given in the home, but if the purchaser makes the down payment, the set can be taken home—or will be delivered—and the man in charge of the radio department will drop in in the evening and see that everything is all right and show how to operate it. Also, if at any time within the first month the customer is dissatisfied, he can return the set and get his money back. This practically amounts to a thirty-day free trial—a dangerous practice with such sensitive merchandise, and one with which the radio trade cannot compete.

Also, Ward apparently gives practically unlimited service in that the manager believes that the set must be made satisfactory and the customer must be kept happy, so he will continue to trade there. In one city, the department manager also spends his evenings out selling in the homes of Ward customers. In the other towns we visited this is not done. Similar service is given on electric washers and cleaners.

Naturally the local radio dealers in the towns we visited are most of them concerned about this invasion by the mail-order chains. Some admitted it frankly, some would not but showed it. None seemed to be really worried. But why shouldn't they be concerned when a company with an established volume of \$250,000,000 annual sales opens a branch in town, that is expected to sell better than \$300,000 worth of merchandise a year, of which radio is to be an important line?

Almost every dealer we talked to had met the chain in competition for some customer. Usually where price had prevailed the chain had won and where quality was recognized, the chain had lost. Some of these dealers were bitter. Some, of course, were indifferent. Some were thinking about it, and analyzing what this new competition is going to mean and how to meet it. A few were figuring out the benefits as well as injuries that may come out of it. Only one radio dealer showed that he had formulated any actual plan to master the situation.

The result of our study of these stores and our discussions with these interested merchants has naturally crystallized some rather definite opinions as to the potential competition which these mail order chain stores may be expected to offer to the independent radio dealer. These can perhaps be best set down in the following general conclusions:

1 This new program of the mail-order houses is, of course, an entirely new departure in retailing merchandise. When a concern with an enormous mail-order business embarks upon a chain-store venture it is naturally confronted with two necessities. It must not destroy the existing business with these countless catalog customers. It must make money in the stores. It faces

the certainty of the diversion of much business from the catalog to the store, because no customer will leave an order for goods which he wants and sees before him.

The stores must therefore develop a large volume of town trade in addition to the country trade. And this is being done. In one store, we found that within a year, the town trade has become fully forty per cent of the total. In another town it is fifty per cent, but in this town the Ward store is out and out the best department store in town, because the others are of such inferior character.

2 This necessity for selling to both catalog customers and new trade presents one difficult condition. Sales cannot be made in the store at prices higher than catalog plus freight. Intelligent competing retailers of any community will not fail to grasp the weakness of this policy and center their attack upon it. For obviously it means that either the merchandise in the catalog is priced too high to start with, or is being sold at a loss in the retail stores, since it probably costs not less than twenty per cent to operate and supervise the local store and it can hardly be believed that mail-order shipments out of a warehouse can cost anything like that much.

But no one will agree that a corporation as large and successful as either of these great organizations will deliberately program a development of four thousand local stores with this purpose of selling through them at a loss. The conclusion will be that the catalog price is so high for the quality of the goods that these mail order houses can afford to carry the losses of the retail store operation.

3 We were very much impressed with the degree of latitude which is being given to the local management. Each manager, of course, must sell catalog merchandise, and at catalog prices and terms. He has standardized store fixtures. These are undoubtedly other standards and regulations to which all must conform. But we found radical variance in the stock assortment. Also, the local manager selected from the catalog the lines that he considered best for his community. Again one manager will deliver while another will not. One store allows its radio man to sell in the home at night. The others don't. One store has its sales girls uniformed in smocks. The others do not.

Now this should have a great significance to the competing radio dealer, for it means that *in practice* the independent dealer is, after all, not confronted by the strength of a tremendous retailing organization whose very magnitude creates a competition which he is unable to meet. He is only competing with another human being who has been put in charge of one store and told to match his merchandise, his experience and his wits against the other merchants.

4 The type of men who are in charge of these stores did not impress us very strongly. A few of them seemed very mediocre. The rest were alert and energetic young men, apparently able and ambitious—but young. Some of them were recruited from the parent mail-order business. Some had been trained in other chain specialty stores. They may know merchandise, they may know how to handle customers—those from other chains—but in this enterprise they are compelled to go adventuring in the new fields of demonstrating and service and easy payment credits and collections, if they are to sell radio and other expensive household equipment out of a store.

They will be treading a narrow path through a morass. Will their training have taught them how?

5 The policy of varying the stock assortment in different stores has both its advantages and disadvantages. Such a divergence of merchandise in comparatively near-by stores would probably not be practical in chain operation, were it not for the fact that behind these stores lies the large volume of mail order sales to give the total operation uniformity and stability. On the other hand, other chain organizations have learned by experience, that local demand does vary sometimes considerably and they attempt to meet this condition as far as possible without losing the advantage of centralized buying and standardized methods of distribution. There is a nice balance to be maintained here that will have much to do with the profits of the chain. The profits of the individual store will also depend largely on the judgment of the local man in his selection, for on this hangs turnover, on which he will be as much dependent for his showing as any independent dealer.

6 There are two outstanding elements of strength in the appeal of these mail-order chain stores to the public. The catalogs of Montgomery Ward and Sears Roebuck are ready at hand in literally millions of homes. These two names are household words. Each house bears a splendid reputation for the cheapness of the merchandise, for giving adequate quality for the price and for the standing guarantee of money back if the customer is not satisfied with any purchase selected from the catalog. The farmer, the miner or the laborer walks into the Montgomery Ward store, therefore, knowing that he will find the same inexpensive merchandise on the same terms. People will purchase in these stores who will not venture into other radio shops and for two reasons: They are afraid of the higher prices asked for higher quality and they are reluctant to expose themselves to the high-pressure selling that is known sometimes to follow such a call.

7 Because of this, it seems evident that these mail-order chains of retail stores will make one very definite contribution to the radio trade. They will tap a new strata in the market, selling inexpensive radio into homes that have not been actively solicited or sold before. And when these households have tired of inferior radio, they will become prospects for the dealers who sell the better quality of tone and cabinet that is found in the standard

equipment. Also, the mail-order chain will attract more country trade to town and bring it within reach of the influence of the regular dealers. And some Ward customers will make comparisons and buy *quality*. Sometimes the farmer buys a Ford first and later a Buick. Sometimes his first car is a Buick.

8 Obviously, the Ward stores cannot escape one serious disadvantage in the sale of radio. They sell the "Airline" instrument which nobody knows. Its only guarantee lies in the good name of Montgomery Ward. Yet they must compete with nationally and locally advertised products, whose names stand for excellence and dependability before the entire public.

This, of course, has long been one of the most debated questions in the realm of retailing, but no one can dispute the fact that advertising *does establish values* in the public mind. The purchaser of a standard radio set can check the price and be sure that it is right for value, but he cannot readily assure himself that the "Airline" is worth what it costs, for nobody else sells it.

Boil it all down and you get about this. It is inevitable that with the coming of the mail-order chain stores to any city, there should be some demoralizing of prices in the local radio market. But that does not mean that the independent dealer need be afraid.

The only dealer we talked to who had thought out his plan for meeting this new type of competition had put his finger squarely on the answer. He said—"My position in this market rests on more than price. I will succeed or fail as I compete with other dealers on the comparison of what I offer in value, in service and as a musical advisor to my customers. If my price is right for what I give in all of this, then I will prosper. I do not fear either the Montgomery Ward or Sears Roebuck competition because by my advertising and my selling and by the appeal of my store, I believe that I can offer to the public more than they do per dollar. I am going actually to cash in on the increase in country trade that these two stores will bring to town." And there is the answer as we see it.

There is no reason why the independent radio dealer should succumb to these mail-order chain stores. But there is every reason why these dealers should anticipate the coming of this new and powerful competition and be ready to sell both a low priced and a quality line and to take a profit from the low price trade that the new stores will bring into town.



The mail-order catalog offers 10 pages of radio—sets, accessories and parts too—as witness this spread in the Montgomery Ward book. Price is the headline, supported by variety and appealing description backed by the money-back guarantee.

Practical Plans That Have Increased Christmas

CHRISTMAS time, for the public, is buying time. People spend more money then than at any other time of the year. Extra efforts should be made by the radio dealer to get his share of this holiday business.

Advertising and windows, the front-line contacts with the public, should both be imbued with the Christmas spirit so that it may, in turn, be imparted to the prospect. Since it pays to have a better store display and better window and store lighting than one's neighbors, it follows that this is especially important at Christmas time, when most people do a lot of window shopping and are attracted by just these things.

But displays and advertising are not enough. It will be necessary to reach many people in different ways and in such fashion as properly to impress them with the need for radio and its appropriateness at this season.

Now is the time when they have extra money to spend; they are eager to buy; they are looking around for appropriate Christmas gifts. The dealer should bring his merchandise and his services to their attention—and invoke the aid of old St. Nicholas.

Lighting and Decoration

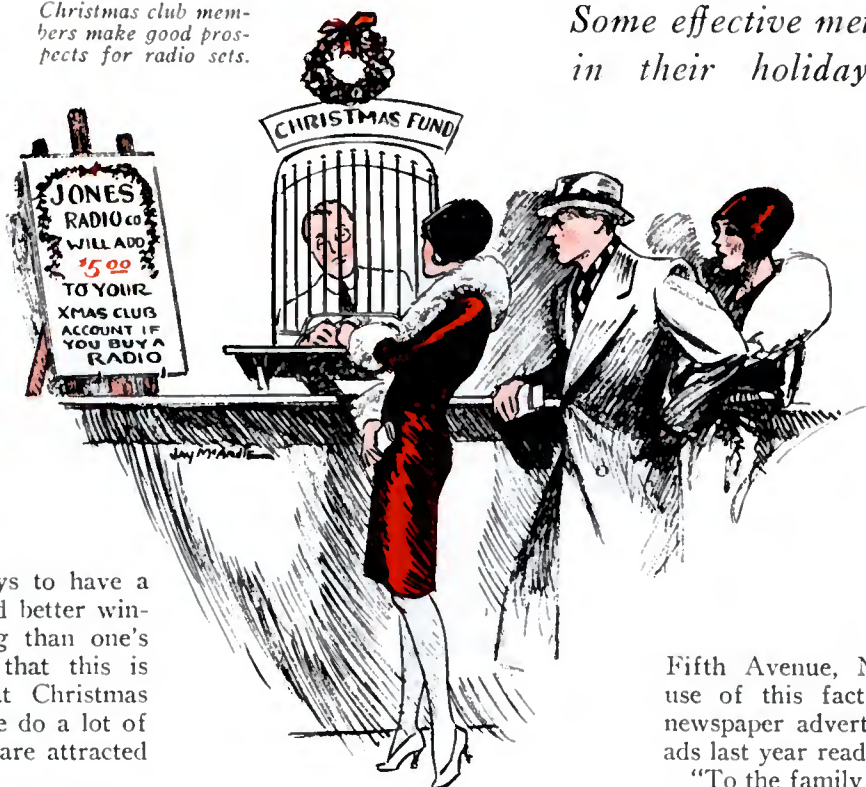
Lighting and decoration are important in the proper display of radio sets at Christmas time. Many dealers enhance the appearance of their models by the use of floodlights equipped with color shields. These are used both in the windows and in the interior of the store.

On the sales floor and display rooms, floor and table lamps with colored shades can be used very effectively in the arrangement of the display. Holly wreaths, laurel trimmings, streamers, mistletoe, paper bells and a Christmas tree will all give your store a real Christmas atmosphere.

A Gift That Can Be Shared

Of all gifts, a radio set is probably used by more members of the family than any other. The recipient of the gift can enjoy it together with the entire family. The

Christmas club members make good prospects for radio sets.



Some effective methods used by in their holiday advertising

utility of a Christmas gift is very often the prime consideration in its purchase and the fact that a radio set will supply enjoyment and entertainment to groups of people instead of to one person, is a telling argument in its favor.

The Aeolian Company, 689

Fifth Avenue, New York, makes use of this fact in its Christmas newspaper advertising. One of its ads last year read as follows:

"To the family from Dad. Here's Christmas cheer for *everybody*—to last all the year 'round, too. Two good decisions and your Christmas problem is solved. First, to choose a gift that will bring pleasure for years—a — set; second, to come to Aeolian Hall. . . ."

Christmas Club Members Are Good Prospects

A Chattanooga company takes advantage of the fact that many banks pay, just before Christmas, the sums due to depositors upon their Christmas Club savings accounts. Last year it ran an ad which was headed, "Here are the best values for Christmas savings checks."

Through the local bankers, it may be possible to arrange for close contact with the bank's Christmas Club and it would be a very useful thing to have the Christmas Club membership list.

One dealer offered to add \$5 to every Christmas Club account which was applied to the purchase of a radio set.

Special Christmas Representatives

One radio dealer in northern New York increased his holiday sales by distributing several thousand envelopes, containing an unstamped return card, to the school children of his city. On the outside of the envelope was printed in heavy type, the question: "Do you want some Christmas money?" The upper part of the two-piece card read as follows: "If you know of a relative, friend

Sales

*radio dealers
and displays.*

or neighbor who is going to buy a radio set, fill in his name on the attached card, return it to us and if we sell them the radio, we will give you a nice five-dollar gold piece."

Thirteen sets averaging \$115 were sold as a direct result of this plan. The total expense was \$20 for printing and about \$65 in commissions.

Santa Brings Business to the Radio Store

Last year the Wisconsin Radio Trade Association, Milwaukee, hired three Santa Clauses and advertised their personal appearance in members' stores. Three appearances at each store, between 5:30 and 9:30 p.m., were scheduled. Each Santa Claus carried an ample supply of candy canes and pop corn balls for the kiddies.

These good-will ambassadors, during their chats with the little ones, obtained pertinent information concerning parents' names and addresses as well as the answer to that all-important question: Has your daddy a radio set and how would you like one for Christmas?" Routings were arranged so that Mr. Claus did not appear in two stores in the same neighborhood during the same evening.

Publicity was obtained in three ways: By co-operative advertisements—listing the six establishments where Santa would make his personal appearance that particular evening; by the use of window cards; and through announcements over the local broadcasting station. The advertisement invited all girls and boys who would like to consult Santa personally about their



*A Santa Claus in the store
means extra business.*

gift problems to come to So-and-So's radio store at the time specified.

A large majority of the participating dealers reported favorably on this plan. Added business was estimated at from five to twenty per cent over what otherwise would have been the case.

A Tree Has Attention Value

A Christmas tree, appropriately decorated, is a good way of attracting attention to your display. It can be located either in the window, at the door, or, if a small one, directly above the entrance. If used in the last position, it is a good place in which to place your outdoor speaker. It should be lighted, of course, and radio parts and accessories should make up the greater part of its attachments.

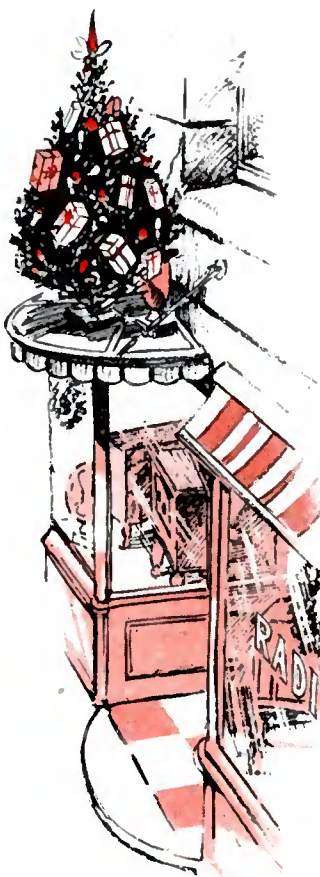
Give Him a Set of Tubes

An ideal gift for anyone who owns a radio is a complete set of tubes made up in combinations to meet the requirements of a number of the popular makes. You can post signs and run advertising, exploiting the idea, addressed to the relatives and friends of radio set owners. Tube manufacturers are now marketing tubes made up in combination packages. These can be wrapped up in Christmas paper, making attractive as well as useful Christmas gifts.

Advertise Last-Minute Deliveries

The last-minute shopper usually wants last-minute deliveries. You can profitably advertise that purchases will be delivered on Christmas eve—or morning.

Other things being equal, late shoppers will buy where they are sure that their deliveries will be made in time for presentation on Christmas morning. This is important because people want to give their gifts in the cheerful atmosphere of Christmas morning.



Place a Christmas tree, appropriately decorated and lighted, at or above the entrance.

WHAT *Is Good*

Recommended "rules of procedure" brought out by an analysis of how the music trade is meeting its radio service problems.

SERVICE has been the one outstanding cause of lost profits for the radio trade. The music merchant, particularly, has suffered because of his lack of experience with the technicalities of radio. Service, therefore, was a subject of the utmost importance in *Radio Retailing's* recent analysis of the music industry's radio sales policies.

From the questions asked music dealers regarding service, and the 350 answers received, certain definite "standards of radio service practice," can be deduced.

When the music dealer went into radio there was little in his previous experience to guide him along service lines. He thought in terms of making good his merchandise, rather than maintaining the usefulness of his customer's set through paid service. Frequent calls due to run-down batteries, burned-out tubes or aerial trouble, which were the three leading causes of difficulty in the earlier stages, were unlike any previous service problem of the piano or phonograph business. This led him into the costly error of giving too much free service.

The first question we asked the music trade, therefore, under the heading of service, was:

"How much free service do you give after the sale?"

About one music merchant in ten, who answered this question, limited his "free service" to a definite number of calls. The number varied from one to four calls, enough to make sure the set was in working order.

Nine out of ten music merchants have endeavored to service their customers' sets for a definite period of time. Some have vaguely attempted to service them "as long as necessary." Entirely too many have attempted to give free service for as long as twelve months. The average period of free service is 3.9 months. In analyzing the survey, it is apparent that the music dealers who have limited their service to one month and two or three calls are the ones who are able to show a substantial net profit.

Here are several definite "standards of practice," therefore, that may be set forth regarding radio service as a result of this survey:

RECOMMENDATION No. 1.—Two or three service calls

By C. L. Dennis

Formerly Manager of the Merchandising Service Bureau, Music Industries Chamber of Commerce

usually justified by conditions that can be made clear to the customer.

MAKING THE SERVICE PAY

"How much do you charge per call or per hour for service?" was the next question asked of this representative group of radio-music dealers.

The average music dealer charges \$1.64 an hour for service, as against \$1.25 an hour which he charged three years ago, when *Radio Retailing* conducted a similar survey. He is waking up. Even more important is the fact that he collects on a greater proportion of his service calls.

Many dealers charge a minimum of \$1 to \$2 per call. Some go as low as 75 cents a minimum charge for a call; a few as high as \$2.50 and even \$3. Distance and car expense have a bearing on the minimum charges. Quite a number of dealers make a higher minimum charge for night calls than they do for day calls; for example, \$1.50 minimum for day calls, \$2.50 minimum for night calls.

After the service man arrives at his destination, he may find little to do; if the job takes time, the hourly service charge varies from \$1 to \$2 with a majority of dealers. In considering the practice of successful dealers, the analysis would lead us to:

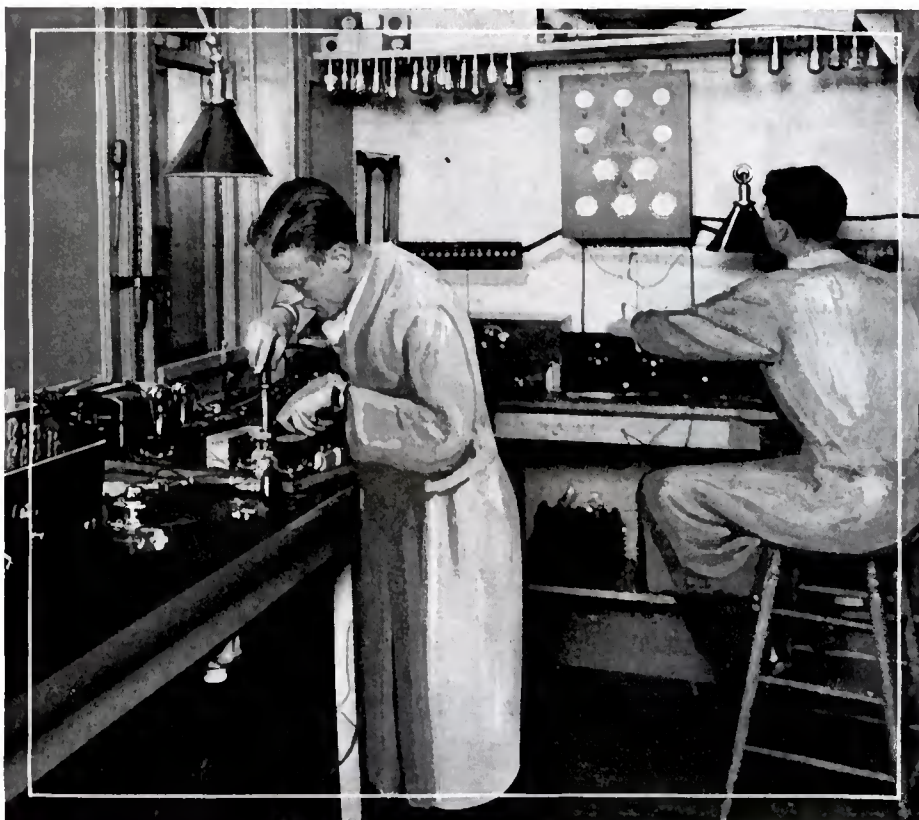
RECOMMENDATION No. 2.—Minimum charge for service call, \$1.50; per hour, \$2.

If the music merchant is to render "free" service to his customer, it is a logical step that he make his service department self-supporting, and perhaps profitable, by the development of his paid service. The electric or radio shop is accustomed to charge for service, as well as for merchandise; the music merchant in the past has rather grudgingly endeavored to keep his customer satisfied with "free" service, as a matter of merchandise guarantee. We asked the music trade:

"What percentage of your gross revenue comes from servicing?"

There are two ways of solving a problem—the right way and the wrong way. In this article, C. L. Dennis points out some of the "right ways" of handling service—the conclusions resulting from a comprehensive study of the music trade's radio sales methods.

Service PRACTICE?



Some recommended standards of practice for handling service:

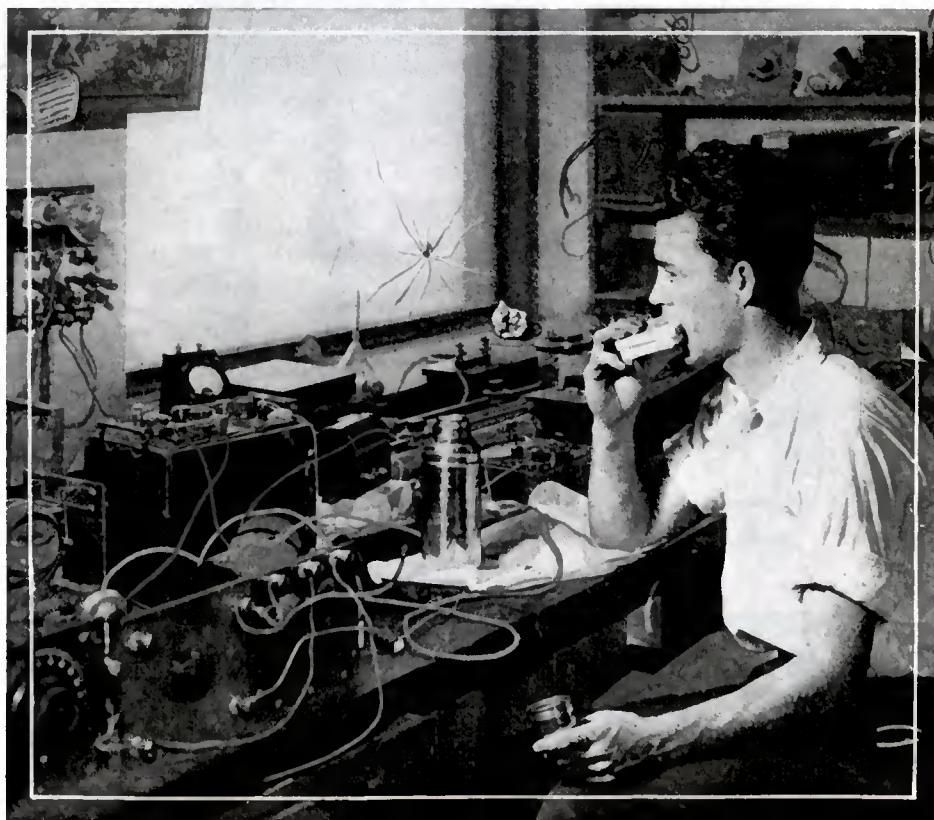
- 1 Definitely limit free service to two or three calls—and for not more than two months.
- 2 Charge at least \$1.50 for each service call; per hour, \$2.
- 3 Make the service department contribute its share of revenue to the business.
- 4 Welcome opportunities for service and train the service men to develop sales from their contacts.
- 5 Pay service men on a salary-and-commission basis.

The answers indicate that the average radio service revenue of the music trade is 6.55 per cent of sales. A few very substantial radio outlets in the music trade have pushed up their service revenue to 20 and 25 per cent of their sales. These music stores are making their radio service departments pay them profits, in addition to taking care of the "free" service needs of their customers. Inasmuch as the customer is bound to pay for continuing radio service, as well as the original price of his set, it is logic and good business to adopt:

RECOMMENDATION No. 3.—Definite effort should be made to broaden the service department and increase the revenue therefrom.

It was this reluctance of the music trade to build up a service department beyond the point of necessity, which led us to ask:

(Please turn to page 82)



RCA Announces *Radiola 41*



This will be another "best seller" in high-quality cabinet sets. Its chief features are:

1. RCA tuned radio frequency—6 tubes and rectifier—providing an output of great undistorted volume.
2. RCA alternating-current or direct-current operation from lighting circuit.
3. RCA Electro-Dynamic Speaker, with extra large baffle board—reproducing voice and music with all the full and mellow richness of the original.

\$215 (less Radiotrons).

RADIO CORPORATION OF AMERICA
NEW YORK CHICAGO
SAN FRANCISCO

RCA Radiola

MADE BY THE MAKERS OF THE RADIOTRON

RCA Radiolas

always first in public favor



RCA RADIOLA 51—The nationally popular "18," with A.C. electric operation, in a specially designed cabinet with RCA Loudspeaker enclosed. All ready to connect to aerial and ground, and bring in the best that's on the air. \$175 (less Radiotrons).



RCA RADIOLA 30A—Custom-built cabinet model of the famous RCA Super-Heterodyne with RCA Loudspeaker. At the new price this is an unusual value in fine radio receivers. Operates directly from the house current. \$285 (with Radiotrons).



RCA ELECTRO-DYNAMIC SPEAKER 106—The incomparable reproducing instrument of the type used in the new cabinet Radiolas now available as a separate unit. Operates from A.C. house-current. \$88.



RCA RADIOLA 64—De luxe cabinet model of new RCA Super-Heterodyne, with improved RCA Electro-Dynamic Speaker. Incorporates new features never before used. Automatic volume control. \$550 (less Radiotrons).



RCA RADIOLA 18—Most popular type of Radiola ever built. A finely designed receiver of broad range and capacity for simplified A.C. lighting-current operation. \$95 (less Radiotrons).



RCA LOUDSPEAKER 103—The famous "100A" in a new dress. The speaker made a thing of beauty as well as utility. Tapestry covered. \$37.50.



RCA LOUDSPEAKER 100A—Over three-quarters of a million of this type of RCA Speaker are now in use. Their sturdy construction and fine performance have made them the most popular of all reproducers. \$20.



RCA RADIOLA 16—Designed to give the finest radio entertainment in homes not wired for electricity. Battery operated. A receiver known for its wonderful performance and long life. \$82.75 (with Radiotrons).



RCA RADIOLA 60—The famous RCA Super-Heterodyne, now with the new A.C. tubes, for simplified house-current operation. Remarkably faithful reproduction. Ideal for congested broadcasting areas—highly sensitive for places remote from broadcast stations. \$175 (less Radiotrons).



RCA RADIOLA 62—Cabinet model of the new RCA Super-Heterodyne. The enclosed Electro-Dynamic Speaker is an improved model of the incomparable RCA reproducer. Superior fidelity of reproduction over the entire musical range. \$375 (less Radiotrons).



This sign marks the leading dealer in every community.

RCA Radiola

MADE BY THE MAKERS OF THE RADIOTRON

AFTER *the* What? Then

Upon the customer's "after-sale condition" depends many a future sale—an analysis by the San Antonio Music Company.

SOMETIME ago, when I was employed by the Southern Equipment Company as a field man to study dealer problems and recommend changes and improvements which would better sales, I found one situation that existed almost universally in the average radio store and which accounts for the lack of better radio merchandising in many places today. That was the "after-sale condition."

In the majority of places, little or no consideration is given to the satisfaction of the customer after the set has been sold and is, presumably, operating satisfactorily. With the closing of the sale and the financial arrangements concluded, the customer is forgotten—except when complaints come in, or something attracts attention in that direction. There is seldom, if ever, an instance wherein the salesman makes a special effort to be sure that everything is working satisfactorily and to make certain that the customer is satisfied and getting good results from his radio set.

How good business may be injured by overlooking these little details is indicated by several experiences we have had right here in our own shop. A few weeks ago, a man came in with some tubes he claimed were defective. We had several complaints from him before and, while we had always attended to them promptly, we had almost concluded that he was a perpetual "squealer."

WE KNEW that those tubes were good when they went out. We believed that, in putting them in or in tinkering with the set, he had done something that had burned them out. However, I determined to see for myself just what the trouble was before asserting that he was wrong and that we were right. So I went to his home and looked over the set. I found that several wires were out of position; that his trouble was one due to defect in manufacture, and that, despite his faulty receptions, he had recommended our sets and had been instrumental in our selling others in his neighborhood.

By F. G. Hatt

*Manager, Radio Department,
San Antonio Music Company,
San Antonio, Tex.*

Merchants Who Have Made Radio Pay—21

This little instance shows how easy it is to be wrong and how easily trouble can be stirred up that would prove injurious to the firm, and for which the firm is responsible. It also shows that there should be more

after-sale interest on the part of the dealer. There is not enough going back to make sure that the set is bringing in the stations desired; that the reception is clear and distinct; that the hook-up is as it should be.

Again—a customer is sold. Something goes wrong with the set. Immediate attention is promised over the telephone, but two or three days elapse before anything is done about it. In the meantime, the customer loses the use of his set. What is the after-sale condition?

To eliminate this, we specialize on same-day service. If a set comes into the shop in the morning, it is understood that it must be delivered that same day in good working condition. If, through some imperfection, it is impossible to deliver it that night, then the customer is so informed and another set is loaned for the customer's use until the repairs have been completed.

OUR radio department was opened late last fall. Our sales have shown a consistent increase, and according to present indications we should close the current year with a sales volume of approximately \$125,000.

The sales organization is made up of ten trained men who devote their entire time to running down business, placing sets on trial, closing sales, and other selling functions. In addition to this, we have a force of five service men who look after repairs and adjustments. All of these men are trained.

We have only men who know their work and who can produce results.

We pay our men on a straight commission basis. We work with them and give them all the prospects we can. How well they are succeeding is shown by one day's sales which, today, totals fourteen. This is in addition to our sale of parts and our repair work.



Our repair and service department is completely equipped to handle all repairs and adjustments. In addition to this, we carry a complete stock of spare parts and accessories, both for use in our service department and for our trade. This places us in a position to render complete service at any time.

IN ORGANIZING our sales department I made a study of the steps which lead to a successful sale. These have been set down and analyzed, and we have drilled them into our salesmen until they are thoroughly familiar with them. The seven steps, as we see them, are as follows:

1. *The Salesman:* The first thing in making arrangements for the sale of anything is to get some one to sell it. This requires a person of attractive appearance, pleasing personality and initiative.

2. *Adaptability:* While a man may have all the above requirements of a good salesman, unless he is adapted to sell radio, he is of little use to such a firm. He may be a good salesman for furniture, automobiles, or other commodities, but we are seeking men who can sell radio. So we consider adaptability as an essential step in this direction.

3. *Analysis:* The analysis of a product brings out its good features and, consequently, its selling points. So,

after we have a salesman who is adapted to selling radio, we train him to analyze the product so that he may better understand it, and thus sell it more successfully.

4. *Action:* After the product has been analyzed and the good points are known, it is time for action. It is all right to know all

about a product, but it is the action that sells it. So, after we know what we are talking about through analysis, we preach action to bring about the sale.

5. *Satisfaction:* There are certain conditions governing the sale of merchandise which determine good salesmanship. It is not good salesmanship to sell a man making a small salary a set costing several hundred dollars unless he has the necessary means to meet the payments. Nor is it good salesmanship to sell one kind of set when another is desired, just because a bonus is paid on the first. The satisfactory sale is vital to the success of any business, and especially to radio.

6. *After-Sale Condition:* After the sale has been closed, so far as actual exchange of merchandise for money is concerned, what is the feeling of the customer? Is the customer pleased? Is the merchandise giving complete satisfaction? Those are but two things on which many merchants would do well to check up. They are important to the future success of all selling.

(Please turn to page 79)

"After-Sale Condition" and "Follow Up" are selected as important steps in the radio sales program of F. G. Hatt, manager of the radio department of the San Antonio Music Company.



Six radio window displays which attracted Christmas shoppers and prospects.



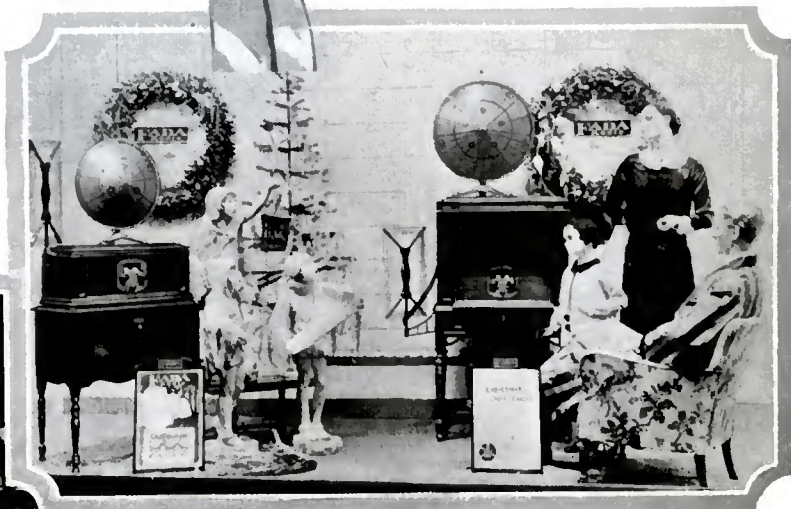
“Radio

REAL CHRISTMAS WEATHER

Santa Claus dashing down from the mountains features this prize-winning Christmas window of the C. D. Tanner Company, Los Angeles, California. The snow-covered log cabin next to the radio set gives the final touch to this excellent winter scene. It won second prize in a window contest sponsored by the Fada Company.

THE CAROL SINGERS (Right)

A family group listening to a radio, symbolized by three little carol singers, definitely ties radio with Christmas in the window installed by the Herpolscheimer Company, Grand Rapids, Michigan. It was awarded first prize in the Fada window display contest. The Christmas tree and the holly wreaths provide the decorative background.



A STREAMER BACKGROUND (Left)

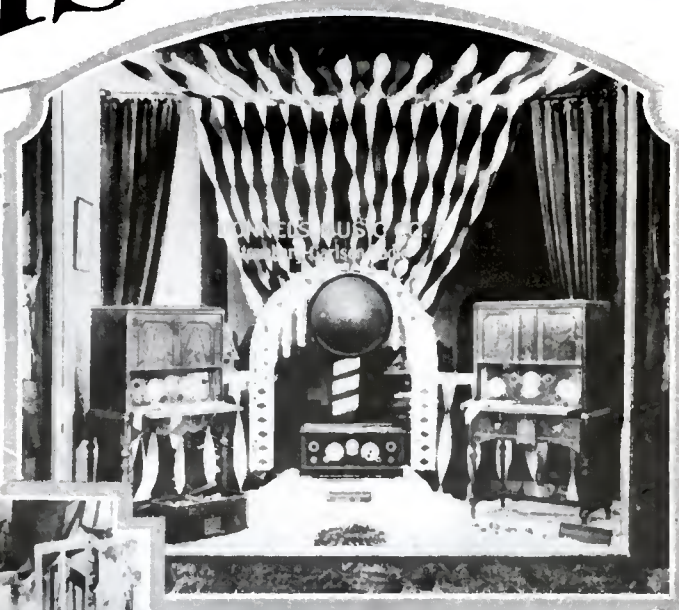
A simple and inexpensive way of bringing Christmas into the window display is demonstrated by Ralph L. Franklin, Red Oak, Iowa, who used colored streamers as a background for his window.



for CHRISTMAS

STREAMERS AND "SNOW" (Right)

Crepe paper and "snow" are used effectively in this holiday window of the Donnels Music Company, Los Angeles, Calif. Snow in Los Angeles is a good attention getter!



A CHRISTMAS HOME (Left)

The Fort & Tucker Co., Herkimer, New York, provided a very homelike setting for its Christmas display. The radio set, of course, is the center of interest. The Christmas tree in the corner, the candlesticks, and streamers, are the holiday props.



ON CHRISTMAS MORN (Below)

Supplying the Christmas atmosphere by a single holly wreath is in keeping with the dignity and appeal of the display by McCreery & Co., N. Y.



“The INFLUENCE



A FEW weeks ago, Miss Clotilde Grunsky, *Radio Retailing's* Pacific Coast editor, was scheduled to speak before the Pacific Coast Electrical Association on "Speaking for the Housewives." Before doing this, she systematically interviewed a large number of women in order to get their opinions of radio.

The information she obtained is so important and diversified that a summary is presented here in question and answer form:

What sort of a radio set do you own?

Home-made—6 per cent; costing between \$50 and \$175—65 per cent; cabinet type—29 per cent.

What member of the family made the purchase?

Husband—12 per cent; wife—6 per cent; husband and wife together—52 per cent; unmarried women—18 per cent; sons—6 per cent; son made sets—6 per cent.

Do you understand the technicalities of radio?

Yes—6 per cent; no—94 per cent.

Did you buy your set in your neighborhood store?

Yes—29 per cent.

Why?

Because I knew the store had sold half the people in the neighborhood and they all seemed satisfied.

Because I knew the merchant personally and went to him for advice. I didn't know anything about radio and I knew he would be honest with me.

Because he came to the front door and interested me in radio in the first place. Besides, he was right at hand and could take care of things if they went wrong. It was a good set he was selling—I had seen the same make in the big stores downtown and I am sure his terms were just as reasonable as I could have gotten anywhere else.

Because I believe in buying from a radio store where they know what they are talking about and can install the set right. A friend of mine received very unsatisfactory service from a department store and had to go to a radio dealer in the end.

Behind the Purchase

Interviews with housewives disclose some interesting things about how and why they buy radio.

Because I bought all my electrical goods there and the store had always treated me well and seemed to know its business.

Did you buy your set downtown? Where?

Department store—24 per cent; music store—20 per cent; downtown radio store—21 per cent; hardware store—6 per cent.

DEPARTMENT STORE

Because we have an account there.

Because the store will take things back if they are not satisfactory. They have a reputation to keep up and can be trusted. I know they are not likely to go out of business and leave the set on my hands.

Because they have a big department and the best selection in town. I shopped around and know. They know what they are talking about, too.

Because they make good terms and it is convenient to have the charge come on my regular bill. They know me, too, and I don't have all the bother of proving my credit is good.

Because they are the only people who sell the set my husband wants.

MUSIC STORE

Because we have always bought our musical instruments there. Their name is a guarantee of good quality.

Because their radio department looks like the best in town. They always have good looking windows. I wanted a first-class set—not the jazzy kind you hear in some of these small stores.

Because they take care of the set after you buy it. I have a friend who was very well satisfied.

DOWNTOWN RADIO STORE

Because I was attracted by the windows and went in. The man seemed to know his business and he was very obliging in coming out at what must have been a most inconvenient hour for him to make a demonstration.

Because the store is near my husband's office and he goes in there all the time to talk over new things in radio.

Because I know they take care of sets after they sell them. We used to have a second hand set and it was always getting out of order and no one would fix it. I was going to buy my set this time where I knew I would get service. Somebody told me this firm has the best service department in town.

HARDWARE STORE

I happened to be in the store making a purchase and when I stopped to look at their radios, the man offered to send it out for a demonstration. My husband was satisfied and we were under obligations. So we bought it.

What decided you to buy a radio?

I thought it was one thing the whole family could enjoy and that it would help to keep them all at home in the evenings.

My husband enjoyed the neighbor's set so much that I knew it was something he would appreciate for a present.

I thought it was a good thing for the boy to get interested in. I thought perhaps he would learn to take care of it.

We enjoy music but we don't always get out to concerts. This has brought it into the home.

I am alone a great deal and it is company.

I think people ought to hear things like the President's address and the speeches by Government officials.

I like to follow the football games.

I think it is fun to listen in on other cities. We have had very good luck with our machine and sometimes the whole neighborhood comes in to hear what we have gotten.

I didn't want one but my husband bought it and now I couldn't do without it. I like the good music and the lectures, but I think I tune in oftenest on the household talks.

It comes in very handy in entertaining guests.

We have an invalid in the house and I don't know what we should do without the radio.

What questions do you ask in buying a radio set?

(The questions are listed in the order of their importance as stressed by the women interviewed.)

1. Is there anything worth hearing on the local programs?

2. Can I get a set that will do reasonably well within the price range I can afford?

3. Is the dealer and manufacturer of the set I am looking at thoroughly reliable? Or is he likely to go out of business and leave the set on my hands with no one to look after it?

4. Does this set give satisfactory operation on local programs? Can I tune out interference? Is the tone good?

5. How much trouble will it be to keep the set in order? What will have to be replaced and how often? How much will it cost to operate it?

6. Is it attractive in appearance? Will it look all right in the place I have reserved for it? Is there anything to spill or spoil my carpets?

7. Can I get long distance on it?

From your experience with radio stores, could you suggest improvements in any of their practices?

I don't think you feel any more friendly toward a store if you find out after you've left that they have sold you

(Please turn to page 92)

Where the Stations Will

Wave lengths in kilocycles and power of the broadcasting stations,

Station	Kc.	Power	Shared with	Station	Kc.	Power	Shared with	Station	Kc.	Power	Shared with
ALABAMA				DELAWARE				INDIANA			
WAPI, Auburn.....	1,140	5,000 (CP)	KVOO	WDRS, New Haven.....	1,330	500	WCAC	WBBM, Chicago.....	770	25,000	KFAB
WBRC, Birmingham.....	930	500		WCAC, Storrs.....	1,330	500	WDRS	WJBT			
WKBC, Birmingham.....	1,310	10		DISTRICT OF COLUMBIA				WEBQ, Harrisburg.....	1,210	50	KFVS
WJBY, Gadsden.....	1,210	50		WDEL, Wilmington.....	1,410	500		WCLS, Joliet.....	1,310	100	WEHS
WIBZ, Montgomery.....	1,500	15		WDBQ, Wilmington.....	1,500	100		WCLB, Joliet.....	1,310	100	WKBB
ALASKA				FLORIDA				WJBC, LaSalle.....	1,200	100	WKBI
KPQD, Anchorage.....	1,230	100		WSUN, Clearwater.....	900	1,000		WJJD, Mooseheart.....	1,180	CP-20,000 (Ltd)	WJBL
KFIU, Juneau.....	1,310	10		WFLA, Gainesville.....	1,470	5,000		WJAZ, Mt. Prospect.....	1,480	5,000	WRM
KGBU, Ketchikan.....	900	500		WJAX, Jacksonville.....	1,260	1,000		WMBD, Peoria Hts.....	1,440	500	WIBO
ARIZONA				WMBL, Lakeland.....	1,310	100		WTAD, Quincy.....	1,440	500	WHT
KFXV, Flagstaff.....	1,420	100		WQAM, Miami.....	1,240	750	WIOD	KFLV, Rockford.....	1,410	500	WTAD
KFAD, Phoenix.....	620	500		WMBF, Miami Beach.....	560	500		WDBO, Orlando.....	1,210	100	WMBD
KFCB, Phoenix.....	1,310	100		WIOD, Miami Beach.....	1,240	1,000	WQAM	WHBF, Rock Is.....	1,210	100	WHT
KGAR, Tucson.....	1,370	100		WDBO, Orlando.....	620	1,000	WDAE	WCBS, Springfield.....	1,210	100	WTAX
KPJM, Prescott.....	1,500	100		WCOA, Pensacola.....	1,120	500		WTAX, Streator.....	1,210	50	WCBS
ARKANSAS				WJBB, Sarasota.....	1,010	250		WHT, Deerfield.....	1,480	5,000	WJAZ
KLCN, Blytheville.....	1,290	50	Day	WDAE, Tampa.....	620	1,000	WDBO	WDZ, Tuscola.....	1,070	100	WORD
KUOA, Fayetteville.....	1,390	1,000	KLRA	WMBR, Tampa.....	1,210	100		WRM, Urbana.....	570	500	WIBO
KTHS, Hot Springs.....	800	5,000	WBAP	GEORGIA				WCBD, Zion.....	1,080	5,000 (Ltd)	WPCC
KLRA, Little Rock.....	1,390	1,000	KUOA	WGST, Atlanta.....	890	250 N	WMAZ	INDIANA			
KGHI, Little Rock.....	1,500	100		WSB, Atlanta.....	740	10,000		WHBU, Anderson.....	1,210	100	WBAA
KGJF, Little Rock.....	890	250		WTHS, Atlanta.....	1,310	100	WRBI	WCMA, Culver.....	1,400	500	WBFB
KGHG, McGeehee.....	1,310	100		WMAZ, Macon.....	890	250 (N)	WGST	WGBF, Evansville.....	630	500	WOS
KFPW, Siloam Spgs.....	1,340	100	(Day)	WRBL, Columbus.....	1,200	50		WCWK, Ft. Wayne.....	1,230	500	KFRU
CALIFORNIA				WTFI, Tooeva.....	1,450	500	WTHS	WOWO, Ft. Wayne.....	1,160	5,000	WSBT
KFWO, Avalon.....	1,500	100	KWTC	HAWAII				WJAK, Kokomo.....	1,310	50	WCBW
KRE, Berkeley.....	1,370	100	KZM	KGU, Honolulu.....	940	500		WBAA, Lafayette.....	1,400	500	WLB
KEJK, Bev. Hills.....	1,250	500	KFON	KGHB, Honolulu.....	1,320	250		WRAF, LaPorte.....	1,200	100	WLB
KELW, Burbank.....	780	500	KNRC	IDAHO				WLB, Munioe.....	1,310	50	WLB
KFVD, Culver City.....	700	250	(Ltd)	KFAU, Boise City.....	1,250	1,000	KXL	WSBT, So. Bend.....	1,230	500	WLB
KGEN, El Centro.....	1,200	100		KFXD, Jerome.....	1,420	50		WBOW, T. Haute.....	1,310	100	WLB
KMJ, Fresno.....	1,200	100		KFEY, Kellogg.....	1,210	10		WRBC, Valparaiso.....	1,240	500 (D)	WLB
KGFI, Glendale.....	1,000	250	(Ltd)	KGIO, Idaho Falls.....	1,320	250	KGIO	WKBV, Brookville.....	1,500	100	WLB
KZM, Hayward.....	1,370	100	KRE	KGIO, Twin Falls.....	1,320	250	KGIO	IOWA			
KFQZ, Hollywood.....	850	1,000	(Ltd)	KSEI, Pocatello.....	900	250		WOI, Ames.....	560	3,500	KFEQ
KFWB, Los Angeles.....	950	1,000	KPSN	ILLINOIS				KFGQ, Boone.....	1,310	10	(Day)
KNX, Hollywood.....	1,050	5,000		WMAQ, Chicago.....	670	5,000		KWCR, Cedar Rapids.....	1,310	100	KFJY
KMTR, Hollywood.....	570	1,000	KPLA	WMBI, Chicago.....	1,080	5,000 (Ltd)	WCB	KSO, Clarinda.....	1,380	1,000	WKBH
KFQU, Holy City.....	1,420	100	KGTT	WORD, Batavia.....	1,480	5,000	WJAZ	KOIL, Council Bluffs.....	1,260	1,000	WKBH
KMIC, Ingleswood.....	1,120	500	KFSG	WCAZ, Carthage.....	1,070	100	WHT	WOC, Davenport.....	1,000	5,000	WHO
KGER, Long Beach.....	1,370	100		WEBH, Chicago.....	1,000	5,000	WIBO	KGCA, Decorah.....	1,270	50	(Day)
KFON, Long Beach.....	1,250	1,000	KEJK	KFKX.....				KWLC, Decorah.....	1,270	50	(Day)
KFI, Los Angeles.....	640	5,000	(CP 50,000)	KYW, Chicago.....	1,020	5,000		WHO, Des Moines.....	1,000	5,000	WOC
KFSG, Los Angeles.....	1,120	500	KMIC	WAAF, Chicago.....	920	500		KFJY, Ft. Dodge.....	1,310	100	KWCR
KGEF, Los Angeles.....	1,300	1,000	RTBI	WCFL, Chicago.....	970	CP-50,000 (Ltd)		WSUL, Iowa City.....	580	500	KSAC
KGJF, Los Angeles.....	1,420	100		WCRW, Chicago.....	1,210	100	WEDC	KFJB, Marshalltown.....	1,200	100	WJAM
KHJ, Los Angeles.....	900	1,000		WEBH, Chicago.....	Cons. with	KFKX	WSBC	KTNT, Muscatine.....	1,170	5,000	(Ltd)
KTBI, Los Angeles.....	1,300	1,000	KGEF	WEDC, Chicago.....	1,210	100	WCRW	WIAS, Ottumwa.....	1,420	100	
KPLA, Los Angeles.....	570	1,000	KMTR	WENR, Chicago.....	870	5,000	WLS	KICK, Red Oak.....	1,420	100	
KLX, Oakland.....	880	500		WBCN, Chicago.....	1,360	500	WJKS	KFNE, Shenandoah.....	890	500	WNAX
KGO, Oakland.....	790	10,000		WGES, Chicago.....	1,310	100	WEHS	KMA, Shenandoah.....	930	500	KUSD
KTAB, Oakland.....	1,280	500		WHFC, Chicago.....	1,310	100	WCLS	KSCJ, Sioux City.....	1,330	1,000	WTAQ
KFWM, Oakland.....	930	500	KFWI	WKBI, Chicago.....	1,310	50	WEHS	WJAM, Waterloo.....	1,200	100	KFJB
KLS, Oakland.....	1,440	250 (D)		WLB, Chicago.....	1,310	50	WCLS	KANSAS			
KFWC, Ontario.....	1,200	100	KPPC	WLB, Chicago.....	1,310	50	WCLS	KGCN, Concordia.....	1,420	50	
KPPC, Pasadena.....	1,200	50	KFWC	WLB, Chicago.....	1,310	50	WCLS	WLB, Kansas City.....	1,420	100	
KPSN, Pasadena.....	950	1,000	KFWB	WLB, Chicago.....	1,310	50	WCLS	KFKU, Lawrence.....	1,220	1,000	WREN
KPSD, San Diego.....	600	500 (N)		WLB, Chicago.....	1,310	50	WCLS	WREN, Lawrence.....	1,220	1,000	KFKU
1,000 (D)				WLB, Chicago.....	1,310	50	WCLS	KSAC, Manhattan.....	580	500	WSUI
KGB, San Diego.....	1,360	250		WLB, Chicago.....	1,310	50	WCLS	KFKB, Milford.....	1,130	5,000	(Ltd)
KFRC, S. Francisco.....	610	1,000		WLB, Chicago.....	1,310	50	WCLS	WIBW, Topeka.....	1,300	1,000	KFH
KGTT, S. Francisco.....	1,420	50	KFQU	WLB, Chicago.....	1,310	50	WCLS	KFH, Wichita.....	1,300	1,000	WIBW
KFWI, S. Francisco.....	930	500	KFWM	WLB, Chicago.....	1,310	50	WCLS	KENTUCKY			
KJBS, S. Francisco.....	1,100	100 (D)		WLB, Chicago.....	1,310	50	WCLS	WFIW, Hopkinsville.....	940	1,000	
KPO, S. Francisco.....	680	5,000		WLB, Chicago.....	1,310	50	WCLS	WHAS, Louisville.....	820	10,000	
KYA, S. Francisco.....	1,230	1,000		WLB, Chicago.....	1,310	50	WCLS	WLAP, Okalona.....	1,200	30	
KFBK, Sacramento.....	1,310	100		WLB, Chicago.....	1,310	50	WCLS	KANSAS			
KQW, San Jose.....	1,010	500		WLB, Chicago.....	1,310	50	WCLS	KGCN, Concordia.....	1,420	50	
KWTC, Santa Anna.....	1,500	100	KFWO	WLB, Chicago.....	1,310	50	WCLS	WLB, Kansas City.....	1,420	100	
KFCR, Santa Barbara.....	1,500	100		WLB, Chicago.....	1,310	50	WCLS	KFKU, Lawrence.....	1,220	1,000	WREN
KSMR, Santa Maria.....	1,200	100		WLB, Chicago.....	1,310	50	WCLS	WREN, Lawrence.....	1,220	1,000	KFKU
KNRC, Santa Monica.....	780	500	KELW	WLB, Chicago.....	1,310	50	WCLS	KSAC, Manhattan.....	580	500	WSUI
KWG, Stockton.....	1,200	100		WLB, Chicago.....	1,310	50	WCLS	KFKB, Milford.....	1,130	5,000	(Ltd)
KGDM, Stockton.....	1,150	50	Day	WLB, Chicago.....	1,310	50	WCLS	WIBW, Topeka.....	1,300	1,000	KFH
COLORADO				WLB, Chicago.....	1,310	50	WCLS	KFH, Wichita.....	1,300	1,000	WIBW
KFUM, Colo. Spgs.....	1,270	1,000		WLB, Chicago.....	1,310	50	WCLS	KANSAS			
KPOF, Denver.....	880	500	KFKA	WLB, Chicago.....	1,310	50	WCLS	KGCN, Concordia.....	1,420	50	
KOW, Denver.....	1,390	500		WLB, Chicago.....	1,310	50	WCLS	WLB, Kansas City.....	1,420	100	
KFUP, Denver.....	1,310	100	KFXJ	WLB, Chicago.....	1,310	50	WCLS	KFKU, Lawrence.....	1,220	1,000	WREN
KFEL, Denver.....	940	250	KFXF	WLB, Chicago.....	1,310	50	WCLS	WREN, Lawrence.....	1,220	1,000	KFKU
KFXF, Denver.....	940	250	KFEL	WLB, Chicago.....	1,310	50	WCLS	KSAC, Manhattan.....	580	500	WSUI
KOA, Denver.....	830	12,500		WLB, Chicago.....	1,310	50	WCLS	KFKB, Milford.....	1,130	5,000	(Ltd)
KFXJ, Edgewater.....	1,310	50	KFUP	WLB, Chicago.....	1,310	50	WCLS	WIBW, Topeka.....	1,300	1,000	KFH
KGEW, Ft. Morgan.....	1,200	100	KGEK	WLB, Chicago.....	1,310	50	WCLS	KFH, Wichita.....	1,300	1,000	WIBW
KFKA, Greeley.....	880	500	KPOF	WLB, Chicago.....	1,310	50	WCLS	KANSAS			
KPHA, Gunnison.....	1,200	50		WLB, Chicago.....	1,310	50	WCLS	KGCN, Concordia.....	1,420	50	
KIZ, Dupont.....	560	1,000		WLB, Chicago.....	1,310	50	WCLS	WLB, Kansas City.....	1,420	100	
KGDP, Pueblo.....	1,210	10		WLB, Chicago.....	1,310	50	WCLS	KFKU, Lawrence.....	1,220	1,000	WREN
KGHF, Pueblo.....	1,320	250		WLB, Chicago.....	1,310	50	WCLS	WREN, Lawrence.....	1,220	1,000	KFKU
KGHA, Pueblo.....	1,200	50		WLB, Chicago.....	1,310	50	WCLS	KSAC, Manhattan.....	580	500	WSUI
KGEK, Yuma.....	1,200	50	KGEW	WLB, Chicago.....	1,310	50	WCLS	KFKB, Milford.....	1,130	5,000	(Ltd)
CONNECTICUT				WLB, Chicago.....	1,310	50	WCLS	WIBW, Topeka.....	1,300	1,000	KFH
WICC, Easton.....	1,430	500	WBRL	WLB, Chicago.....	1,310	50	WCLS	KFH, Wichita.....	1,300	1,000	WIBW
WTIC, Hartford.....	600	250		WLB, Chicago.....	1,310	50	WCLS	KANSAS			
(CP 50,000)				WLB, Chicago.....	1,310	50	WCLS	KGCN, Concordia.....	1,420	50	

Be Located after Nov. 11

listed by states, as reallocated by the Federal Radio Commission

Station	Kc.	Power	Shared with	Station	Kc.	Power	Shared with	Station	Kc.	Power	Shared with
LOUISIANA				KFRU, Columbia.....	630	500	WOS WGBF	WCAM, Camden.....	1,200	500	WCAP WCAX
KGGH, Cedar Grove.....	1,310	50	KRMD	KMBC				WHAP, Carlstadt.....			(See New York)
KWKH, Kennonwood.....	850	20,000	WWL	KLDS, Independence.....	950	1,000 (Ltd)	WHB	WCDA, Cliff Pk.....			(See New York)
WLSU, New Orleans.....	1,270	1,000		WOS, Jefferson.....	630	500	KFRU WGBF	WPAP, Cliff Pk.....	1,010	250	WHN
WABZ, New Orleans.....	1,200	100	WJBW					WQAO.....			WRNY
WJBO, New Orleans.....	1,370	100		WMBH, Joplin.....	1,420	100		WIBS, Elizabeth.....	1,450	250	
WJBW, New Orleans.....	1,200	30	WABZ	KWKC, Kans. City.....	1,370	100	KGBX	WMCA, Hoboken.....	570	500	WNYC
WKBT, New Orleans.....	1,420	50		WDAF, Kans. City.....	610	1,000	WQO	WPCH, Hoboken.....	810	500 (D)	
WSMB, New Orleans.....	1,320	750		WHB, Kans. City.....	950	1,000	KMBC KLDS WDAF	WAAT, Jersey City.....	1,070	300	
WWL, New Orleans.....	850	5,000 (cp)	KWKH	WQO, Kans. City.....	610	1,000		WKBO, Jersey City.....	1,450	250	WBMS WNJ WIBS
KFDX, Shreveport.....	1,210	100	KWEA	KFKZ, Kirksville.....	1,200	50		*WIBS, under new allocation divides time with Stations WBMS, WNJ, WKBO			
KRMD, Shreveport.....	1,310	50	KGGH	KMOX, KFQA, St. Louis.....	1,090	5,000	WOI (D)	WGCP, Newark.....	1,250	500	WODA WAAM
KWEA, Shreveport.....	1,210	100	KFDX	KFEQ, St. Joseph.....	560	2,500	KWKC	WLWL, Kearny.....	1,100	5,000 (Day)	WPG
KSBA, Shreveport.....	1,450	1,000		KGBX, St. Joseph.....	1,370	100	WIL	WOR, Newark.....	710	500	WODA- WGCP
MAINE				KWK, St. Louis.....	1,350	1,000	WMAY	WAAM, Newark.....	1,250	250	WKBO WBMS
WABI, Bangor.....	1,200	100		KFWF, St. Louis.....	550	500	KFUO	WGCP, Newark.....	1,250	250	WKBO WBMS
WLBZ, Dover, Foxcroft.....	620	500		WEW, St. Louis.....	760	1,000 (Day)	KWK KFWF	WNJ, Newark.....	1,450	250	WAAM- WGCP
WCSH, Portland.....	940	500		WIL, St. Louis.....	1,350	1,000		WODA, Paterson.....	1,250	1,000	WAAM- WGCP WGBB WNR See N. Y.
MARYLAND				WMAY, St. Louis.....	1,200	100		WOV, Secaucus.....	1,130	1,000	See N. Y.
WCAO, Baltimore.....	600	250		MONTANA				WOAX, Trenton.....	1,280	500	WCAM WCAP
WCBM, Baltimore.....	1,370	100		KGHL, Billings.....	950	500		WBMS, Union City.....	1,450	250	
WBFB, Baltimore.....	1,120	250		KFBB, Havre.....	1,360	500 (N) (D)	KGIR	Shr. w. WNJ, WIBS, WKBO			
WBAL, Baltimore.....	1,060	5,000		KGEZ, Kalispell.....	1,310	100		NEW MEXICO			
WSMD, Salisbury.....	1,310	100		KGHD, Missoula.....	1,420	50		KOB, State College.....	1,180	10,000	KEX
WTBO, Cumberland.....	1,420	50		KGIR, Butte.....	1,360	250	KFBB	KGFL, Raton.....	1,370	50	
MASSACHUSETTS				KUOM, Missoula.....	570	500	KXA	KGGM, Albuquerque.....	1,370	100	
WBZA, Boston.....	990	500	WBZ	KGCC, Vida.....	1,420	10		NEW YORK			
WBIS, WNAC, Boston.....	1,230	500		How to Convert Kilocycles Into Meters				WKBW, Amherst.....	1,470	5,000	Lim. time
WBEI, Boston.....	590	500		<i>ALL the new allocations are announced in terms of kilocycles. In order to find the wave length in meters, the following formula may be used:</i>				WGBS, Astoria, L. I.....	1,180	500	
WMES, Boston.....	1,500	50	WLOE	$\text{Meters} = \frac{300,000}{\text{kilocycles}}$				WMBO, Auburn.....	1,370	1,000	
WSSH, Boston.....	1,420	100	WLEX	<i>For instance, to find the new wave length, in meters, of station WMAQ which has been placed on 670 kilocycles:</i>				WINR, Bay Shore.....	1,210	100	WJBI WGBB WCOH
WLOE, Chelsea.....	1,500	100	WMES	$\text{Meters} = \frac{300,000}{670} = 447.7$				WEAF, Bellmore.....	660	50,000	
WMAF, S. Dartmouth.....	1,360	500	WBET					WBBC, Brooklyn.....	1,400	500	WCGU WLTH WSGH WSDA WCGU WBBC WSGH WSDA WLBX WCLB WWRL WCGU WLTH WBBC
WSAR, Fall River.....	1,450	250						WLBH, Farmingdale.....	1,420	30	WHPP WMRJ WJBI WINR WCOH
WEPS, Gloucester.....	1,200	100	WKBE					WGBB, Freeport.....	1,210	100	WJBI WINR WCOH
WLEX, Lexington.....	1,420	100 (N) 250 (D)	WSH WMAF					WKEN, Buffalo.....	1,040	1,000 (Ltd)	WJBI WINR WCOH
WBET, Medford.....	1,360	500						WCOH, Greenville.....	1,210	100	WJBI WINR WCOH
WNBH, New Bedford.....	1,310	100						WEAI, Ithaca.....	1,270	500	WJBI WINR WCOH
WBZ, E. Springfield.....	990	15,000	WBZA					WLCI, Ithaca.....	1,210	50	WJBI WINR WCOH
WKBE, Webster.....	1,200	100	WEPS					WMRJ, Jamaica.....	1,420	10	WJBI WINR WCOH
WBSO, Wellesley Hills.....	780	100						WOCL, Jamestown.....	1,210	25	WJBI WINR WCOH
WTAG, Worcester.....	580	250						WCLB, Long Beach.....	1,500	100	WJBI WINR WCOH
MICHIGAN								WLBX, Long Island.....	1,500	100	WJBI WINR WCOH
WKBP, Battle Creek.....	1,420	50						WMAK, Martinsville.....	900	750	WJBI WINR WCOH
WSKC, Bay City.....	1,410	500						WOKO, Mt. Beacon.....	1,440	500	WJBI WINR WCOH
WEMC, Berrien Spr.....	590	1,000						WBNY, New York.....	1,350	250	WJBI WINR WCOH
WWJ, Detroit.....	920	1,000									
WMBC, Detroit.....	1,420	100									
WBMH, Detroit.....	1,310	100	WAGM								
WAFD, Detroit.....	1,500	100									
WKAR, E. Lansing.....	1,040	500									
WFDF, Flint.....	1,310	100									
WGHP, Fraser.....	1,240	750									
WOOD, Grand Rapids.....	1,270	500	WASH								
WASH, Grand Rapids.....	1,270	250	WOOD								
WIBM, Jackson.....	1,370	100	WJBA								
WMPC, Lapeer.....	1,500	30									
WKBZ, Ludington.....	1,500	50									
WJR.....											
WCX, Pontiac.....	750	5,000									
WAGM, Royal Oak.....	1,310	50	WRMH								
WJBK, Ypsilanti.....	1,370	50	WIBM								
MINNESOTA											
WCCO, Minneapolis.....	810	10,000									
KGDE, Barrett.....	1,200	50									
WFBJ, Collegeville.....	1,370	100									
WRHM, Fridley.....	1,250	1,000	WCAL KFMX WLB								
KGFK, Hallock.....	1,200	50									
WDGY, Minneapolis.....	1,410	500	KFLV WHDI WDGY WHBL KFLV WCAL KFMX WRHM WCAL WRHM WLB								
WHDI, Minneapolis.....	1,410	500									
WLB.....											
WGMS, Minneapolis.....	1,250	1,000									
KFMX, Northfield.....	1,250	1,000									
WCAL, Northfield.....	1,250	1,000									
KSTP, Westcott.....	1,460	10,000									
MISSISSIPPI											
WCOC, Columbus.....	880	500									
WRBQ, Greenville.....	1,210	100									
WGCM, Gulfport.....	1,210	100									
WRBJ, Hattiesburg.....	1,500	10									
WQBC, Utica.....	1,360	300									
MISSOURI											
KFVS, Cape Girardeau.....	1,210	100	WEBQ								
KFUO, St. Louis.....	550	500	KSD								
NEBRASKA											
KGES, Central City.....											
KMMJ, Clay Center.....											
KGBY, Columbus.....											
KGEQ, Grand Is.....											
KGDW, Humboldt.....											
KFOR, Lincoln.....											
KFAB, Lincoln.....											
WCAJ, Lincoln.....											
WJAG, Norfolk.....											
WAAW, Omaha.....											
WOW, Omaha.....											
KGFW, Ravenna.....											
KGCH, Wayne.....											
KGBZ, York.....											
NEW HAMPSHIRE											
WKAV, Laconia.....											
WBRL, Tilton.....											
NEW JERSEY											
WCAP, Asbury Pk.....											
WPG, Atlantic City.....											
WFAH, Plainfield.....											

Station	Kc.	Power	Shared with
WHN, New York.....	1,010	250	WQAO
			WPAP
			WRNY
WKBQ, New York.....	1,350	250	WBNY
			WMSG
			WCDA
WNYC, New York.....	570	500	WMCA
WMCA, New York.....	570	500	WNYC
			WBNY
WMSG, New York.....	1,350	250	WCDA
			WKBQ
WABC, New York.....	860	5,000	(Consol. with WBOQ)
WBOQ, Richmond.....	See WABC		
WHEC, WABO, Rochester.....	1,440	500	WMAC
			WOKO
WNBQ, Rochester.....	1,500	15	WHAP
			WHAZ
WBBR, Rossville.....	1,300	1,000	WEVD
WNBY, Saratoga.....	1,290	10(D)	
WGY, Schenectady.....	790	50,000	Ltd.
WFBL, Syracuse.....	930	750	WMAK
WSYR, Syracuse.....	570	250	
			WBBR
WHAZ, Troy.....	1,300	500	WHAP
			WEVD
WIBX, Utica.....	1,200	100	
WHAM, Rochester.....	1,150	5,000	
WEVD, Woodhaven.....	1,300	500	WBBR
			WHAP
			WHAZ
WWEL, Woodside.....	1,500	100	WMBQ
			WLBX
			WCLB
WCDA, New York.....	1,350	250	WBNY
			WMSG
			WKBQ
			WBBR
WHAP, New York.....	1,300	1,000	WEVD
			WHAZ
WPAP-WQAO, New York.....	1,010	250	WRNY
			WHN
WRNY, New York.....	1,010	250	WQAO
			WPAP
			WHN
WHPP, New York.....	1,420	10	WLBH
WPCH, New York.....	810	500(D)	
WLWL, New York.....	1,100	5,000	WPG
			(6 to 8 P. M.)
WOV, New York.....	1,130	1,000(D)	
WJZ, New York.....	760	30,000	

NORTH CAROLINA

WWNC, Asheville.....	570	1,000	
WBT, Charlotte.....	1,080	(CP 10,000)	
WRBU, Gastonia.....	1,210	100	
WNRC, Greensboro.....	1,440	500	
WPTF, Raleigh.....	680	(CP 10,000)	
WRBT, Wilmington.....	1,370	50	

NORTH DAKOTA

KFJM, Bismarck.....	550	500	KFDY
			KFYR
KDLR, Devils Lake.....	1,210	100	
WDAY, Fargo.....	1,280	1,000	WBCB
KFJM, Grand Forks.....	550	500	KFDY
			KFYR
KGCU, Mandan.....	1,200	100	

OHIO

WADC, Akron.....	1,320	1,000	
WFJC, Akron.....	1,450	500	WJAY
WHBD, Bellefontaine.....	1,370	100	
WEBC, Cambridge.....	1,210	100	
WHBC, Canton.....	1,200	10	
WAAD, Cincinnati.....	1,420	25	WSRO
WKRC, Cincinnati.....	550	500	WEAO
WFBE, Cincinnati.....	1,200	100	
WLV, Mason.....	700	50,000	
WJAY, Cleveland.....	1,450	500	WFJC
WHK, Cleveland.....	1,390	1,000	
WTAM, Cleveland.....	1,070	3,500	WEAR
WEAR, Cleveland.....	1,070	1,000	WTAM
WAU, Columbus.....	640	5,000	(Ltd.)
WCAH, Columbus.....	1,430	250	WMBS
WEAO, Columbus.....	550	750	WKRC
WMAN, Columbus.....	1,210	50	
WSMK, Dayton.....	570	200	WKBN
WRK, Hamilton.....	1,310	100	
WLBV, Mansfield.....	1,210	100	
WSAI, Mason.....	800	5,000	(Ltd.)
WSRO, Middletown.....	1,420	100	WAAD
WCSD, Springfield.....	1,380	500	KQV
WIBD, Steubenville.....	1,420	50	WQBZ
WSPD, Toledo.....	1,340	500	
WKBN, Youngstown.....	570	500	WSMK
WMBW, Youngstown.....			(Deleted)

OKLAHOMA

KGFE, Alva.....	1,420	100	
KOCW, Chickasha.....	1,420	100	
KGCB, Enid.....	1,370	100	KGFG
WNAD, Norman.....	1,010	500	KGFG
KFJF, Okla. City.....	1,470	5,000	
KFXB, Okla. City.....	1,310	100	
KGFG, Okla. City.....	1,370	50	KGCB
WKY, Okla. City.....	900	1,000	
KGFE, Ficher.....	1,010	500	WNAD
WBBZ, Ponca City.....	1,200	100	
KVOO, Tulsa.....	1,140	5,000	CP WAPI

OREGON

KFJI, Astoria.....	1,370	50	KFEC
KOAC, Corvallis.....	560	1,000	
KORE, Eugene.....	1,420	100	

Station	Kc.	Power	Shared with
KMED, Medford.....	1,420	50	
KEX, Portland.....	1,180	5,000	KOB
KFEC, Portland.....	1,370	100	KFJI
KFIF, Portland.....	1,420	50	
KFJR, Portland.....	1,300	500	KTBR
KTBR, Portland.....	1,300	500	KFJR
KGW, Portland.....	620	1,000	
KWBS, Portland.....	1,500	15	
KWJJ, Portland.....	1,060	500	(Ltd)
KXL, Portland.....	1,250	500	KFAU
KOIN, Portland.....	940	1,000	

PENNSYLVANIA

WCBA, Allentown.....	1,500	100	WSAN
WSAN, Allentown.....	1,500	100	WCBA
WFBG, Altoona.....	1,310	100	WHBP
WNBW, Carbondale.....	1,200	5	
WIBG, Elkins.....	930	50(D)	
WEDH, Erie.....	1,420	30	
WRAK, Erie.....	1,370	50	
WFKD, Frankford.....	1,310	50	WNAT
			WABY
WSAJ, Grove City.....	1,310	100	WFBG
WBAK, Harrisburg.....	1,120	500(D)	
WPRC, Harrisburg.....	1,200	100	WKJZ
WHBP, Johnstown.....	1,310	100	
WABF, Kingston.....	1,440	250	WRAX
WGAL, Lancaster.....	1,310	15	WRAX
WKJC, Lancaster.....	1,200	100	WPRC
WMBG, Lemoyne.....	1,430	500	WCAH
WJBU, Lewisburg.....	1,210	100	WBAX
WLBW, Oil City.....	1,260	500	
WFAN, Philadelphia.....	610	580	WIP
WABY, Philadelphia.....	1,310	50	WFKD
			WNAT
			WLIT
WFI, Philadelphia.....	560	500	CP
WCAU, Philadelphia.....	1,170	5,000	
			WALK
			WOO
			WPSW
WHBW, Philadelphia.....	1,500	100	
			WEAM
WIAD, Philadelphia.....	1,370	100	WFAN
WIP, Philadelphia.....	610	500	WFI
WLIT, Philadelphia.....	560	500	WFI
WNAT, Philadelphia.....	1,310	100	WFKD
			WABY
			WHBW
WOO, Philadelphia.....	1,500	100	
			WALK
			WPSW
			WOO
			WABF
			WCSO
WRAX, Philadelphia.....	1,440	250	
KQV, Pittsburgh.....	1,380	500	
WCAE, Pittsburgh.....	1,220	500	
WJAS, Pittsburgh.....	1,290	000	
KDKA, Pittsburgh.....	980	50,000	
WRAW, Reading.....	1,310	100	WGAL
WGBI, Scranton.....	880	250	WQAN
WQAN, Scranton.....	880	250	WGBI
WPSC, State College.....	1,230	500(D)	
WNBO, Washington.....	1,200	15	
WBAX, Wilkes-Barre.....	1,210	100	WJBU
			WHBW
			WOO
			WPSW
WALK, Willow Grove.....	1,500	50	
WBRE, Wilkes-Barre.....	1,310	100	

PORTO RICO

WKAQ, San Juan.....	580	500	
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RHODE ISLAND

WDWF, Cranston.....	1,210	100	WFC
WMBA, Newport.....	1,500	100	
WFCI, Pawtucket.....	1,210	100	WDWF
			WLSI
WEAN, Providence.....	1,160	500(D)	
WJAR, Providence.....	890	250	

SOUTH CAROLINA

WBBY, Charleston.....	1,200	75	
WRBW, Columbia.....	1,310	100	

SOUTH DAKOTA

KFDY, Brookings.....	550	500	KFJM
			KFYR
KGCR, Brookings.....	1,210	100	
KGDA, Dell Rapids.....	1,370	15	
KGDY, Oldham.....	1,200	15	
KGFX, Pierre.....	580	200	
			(Daytime)
KSOO, Sioux Falls.....	1,110	1,000	(Ltd)
KUSD, Vermilion.....	890	500	WNAX
			KFNF
WCAT, Rapid City.....	1,200	100	
WNAX, Yankton.....	890	500	KUSD
			KFNF

TENNESSEE

WFBC, Knoxville.....	1,200	50	
WNBK, Knoxville.....	1,310	50	
WNOX, Knoxville.....	560	1,000	
WOAN, Lawrenceburg.....	600	500	WREC
WGBC, Memphis.....	1,430	500	WNBR
			(Sunday only)
WHBQ, Memphis.....	1,370	100	
WMBM, Memphis.....	1,500	10	
WMC, Memphis.....	780	500	
WNNR, Memphis.....	1,430	500	WGBC
WBAW, Nashville.....	1,490	5,000	WLAC
WLAC, Nashville.....	1,490	5,000	WBAW
WSM, Nashville.....	650	5,000	
			(CP 50,000)
WSIX, Springfield.....	1,210	100	
WOBT, Union City.....	1,310	15	
WREC, Whitehaven.....	600	500	WOAN
WDOD, Chattanooga.....	1,280	1,000	

Station	Kc.	Power	Share with
TEXAS			
KGRS, Amarillo.....	1,410	1,000	WDAG
WDAG, Amarillo.....	1,410	1,000	KGRS
KUT, Austin.....	1,120	500	WTAW
KFDM, Beaumont.....	560	500	
KFYO, Breckenridge.....	1,420	100	
KWWG, Brownsville.....	1,260	500	KRGV
WTAW, College Sta.....	1,120	500	KUT
KRLD, Dallas.....	1,040	10,000	WFAA
WFAA, Dallas.....	1,040	5,000	KRLD
			CP 50,000
WRR, Dallas.....	1,190	5,000	WOAI
KFPL, Dublin.....	1,310	15	
WDAH, El Paso.....	1,310	100	
KFJZ, Fort Worth.....	1,370	100	
WBAP, Fort Worth.....	800	50,000	KTTH
KFQB, Fort Worth.....	1,240	1,000	WJAD
KFLX, Galveston.....	1,370	100	
KFUL, Galveston.....	1,290	500(N)	KTSA
			1,030(D)
KGKL, Georgetown.....	1,370	100	
KGKB, Goldthwaite.....	1,500	100	
KFPM, Greenville.....	1,310	15	
KRGV, Harlingen.....	1,260	530	KWWG
KPRC, Houston.....	920	1,000	
KTUE, Houston.....	1,420	5	
KGHX, Richmond.....	1,500	50	
KGFI, San Angelo.....	1,310	100	
KGCI, San Antonio.....	1,370	100	KGRC
KGDR, San Antonio.....	1,500	100	
KGRC, San Antonio.....	1,370	100	KGCI
KTSA, San Antonio.....	1,250	1,000	KFUL
KTAP, San Antonio.....	1,420	100	
WOAI, San Antonio.....	1,190	5,000	WRR
WJAD, Waco.....	1,240	1,000	KFQB
KGKO, Wichita Falls.....	570	250	

UTAH

KFUR, Ogden.....	1,370	50	
KDYL, Salt Lake City.....	1,290	1,000	
KSL, Salt Lake City.....	1,130	5,000	(CP)

VERMONT

WCAX, Burlington.....	1,200	100	WNBX
WNBX, Springfield.....	1,200	10	WCAX

VIRGINIA

WTAZ, Richmond.....	1,210	150	WMBG
WNEW, Newport.....	1,310	100	
WTFB, Mt. Vernon Hills.....	1,460	10,000	
WTAR, Norfolk.....	780	580	WSEA
WPOR, Norfolk.....	1,200	100	
WBBW, Norfolk.....	1,200	100	
WLBG, Petersburg.....	1,200	100	
WRVA, Richmond.....	1,110	5,000	(CP)
WMBG, Richmond.....	1,210	100	WTAZ
WBBL, Richmond.....	1,370	100	
WDBJ, Roanoke.....	930	500(D)	250(N)
WSEA, Portsmouth.....	780	500	WTAR
			WPOR

WASHINGTON

KXRO, Aberdeen.....	1,420	75	
KVOS, Bellingham.....	1,200	100	
KFBL, Everett.....	1,370	50	KVL
KGY, Laeey.....	1,200	50(D)	10(N)
KUJ, Longview.....	1,500	10	
KWSC, Pullman.....	1,390	500	KFPY
KFOA, Seattle.....	1,270	1,000	KTW
KFWQ, Seattle.....	1,420	100	KKP
KPQ, Seattle.....	1,210	100	KPCB
KVL, Seattle.....	1,370	100	KFBL
KJR, Seattle.....	970	5,000	
KKP, Seattle.....	1,420	15	KFWQ
KOMO, Seattle.....	920	1,000	
KPCB, Seattle.....	1,210	100	KPQ
KRSC, Seattle.....	1,120	50(D)	
KTW, Seattle.....	1,270	1,000	KFOA
KXA, Seattle.....	570	500	KUOM

KO, Spokane.....	1,230	100(D)	
KPY, Spokane.....	1,390	500	KWSC
KA, Spokane.....	1,470	5,000	
KQ, Spokane.....	590	1,000	
KO, Tacoma.....	1,340	500	KVI
K, Nr. Des Moines....	1,340	1,000	KMO

TUBE Specifications

IT should be noted that although the 171, 112, 210 and 250 tubes appear on both A.C. and D.C. lists, they are now generally used as A.C. tubes. Properly speaking the A.C. tubes are the 226 and 227 type but from the standpoint of the user the power tube, into which class the four first mentioned fall, is also an A.C. tube.

A. C. Receiving Tubes

Name and Address of Manufacturer	Trade Name and Model Number	List Price	Heater or Filament Type	Recommended Use	A.C. Filament or Heater Voltage	A.C. Filament or Heater Current Amperes	Maximum D.C. Plate Voltage	Voltage Amplification Factor	Plate Current in Milli-amperes
Allan Mfg. Co. 102 N. 5 St. Harrison, N. J.	Vogue—AX226	\$2.50	Filament	Amplifier	1.5	1.05	180	8.2	3.7-3.8
	AX227	4.00	Heater	Det.-Amplifier	2.5	1.75	180	8.2	3.0-6.0
	AX210	9.00	Filament	Power Amplifier	7.5	1.25	450	7.7	7.0-18.5
	AX250	12.00	Filament	Power Amplifier	7.5	1.25	450	2.5	55
	112A	3.00	Filament	Power Amplifier	5.0	.25	180	8.0	4.8-7.8
	171A	2.75	Filament	Power Amplifier	5.0	.25	180	3.0	11.0-20.0
Arcturus Radio Co. 219 Elizabeth Ave. Newark, N. J.	Arcturus—126	2.25	Filament	Amplifier	1.5	1.05	135	8.2	3.8
	126-H	4.00	Heater	Amplifier	1.5	1.20	135	8.2	4.7
	28	4.00	Heater	Amplifier	15.0	0.35	135	10.0	4.0
	32	4.00	Heater	Amplifier	15.0	0.35	135	30.0	1.5
	48	4.00	Heater	Amplifier	15.0	0.35	135	10.0	4.0
	30	4.00	Heater	Power Amplifier	15.0	0.35	180	3.8	23.0
	40	4.00	Heater	Power Amplifier	15.0	0.38	180	3.1	20.0
	071-H	4.00	Heater	Power Amplifier	5.0	1.00	180	3.1	20.0
	26	5.00	Heater	Detector	15.0	0.35	45	10.0	2.5
	127	4.00	Heater	Detector	2.25	1.60	180	9.0	3.7
	Screen Grid—22	7.50	Heater	Amplifier	15.0	0.35	180	370.0	1.0
Armstrong Elec. & Mfg. Co., Inc. 187 Sylvan Ave., Newark, N. J.	Armor—AC526	2.50	Filament	Amplifier	1.5	1.05	135		
	AC527	5.00	Heater	Det.-Amplifier	2.5	1.75	135		
Cable Supply Co., Inc. 84 No. 9th St., Brooklyn, N. Y.	Speed—226	2.25	Filament	Amplifier	1.5	1.05	180	8.5	8
	227	4.00	Heater	Det. & amp.	2.5	1.75	180	8	7
	112A	2.75	Filament	Power amp.	5	.25	157	8	10
	171A	2.75	Filament	Power amp.	5	.25	180	3	20
	210A	8.00	Filament	Power amp.	7.5	1.25	425	8	18
	250	10.50	Filament	Power amp.	7.5	1.25	450	4	60
	Y222	6.50	Heater	R.F. & A.F.—Amp.	2.5	1.75	180	300	2
Ceco Mfg. Co. 702 Eddy St. Providence, R. I.	Ceco—M26	2.25	Filament	Amplifier	1.5	1.05	180	8.2	
	N27	4.00	Heater	Det.-Amplifier	2.5	1.75	180	8.2	
	S27	5.00	Heater	Det.-Amplifier	3.0	1.10	180	8.2	
	Hi-Mu26	4.00	Filament	Amplifier	1.5	1.05	180	20.0	
	Screen Grid—AC22	8.00	Heater	Amplifier	2.5	1.75	180	300.0	
Champion Radio Works, Inc. Danvers, Mass.	Champion—Y227	4.00	Heater	Det.-Amplifier	2.5	1.75	180	8.0	6.0
	X226	2.25	Filament	Det.-Amplifier	1.5	1.05	180	8.2	7.5
	X171A	2.75	Filament	Power Amplifier	5.0	0.25	180	3.0	20.0
	X112A	2.75	Filament	Power Amplifier	5.0	0.25	180	8.0	8.0
Cunningham Inc., E. T. 370 Seventh Ave. New York, N. Y.	Cunningham—CX-326	2.25	Filament	Amplifier	1.5	1.05	180	8.2	7.5
	C-327	4.00	Heater	Det.-Amplifier	2.5	1.75	180	9.0	6.0
	CX-112A	2.75	Filament	Power Amplifier	5.0	.25	180	8.0	9.5
	CX-371A	2.75	Filament	Power Amplifier	5.0	.25	180	3.0	20.0
	CX-310	9.00	Filament	Power Amplifier	7.5	1.25	425	8.0	18.0
	CX-350	11.50	Filament	Power Amplifier	7.5	1.25	450	3.8	55.0
Daven Corp. 158 Summit St. Newark, N. J.	Daven—AC-26	2.50	Filament	Amplifier	1.5	1.05		8.0	5.0
	AC-27	5.00	Heater	Det.-Amplifier	2.5	1.75		8.0	1.5
	AC-10	9.00	Filament	Power Amplifier	7.5	1.25		7.0	30.0
De Forest Radio Company Central Ave. and Franklin St. Jersey City, N. J.	Audion—410	9.00	Filament	Power Amplifier	7.5	1.25	425	7.7	
	426	2.75	Filament	Amplifier	1.5	1.05	180	8.2	
	427	5.00	Heater	Det.-Amplifier	2.5	1.75	180	8.2	
	450	12.00	Filament	Power Amplifier	7.5	1.25	400	3.8	
Diamond Electric Corp. 780 Frelinghuysen Ave., Newark, N. J.	Diamond—D-226	2.25	Filament	Amplifier	1.5	1.05	180	8.2	3.8
	D-227	4.00	Heater	Detector	2.5	1.75	45	8.2	.14
Diamond Vacuum Products Co. 4049 Diversey Ave. Chicago, Ill.	Diatron—226	2.25	Filament	Amplifier	1.5	1.05	180	8.2	3.8
	227	4.00	Heater	Det.-Amplifier	2.5	1.75	180	8.2	6.0
	Shieldplate—122 A.C.	7.00	Heater	Amplifier	2.25	1.75	135		
Fray Mfg. Co. 2021 So. Michigan Ave., Chicago, Ill.	Mellotron—X-226	2.25	Filament	Amplifier	1.5	1.05	180	8.2	
	X-227	4.00	Heater	Det.-Amplifier	2.5	1.75	180	8.0	
Gold Seal Elec. Co. 250 Park Ave. N. Y. City	Gold Seal—226	2.25	Filament	Amplifier	1.5	1.05	180	8.2	7.5
	227	4.00	Heater	Det.-Amplifier	2.5	1.75	180	9.0	6.0
	112A	2.75	Filament	Power Amplifier	5.0	0.25	157	8.0	10.0
	171A	2.75	Filament	Power Amplifier	5.0	0.25	180	3.0	20.0
	210	9.00	Filament	Power Amplifier	7.5	1.25	425	8.0	22.0
	250	11.50	Filament	Power Amplifier	7.5	1.25	450	3.8	55.0
Hytron Corp. 19 Oakland St., Salem, Mass.	Hytron—X-226	2.25	Filament	Amplifier	1.5	1.05	180	8.0	6.0
	Y-227	4.00	Heater	Det.-Amplifier	2.5	1.75	180	8.0	7.5
Jaeger Research Labs., Inc. 280 Park Ave., Weehawken, N. J.	Jaeger—AC-226	2.50	Filament	Amplifier	1.5	1.05	180		
	AC-227	5.00	Heater	Det.-Amplifier	2.5	1.75	135		
Kellogg Switchboard & Supply Co. 1066 W. Adams St., Chicago	Kellogg—401	5.00	Heater	Det. & amp.	3	1	150		
	403	7.50	Heater	Power amp.	3	1.5	200		
Ken-Rad Corp. Owensboro, Kentucky	Ken-Rad Archatrons—226	2.25	Filament	Amplifier	1.5	1.05	180	8.2	3.8
	112A	2.75	Filament	Power Amplifier	5.0	.25	157	8.0	9.5
	171A	2.75	Filament	Power Amplifier	5.0	.25	180	3.0	20.0
	227	4.00	Heater	Det.-Amplifier	2.5	1.75	180	8.2	6.0

A. C. Receiving Tubes—Continued

Name and Address of Manufacturer	Trade Name and Model Number	List Price	Heater or Filament Type	Recommended Use	A. C. Filament or Heater Voltage	A. C. Filament or Heater Current Amperes	Maximum D. C. Plate Voltage	Voltage Amplification Factor	Plate Current in Milli-Amperes
La Salle Radio Corp. 149 West Austin Ave., Chicago, Ill. (A division of Matchless Electric Co.)	La Salle—LS-226 LS-227	\$2.25 4.00	Filament Heater	Amplifier Det.-Amplifier	1.5 2.5	1.05 1.75	180 180	8.2 8.2	4.0 6.0
Magnatron Corp. Magnatron Bldg., Hoboken, N. J.	Magnatron—AC-226 AC-227	2.25 4.00	Filament Heater	Amplifier Det.-Amplifier	1.5 2.5	1.05 1.75	180 180	8.2 8.0	6.0 5.0
Matchless Electric Co. —See La Salle Radio Corp.									
National Tube Mfrs., Inc. 1890 E. 40 St. Cleveland, Ohio	Royal—R226 R171A R227 R210 R250	2.25 2.75 4.00 9.00 11.50	Filament Filament Heater Filament Filament	Amplifier Power Amplifier Detector Power Amplifier Power Amplifier	1.5 5.0 2.5 7.5 7.5	1.05 .25 1.75 1.25 1.25	180 180 180 425 450	8.2 3.0 9.0 8.0 3.8	8.0 20.0 6.0 18.0 55.0
Neutron Corp. Salem, Mass.	Neutron—X-250 Y-227 X-171A X-226	11.50 4.00 2.75 2.25	Filament Heater Filament Filament	Power Amplifier Det.-Amplifier Power Amplifier Amplifier	7.5 2.5 5.0 1.5	1.25 1.75 .25 1.05	450 180 180 180	3.8 8.2 3.0 8.2	55.0 6.0 20.0 16.5
Northern Mfg. Co. 365 Ogden St. Newark, N. J.	Marathon—112-A 171-A 210 226 227 250	3.00 3.00 9.00 2.50 5.00 12.00	Filament Filament Filament Filament Heater Filament	Power Amplifier Power Amplifier Power Amplifier Amplifier Detector Power Amplifier	5.0 5.0 7.5 1.5 2.5 7.5	.25 .25 1.25 1.05 1.75 1.25	157 180 425 180 90 450	8.0 3.0 8.0 8.2 8.0 3.8	9.5 20.0 18.0 7.5 7.0 55.0
Perryman Electric Co. 33 W. 60th St. New York City	Perryman—P.A.-227 P.A.-226 P.A.-112A P.A.-171A P.A.-210A P.A.-250	\$4.00 2.25 2.75 2.75 9.00 11.50	Heater Filament Filament Filament Filament Filament	Det.-Amplifier Det.-Amplifier Power Amplifier Power Amplifier Power Amplifier Power Amplifier	2.5 1.5 6.0 6.0 6.0—8.0 7.5	1.75 1.05 .50 .25 1.1—1.25 1.25	45 45 157 180 425 450	8.2 8.2 8.0 2.65 7.5 3.8	7.0 8.0 7.9 21.0 23.0 55.0
Radio Corp. of America 233 Broadway, New York, N. Y. Note—See special tubes at end of this list.	Radiotron—UX-226 UY-227	2.25 4.00	Filament Heater	Amplifier Det.-Amplifier	1.5 2.5	1.05 1.75	180 180	8.2 9.0	7.5 6.0
Raytheon Mfg. Co. 238 Main St., Cambridge, Mass.	Raytheon—Ray-X-226 Ray-X-227	2.25 4.00	Filament Heater	Amplifier Det.-Amplifier	1.5 2.5	1.05 1.75	180 180	8.2 9.0	7.5 6.0
Sonatron Tube Co. 108 W. Lake St. Chicago, Ill.	Sonatron—X-226 Y-227 X-401 X-225A	2.25 4.00 5.00 Same as	Filament Heater Heater 401 except heater	Amplifier Det.-Amplifier Det.-Amplifier ater prongs are	1.5 2.5 3.0	1.05 1.75 1.00	180 90 135	8.2 8.0 10.0	7.5 5.0
Sunlight Lamp Co. 288 Springfield Ave. Newark, N. J.	Crusader—SLX226 SLX227 SLX171A SLX210 SLX250 SLX171AC SLX112AC	2.50 5.00 3.00 9.00 12.00 3.00 3.00	Filament Heater Filament Filament Filament Filament Filament	Amplifier Det.-Amplifier Power Amplifier Power Amplifier Power Amplifier Power Amplifier Power Amplifier	1.5 2.5 5.0 7.5 7.5 5.0 5.0	1.05 1.75 .25 1.25 1.25 .75 .75	180 180 180 425 450 180 135	8.2 8.2 3.0 8.0 3.8 3.0 8.0	
Supercraft Products Corp. 225 W. 46 St. New York City	Supercraft—SPX-426 SPY-427 SX-412A SX-471A SPX-410	2.25 4.00 2.75 2.75 9.00	Filament Heater Filament Filament Filament	Amplifier Detector Power Amplifier Power Amplifier Power Amplifier	1.5 2.5 5.0 5.0 7.5	1.05 1.75 .25 .25 1.25	180 45—90 180 180 425	8.2 8.0 8.0 3.0 8.0	7.5 2.7 9.5 20.0 18.0
Sylvania Products Company Emporium, Penna.	Sylvania—SX-226 SY-227 Screen Grid—SY-222	2.25 4.00 6.50	Filament Heater Heater	Amplifier Detector Amplifier	1.5 2.5 2.5	1.05 1.75 1.75	180 180 180	8.5 8.5 150.0	7.5 7.5 5.0
Tele vocal Corp. 588 12th St. West New York, N. J.	Tele vocal—AC226 AC227 AC227S	2.25 4.00 4.00	Filament Heater Heater	Amplifier Detector Detector	1.5 2.5 2.5	1.05 1.75 1.75	180 90 90	8.0	
United Radio & Electric Corp. 500 Chancellor Ave. Irvington, N. J.	Ureco—X-226 Y-227 X-401	2.25 4.00 5.00	Filament Heater Heater	Amplifier Det.-Amplifier Det.-Amplifier	1.5 2.5 3.0	1.05 1.75 1.0	180 90 90	8.2 8.0 12.0	7.5 7.0 1.0

D. C. Receiving Tubes

Name and Address of Manufacturer	Trade Name and Model Number	List Price	Recommended Use	Filament Terminal Voltage	Filament Current Amperes	Detector Plate Voltage	Maximum Amplifier Plate Voltage	Voltage Amplification Factor	Plate Current in Milli-amperes
Allan Mfg. Co. 102 N. 5th St. Harrison, N. J.	Vogue 201A V or X 199 120 AX12 AX11 X112 X171 X300	\$1.50	Detector-amplifier	5.0	0.25	45	135	8.0	0.9—2.5
		2.25	Detector-amplifier	3.3	0.07	22-45	90	6.2	1.0—2.5
		2.50	Power amplifier	3.3	0.14		135	3.3	3.2—7.0
		2.50	Detector-amplifier	1.1	0.25	22	90	6.5	1.1—2.6
		2.50	Detector-amplifier	1.1	0.25	22	90	6.5	1.1—2.6
		2.75	Power amplifier	5.0	0.5		180	8.0	4.8—7.8
		2.75	Power amplifier	5.0	0.5		180	3.0	11.0—20.0
		4.00	Detector	5.0	0.25	45		20.0	1.0
Armstrong Elec. & Mfg. Co., Inc. 187 Sylvan Ave. Newark, N. J.	Armor—CF501 CF512a CF512 CF571a CF571 CF510 CF550 CF500a	2.50	Detector-amplifier	5.0	0.25	22	135	8.0	
		3.00	Detector-amplifier	5.0	0.25	90	157		
		3.00	Detector-amplifier	5.0	0.5	90	157	8.0	
		3.00	Power amplifier	5.0	0.25	90	180		
		3.00	Power amplifier	5.0	0.5	90	180		
		9.00	Power amplifier	7.5	1.25	180	450		
		12.00	Power amplifier	7.5	1.25		450		
		4.00	Special detector	5.0	0.25	22	45		
Cable Supply Co., Inc. 84 No. 9th St. Brooklyn, N. Y.	Speed—201A 200AA 199V 199X WD12 WD11 120 X222A.C.	1.50	Detector-amplifier	5	0.25	45	135	8	3
		3.00	Detector	5	0.25	90		20.0	1.0
		1.75	Detector-amplifier	3	0.060	45	90	6.6	2.5
		1.75	Detector-amplifier	3	0.060	45	90	6.6	2.5
		2.50	Detector-amplifier	1.1	0.25	45	135	6.6	3.0
		2.50	Detector-amplifier	1.1	0.25	45	135	6.6	3.0
		1.75	Power amplifier	3.0	0.125		135	3.3	6.5
		7.50	R.F. and A.F. amp.	3.0	0.125		180	300.0	1.5

D. C. Receiving Tubes—Continued

Name and Address of Manufacturer	Trade Name and Model Number	List Price	Recommended Use	Filament Terminal Voltage	Filament Current Amperes	Detector Plate Voltage	Maximum Amplifier Plate Voltage	Voltage Amplification Factor	Plate Current in Milli-amperes
Ceco Mfg. Co. 702 Eddy St. Providence, R. I.	Ceco—AX	\$1.50	General purpose	5.0	0.25	45	135	8.5	
	01B	3.50	General purpose	5.0	0.125	45	135	8.5	
	B	2.00	Dry cell operation	3.0	0.06	45	90	6.4	
	BX	2.00	Dry cell operation	3.0	0.06	45	90	6.4	
	C (large base)	2.00	Dry cell operation	3.0	0.06	45	90	6.4	
	E	2.50	Dry cell power amplifier	3.0	0.125		180	3.3	
	F12	2.75	Power amplifier	5.0	0.50	45	180	8.0	
	F12A	2.75	Power amplifier	5.0	0.25	45	180	8.0	
	G	2.00	Hi-mu amplifier	5.0	0.25		180	20.0	
	H	2.50	Special detector	5.0	0.25	67-90	135	14.4	
	J71	2.75	Power amplifier	5.0	0.50		180	3.0	
	J71A	2.75	Power amplifier	5.0	0.25		180	3.0	
	K	3.00	Special R.F. amplifier	5.0	0.25		140	12.5	
	L10	9.00	Power amplifier	7.5	1.25		425	7.8	30
	L50	11.50	Power amplifier	7.5	1.25		450	3.8	55
	R.F. 22	6.50	Screen grid amplifier	3.3	0.132		135	300.0	
	L15	5.00	Power amplifier	5.0	1.00		180	7.0	20
Champion Radio Works, Inc. Danvers, Mass.	Champion—X250	11.50	Power amplifier	7.5	1.25		450	3.8	55.0
	X210	9.00	Power amplifier	7.5	1.25		450	8.0	55.0
	X200A	4.00	Detector	5.0	0.25	45		20.0	1.5
	X171A	2.75	Power amplifier	5.0	0.25		180	3.0	20.0
	X112A	2.75	Power amplifier	5.0	0.25		180	8.0	7.9
	X120	2.50	Power amplifier	3.3	0.132		135	3.3	7.0
	X199	2.25	Detector-amplifier	3.3	0.063		90	6.6	2.5
	V199	2.25	Detector-amplifier	3.3	0.063		90	6.6	2.5
	X240	2.00	Detector-amplifier	5.0	0.25		180	30.0	0.2
	X201A	1.50	Detector-amplifier	5.0	0.25		135	8.0	2.5
Cunningham, Inc., E. T. 370 Seventh Ave. New York, N. Y.	Cunningham—C-11-CX-12	2.50	Detector-amplifier	1.1	0.25	22-45	135	6.6	3.5
	C-299	2.25	Detector-amplifier	3.3	0.063	22-45	90	6.6	2.5
	CX-299	2.25	Detector-amplifier	3.3	0.063	22-45	90	6.6	2.2
	CX-220	2.50	Power amplifier	3.3	0.132		135	3.3	6.5
	CX-322	6.50	Screen grid amplifier	3.3	0.132		180	300*	1.5
	CX-300A	4.00	Detector	5.0	0.25	22-45		20	1.5
	CX-301A	1.50	Detector-amplifier	5.0	0.25	45	135	8.0	3.0
	CX-340	2.00	Detector amplifier	5.0	0.25	135	180	30.0	0.2
	CX-112A	2.75	Detector amplifier	5.0	0.25	45	180	8.0	9.5
	CX-371A	2.75	Power amplifier	5.0	0.25		180	3.0	20.0
*Varies with voltages applied.									
Daven Corp. 158 Summit St. Newark, N. J.	Daven MU-6	3.50	Semi-power tube	6	0.5		135	6	12
	MU-20	2.25	Detector-amplifier	6	0.25	45-90	135	20	1.2
	201-A	1.50	Detector-amplifier	5	0.25	45	90-135	8	3
De Forest Radio Co. Central Ave. and Franklin St. Jersey City, N. J.	Audion—401A	2.00	Detector-amplifier	5.0	0.25	45	135	8.0	8.0
	412A	3.25	Det.-amp., pwr. amplifier	5.0	0.25	90	157	8.0	8.0
	471A	3.25	Power amplifier	5.0	0.50		180	3.0	3.0
Diamond Electric Corp. 780 Frelinghuysen Ave. Newark, N. J.	Diamond—D201A	1.50	General purpose	5.0	0.25	22	135	8.5	3.0
	D199	2.00	General purpose	3.3	0.063	22	90	6.25	2.5
	D112	2.75	Power amplifier	5.0	0.5	22	157	8.2	8.0
	D112A	2.75	Power amplifier	5.0	0.25	22	157	8.2	8.0
	D171	2.75	Power amplifier	5.0	0.5	22	180	3.0	20.0
	D171A	2.75	Power amplifier	5.0	0.25	22	180	3.0	20.0
	D200A	4.00	Power detector	5.0	0.25	22-45		20.0	1.5
	D240	2.00	Resistance coupling	5.0	0.25		135-180	30.0	0.5
	D222	6.50	Shielded grid	3.3	1.32		90-135	300.0	0.75
	D210	9.00	Power amplifier	7.5	1.25		90-425	7.7	20.0
	D250	12.00	Power amplifier	7.5	1.25		450	3.8	
	Diatron—199V	2.25	Detector-amplifier	3.0	0.06		90	6.25	2.7
	199X	2.25	Detector-amplifier	3.0	0.06		90	6.25	2.7
Diamond Vacuum Products Co. 4049 Diversey Ave. Chicago, Ill.	201A	1.50	Detector-amplifier	5.0	0.25	90	135	8.0	2-2.5
	200A	4.00	Detector	5.0	0.25	22-45		20.0	1.5
	240	2.00	Res. amplifier	5.0	0.25		180	30.0	0.5
	112	2.75	Detector-amplifier	5.0	0.5		157	8.0	8.0
	171	2.75	Amplifier	5.0	0.5		180	3.0	20.0
	112A	2.75	Detector-amplifier	5.0	0.25		157	8.0	8.0
	171A	2.75	Amplifier	5.0	0.25		180	3.0	20.0
	250	11.50	Amplifier	7.5	1.25		450	3.0	55.0
	Shield plate—SP122	6.50	Amplifier	3.3	0.132		*90-135	300.0	0.75
*Screen grid voltage—45 to 67									
Fray Mfg. Co. 2021 So. Michigan Ave. Chicago, Ill.	Mellotron—X201A	1.50	Detector-amplifier	5.0	0.25	45	135	8.0	
	X199	2.25	Detector-amplifier	3.0	0.06	45	135	6.6	
	X112A	2.75	Detector-amplifier	3.0	0.25	45	180	8.0	
	X171A	2.75	Power amplifier	5.0	0.25		180	3.0	
	X171	2.75	Power amplifier	5.0	0.75		180	3.0	
Gold Seal Electrical Co. 250 Park Ave. New York, N. Y.	Gold Seal—201A	1.50	Detector-amplifier	5.0	0.25	45		8.0	6.0
	199	2.25	Detector-amplifier	3.3	0.060	45		6.25	2.5
	171	2.75	Power amplifier	5.0	0.5		180	3.0	11-20
	112	2.75	Power amplifier	5.0	0.50		157	8.0	8.0
	200A	4.00	Detector	5.0	0.25	45-90		20.0	2.5
	240	2.25	Amplifier	5.0	0.25	135-180	180	30.0	1.5
	120	2.50	Power amplifier	3.3	0.132		135	3.3	6.5
	222	6.50	Amplifier	3.3	0.132		135	175-300	1.5
Hytron Corp. 19 Oakland, Salem, Mass.	Hytron—X201A	1.50	Detector amplifier	5.0	0.25	45	135	8.0	
	V199	2.25	Detector amplifier	3.0	0.06	45	90	6.6	
	X199	2.25	Detector amplifier	3.0	0.06	45	90	6.6	
	(std. base) X199	2.25	Detector amplifier	3.0	0.06	45	90	6.6	
	X112A	2.75	Power tube	5.0	0.25		135	8.0	
	X112	2.75	Power tube	5.0	0.50		135	8.0	
	X171A	2.75	Power tube	5.0	0.25		180	3.0	
	X171	2.75	Power tube	5.0	0.50		180	3.0	
	X120	3.00	Power tube	3.0	0.125		135	3.3	
	X200A	4.00	Detector	5.0	0.25	45		20.0	
	X222	6.50	Shield grid tube	3.3	0.132		135	300.0	
	X250	12.00	Power amplifier	7.5	1.25		450	3.8	
Jaeger Research Labs., Inc. 280 Park Avenue Weekawken, N. J.	Jaeger—JX201A	1.50	Detector amplifier	5.0	0.25	20-90	135		
	JX199	2.25	Detector amplifier	3.0	0.06	20-90			
	JX112	3.00	Power tube	5.0	0.50		45-150		
	JX171	3.00	Power tube	5.0	0.50		180		
	JX200A	4.00	Detector	5.0	0.25	45			

D. C. Receiving Tubes—Continued

Name and Address of Manufacturer	Trade Name and Model Number	List Price	Recommended Use	Filament Terminal Voltage	Filament Current Amperes	Detector Plate Voltage	Maximum Amplifier Plate Voltage	Voltage Amplification Factor	Plate Current in Milli-amperes	
Ken-Rad Corp. Owensboro, Ky.	Ken-Rad Archatrons—201A	\$1.50	Detector amplifier	5.0	0.25	45	135	8.0	2.5	
		240	2.00	Amplifier Hi-Mu 35	5.0	0.25	90	180	30.0	0.2
		199	2.25	Detector amplifier	3.3	0.063	22-45	90	6.25	2.5
		120	2.50	Power amplifier	3.3	0.132		135	3.3	7.0
		112	3.00	Power amplifier	5.0	0.50	45	157.5	8.0	9.5
		171	3.00	Power amplifier	5.0	0.50		180	3.0	20.0
		200A	4.00	Detector	5.0	0.25	45			1.0
		222	6.50	Shielded grid amplifier	3.3	0.132		180	60.0	0.3
		210	9.00	Power amplifier	7.5	1.25		425	7.7	18.5
		250	11.50	Super-power amplifier	7.5	1.25		450	3.8	55.0
LaSalle Radio Corp. 149 West Austin Ave., Chicago, Ill. (A division of Matchless Electric Co.)	LaSalle—LS201A	1.50	Detector amplifier	5.0	0.25	22-45		8.0	7.0	
		LS199	2.25	Detector amplifier	3.0	0.006	22-45		6.25	4.0
		LS200-A	4.00	Detector	5.0	0.25	22-45		20.0	2.0
		LS120	2.50	Power amplifier	3.0	0.012		135	3.3	7.0
		LS112	2.75	Detector amplifier	5.0	0.25	22-45	150	8.0	8.0
		LS112A	2.75	Detector amplifier	5.0	0.25	22-45	150	8.0	8.0
		LS171	2.75	Amplifier	5.0	0.50		180	3.0	20.0
		LS171A	2.75	Amplifier	0.25	0.25		180	3.0	20.0
		LS210	9.00	Amplifier oscillator	7.5	1.25		425	7.7	18.0
		LS250	11.50	Amplifier	7.5	1.25		425	3.8	20.0
		LS222	6.50	Radio frequency	3.3	0.132		135		7.0
Magnatron Corp. Magnatron Bldg., Hoboken, N. J.	Magnatron—DC201A	1.50	Detector amplifier	5.00	0.25	45	135	8.0	3.0	
		DC199	2.25	Detector amplifier	3.3	0.063	45	90	6.6	2.5
		DC120	2.50	Power amplifier	3.3	0.132		135	3.3	6.5
		DC200A	4.00	Detector	5.0	0.25	45		20.0	1.5
		DC112A	2.75	Detector amplifier	5.0	0.25	45	157.5	8.0	9.5
Matchless Electric Co., See La Salle Radio Corp.	Radio Corp.									
National Tube Mfrs., Inc. 1890 E. 40 St., Cleveland, Ohio	Royal—R201A	1.50	Detector amplifier	5.0	0.25	22-45	135	8.0		
		R112A	3.00	Power amplifier	5.0	0.50	22-45	135	8.0	9.5
		R200A	4.00	Special detector	5.0	0.25	45		20.0	
		R171	3.00	Power amplifier	5.0	0.50		180	3.0	20.0
Neutron Corp. Salem, Mass.	Neutron—X200A	4.00	Detector	5.0	0.25	45		20.0	1.0	
		X171A	2.75	Power amplifier	5.0	0.25		180	3.0	20.0
		X112A	2.75	Amplifier	5.0	0.25		180	8.0	13.5
		X120	2.50	Power amplifier	3.3	0.132		135	3.3	7.0
		X199	2.25	Detector amplifier	3.3	0.063	45	90	6.25	2.5
		X201A	1.50	Detector amplifier	5.0	0.25	45	135	8.0	2.0
Northern Mfg. Co. 365 Ogden St., Newark, N. J.	Marathon—201B	2.50	Detector amplifier	5.0	0.125	45	135	8.0	1.5-3	
		120	2.50	Amplifier	3.3	0.132		135	3.3	6.5
		199	2.25	Detector amplifier	3.3	0.063	45	90	6.6	1-2.5
		200A	4.00	Detector	5.0	0.25	45		20.0	1.5
		201A	1.50	Detector amplifier	5.0	0.25	45	135	8.0	1.5-3
		222	6.50	R.F. amplifier	3.3	0.132		135	300	0.15*
		240	2.00	Amplifier	5.0	0.25	180	180	30.0	0.2
		112	3.00	Power amplifier	5.0	0.5	45	135	8.0	1.5-7
		171	3.00	Power amplifier	5.0	0.5		180	3.0	20.0
*Plate current with —1.5 volts on the inner grid and +45 volts on the outer grid.										
Perryman Electric Co. 33 W. 60th St., New York, N. Y.	Perryman—R.H.199	2.25	Detector amplifier	3.0	0.06	22-45	67.5-90	6.5	2.5	
		R.H.201A	1.50	Detector amplifier	5.0	0.25	22-45	90-135	8.0	3.5
		P.D.200A	4.00	Detector only	5.0	0.25	45			2.0
		P.X.240	2.00	*	5.0	0.25	90-180	90-180	0.30	0.75-1.0
		P.A.120	2.50	{ Power amplifier last audio only }	3.0	0.120		135	3.3	6.5
		P.A.112	3.00		5.0	0.50		90-157	8.0	2.4-7.9
		P.A.171	3.00		5.0	0.50		90-180	2.65	13-21
Radio Corp. of America 233 Broadway New York, N. Y.	Radiotron—UX-201A	1.50	Detector-amplifier	5.0	0.25	45	135	8.0	1.5-3.0	
		UX-240	2.00	Det.-amp. (resist. coup.)	5.0	0.25	135*	180*	30	0.3-0.2
		UX-199	2.25	Detector-amplifier	3.3	0.063	45	90	6.6	1.0-2.5
		UX-199	2.25	Detector-amplifier	3.3	0.063	45	90	6.6	1.0-2.5
		WD-11	2.50	Detector-amplifier	1.1	0.25	22-45	135	6.6	1.5-3.5
		WX-12	2.50	Detector-amplifier	1.1	0.25	22-45	135	6.6	1.5-3.5
		UX-120	2.50	Power amplifier	3.3	0.132		135	3.3	6.5
		UX-112A	2.75	Amplifier-detector	5.0	0.25	45	180	8.0	1.5-9.5
		UX-171A	2.75	Power amplifier	5.0	0.25		180	3.0	20.0
		UX-200A	4.00	Detector	5.0	0.25	45		20.0	1.5
		UX-222	6.50	R.F. amp.-A.F. amp.	3.3	0.132		135	300.0	1.5
		UX-210	9.00	Pwr. amp. oscil. for transm.	7.5	1.25		425	8.0	18.0
		UX-250	11.50	Power amplifier	7.5	1.25		450	3.8	55.0
Raytheon Mfg. Co. 238 Main St., Cambridge, Mass.	Raytheon—Ray-X-171-A	2.75	Power amplifier	5.0	0.25		180	3.0	20.0	
Sonatron Tube Co. 108 W. Lake St., Chicago, Ill.	Sonatron—X201A	1.50	Detector-amplifier	5.0	0.25	45	135	8.0	2-3	
		X201B	3.00	Detector-amplifier	5.0	0.125	45	135	8.0	2-3
		X200	1.75	Detector	5.0	1.0	16-22			1.0
		X200A	4.00	Detector	5.0	0.25	45		20.0	1.5
		X240	2.00	Detector-res. amplifier	5.0	0.25	180	180	30.0	0.2
		X30	4.00	Detector-res. amplifier	5.6	0.25	135	135	32.0	1.7
		X20	4.00	Detector-res. amplifier	5-6	0.25	135	135	20.0	2.5
		X6	4.00	Amplifier	5-6	0.5		135	6.0	11.0
		11	2.50	Detector-amplifier	1.1	0.25	22-45	135	6.6	1.5-3.5
		X12	2.50	Detector-amplifier	1.1	0.25	22-45	135	6.6	1.5-3.5
		A199	2.25	Detector-amplifier	3.3	0.063	45	90	6.6	1-2.5
		V199	2.25	Detector-amplifier	3.3	0.063	45	90	6.6	1-2.5
		X199	2.25	Detector-amplifier	3.3	0.063	45	90	6.6	1-2.5
		X29	4.00	Res.-amplifier	3-4	0.06		135	21.0	1.0
		X19	4.00	Res.-amplifier	3-4	0.06		135	18.0	1.5
		X9	4.00	Amplifier	3-4	0.125		135	3.0	6.0
		X120	2.50	Amplifier	3.3	0.132		135	3.3	6.5
		V120	2.50	Amplifier	3.3	0.132		135	3.3	6.5
		A120	2.50	Amplifier	3.3	0.132		135	3.3	6.5
		X222	6.50	Amplifier	3.3	0.132		180*	6.0	0.3
		X171	2.75	Amplifier	5.0	0.5		90	3.0	10.0
		X171A	2.75	Amplifier	5.0	0.25		135	3.0	16.0
*Applied through plate coupling resistance of 200,000 ohms.										

D. C. Receiving Tubes—Continued

Name and Address of Manufacturer	Trade Name and Model Number	List Price	Recommended Use	Filament Terminal Voltage	Filament Current Amperes	Detector Plate Voltage	Maximum Amplifier Plate Voltage	Voltage Amplification Factor	Plate Current in Milli-Amperes
Sonatron Tube Co. <i>Continued.</i>	X112	2.75	Detector-amplifier	5.0	0.5	45	90	8.0	1.5-5.5
	X112A	2.75	Detector-amplifier	5.0	0.25	45	135	8.0	1.5-7
	X210	9.00	Amplifier	7.5	1.25		425	8.0	18.0
	X250	11.50	Amplifier	7.5	1.25		450	3.8	55.0
Sunlight Lamp Co. 288 Springfield Ave. Newark, N. J.	Crusader—SLD11	\$2.50	Detector-amplifier	1.1	0.25	22.5	135	6.6	2.5-3.5
	SLD12	2.50	Detector-amplifier	1.1	0.25	22.5	135	6.6	2.5-3.5
	SLX112A	3.00	Detector-amplifier	5.0	0.25	45	135	8.0	5.5-7.0
	SLV199	2.25	Detector-amplifier	3.0	0.060	45	90	6.6	2.5
	SLX199	2.25	Detector-amplifier	3.0	0.060	45	90	6.6	2.5
	SLX200A	4.00	Detector only	5.0	0.25	45	45	20.0	1.5
	SLX222	6.50	Shield grid amplifier	3.3	0.132		180	300.0	1.5
	SLX240	2.00	Detector or amplifier	5.0	0.25	0.3	180	30.0	0.2
	SLX120	2.50	Power amplifier	3.3	0.132		135	3.3	2.5
Supercraft Prod. Corp. 225 W. 46th St. New York, N. Y.	Supercraft—SX401	1.50	Detector-amplifier	5.0	0.25	45	135	8.0	1.5-3.0
	SX400A	4.00	Power detector	5.0	0.25	67-90		14.4	1.5
	SX412A	2.75	Power amplifier	5.0	0.25	45	180	8.0	7.0-9.5
	SX471A	2.75	Power amplifier	5.0	0.25		180	3.0	10-20
	SPX410	9.00	Power amplifier	7.5	1.25		425	8	10-18
Sylvania Products Co. Emporium, Penna.	Sylvania—SX201-A	1.50	Detector-amplifier	5.0	0.25	45	135	8-9	1.0-3.0
	SX171	2.75	*Amplifier	5.0	0.50		180	3-4	10.0-20.0
	SX171A	2.75	Amplifier	5.0	0.25		180	3-4	10.0-20.0
	SX112A	2.75	Amplifier	5.0	0.25		135-180	7.5-8.5	5.5-13.0
	SX240	2.00	Res. amplifier	5.0	0.25		200	30.0	0.1-0.3
	SX222	6.50	Amplifier	3.3	0.132		180	330.0	1.5
	SX200A	4.00	Detector	5.0	0.25	45		20.0	1.0-1.5
	SX199	2.25	Detector	3.3	0.06	45	135	6-7	1.0-3.2
	SX120	2.50	Amplifier	3.3	0.125		135	3-4	6.5
	SX210	9.00	Amplifier	7.5	1.25		425	7.75	10.0-18.0
	SX250	11.50	Amplifier	7.5	1.25		450	3.8	28.0-55.0
	SX201B	2.50	Detector-amplifier	5.0	0.125		135	8-9	1.0-3.0
	SX200B	4.00	Detector	5.0	0.125	45		20.0	1.0-1.5
Televoal Corp. 588 12 St. West New York, N. J.	Televoal TC201A	1.50	Detector-amplifier	5.0	0.25	45	135	8.0	1.5-2.5
	TC199	2.25	Detector-amplifier	3.0	0.06	45	90	6.25	1.0-2.5
	TC240	2.25	Detector-amplifier	5.0	0.25	22	90	30.0	0.20
	TC200A	4.00	Detector only	5.0	0.25	45			
	TC200B	2.25	Detector only	5.0	0.25	22-45			
	TC112	2.75	Power amplifier	5.0	0.5		90-157	8.0	2.5-8.0
	TC112A	2.75	Power amplifier	5.0	0.25		90-157	8.0	2.5-8.0
	TC171	2.75	Last stage audio	5.0	0.5		90-180	3.0	10-20.0
	TC171A	2.75	Last stage audio	5.0	0.25		90-180	3.0	10.0-20.0
United Radio & Electric Corp. 500 Chancellor Ave. Irvington, N. J.	Ureco—X120	2.50	Power amplifier	3.0	0.125		135	3.3	6.5
	X199	2.25	Detector-amplifier	3.0	0.060	45	90	6.6	2.5
	X112A	2.75	Amplifier	5.0	0.5		157.5	8.0	
	X171A	2.75	Power amplifier	5.0	0.5		180	3.0	20.0
	DX200	4.00	Detector	5.0	0.25	45		20.0	1.5
	X201	1.50	Detector-amplifier	5.0	0.25	45	135	8.0	3.0
	X240	2.00	Res. coupled amplifier	5.0	0.25	135-180	180	30.0	0.2
	X250	11.50	Power amplifier	7.5	1.25		500	3.8	55.0
	X210	9.00	Power amplifier	7.5	1.25		425	8.0	18.0

Rectifying Tubes

Name and Address of Manufacturer	Trade Name and Model Number	List Price	Full or Half Wave Rectifier	Filament or Gaseous Type	Filament Terminal Voltage	Filament Current Amperes	Maximum A.C. Input Voltage per Plate (See Note)	Maximum D.C. Output Current Milli-amperes	D.C. Output Voltage at Max. D.C. Output Current
Allan Mfg. Co. Harrison, N. J.	Vogue—AX280 AX281	\$4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 700	125 85	
Arcturus Radio Co. 255 Sherman Ave., Newark, N. J.	Arcturus—180	4.25	Full	Filament	5.0	2.0	300	125	260
Armstrong Elec. & Mfg. Co., Inc. 187 Sylvan Ave., Newark, N. J.	Armor—CF-580 CF-581	4.50 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	220 450		
Cable Supply Co., Inc. 84 No. 9th St., Brooklyn, N. Y.	Speed—280 281 S H	4.25 7.50 4.00	Full Half Full	Fil. Fil. Gas.	5 7.5	2 1.25	300 750 300	125 110 125	260 620 260
Ceco Mfg. Co. 702 Eddy St., Providence, R. I.	Ceco—R-80 R-81	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 110	225 500
Champion Radio Works, Inc. Danvers, Mass.	Champion—X-281 X-280	7.50 4.25	Half Full	Filament Filament	7.5 5.0	1.25 2.0	750 300	110 125	650 260
Cunningham Inc., E. T. 370 Seventh Ave., New York, N. Y.	Cunningham—CX-380 CX-381	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 700	125 85	
Daven Corp. 158 Summit St., Newark, N. J.	Daven—AC-16	7.50	Half	Filament	7.5	1.25	550	100	450
De Forest Radio Co. Jersey City, N. J.	Audion—480 481	5.00 8.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 110	260 625
Diamond Electric Corp. Newark, N. J.	Diamond—D-280 D-281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 110	125 110
Diamond Vacuum Products Co. 4049 Diversey Ave., Chicago, Ill.	Diatron—280	4.25	Full	Filament	5.0	2.0	300	125	
Fray Mfg. Co. Chicago, Ill.	Mellotron—X-280 X-281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 110	260 620
Gold Seal Elec. Co. 250 Park Ave. New York, N. Y.	Gold Seal—280 281 85	4.25 7.50 4.50	Full Half Full	Filament Filament Gaseous	5.0 7.5	2.0 1.25	300 750 400	125 110 85	250 625 300

Please turn to page 79

JOBBERS—Are You Helping Your DEALERS to Sell

Retailers Need Help in Selling Quality Furniture

HOW many radio jobbers are helping their dealers to merchandise quality cabinets?

A well-known furniture manufacturer, distributing in a large mid-western city through a wholesaler, recently interviewed twenty dealers who were buying from that jobber connection. Ten of these retailers had never been solicited by the jobber relative to this furniture manufacturer's product. Five were carrying a few samples but were not pushing quality furniture. The remainder had never even heard of the line.

But the wholesaler should render his dealers practical aid on quality cabinets as well as on sets, both because it is his duty to do so and because there's money in it for all concerned.

Witness the following recent experience:

The Republic Radio Corporation, Grand Rapids, Mich., during the past six months sold, through its dealers, 224 special cabinets in a field of less than 200,000 persons. The retail price for the furniture alone averaged \$130 per transaction. This jobber simply made it easy for its dealers to do a 100 per cent job, that's all.

Among other things it was insisted that each retailer carry three specially selected samples of better furniture. A standard of resale prices was established. Each merchant was supplied with an elaborate catalog illustrating a wide assortment of cabinets. The importance of contacting the "class" buyer was stressed. Dealers were drilled in the talking points that appeal to the

discriminating—and they agreed to fit the chassis into any cabinet selected, with matched wood panel; a 12-hour delivery service was featured.

In short, furniture was organized as a vital appeal in the radio business—which it is. And this is something that every wholesale house can do to the profit of every dealer customer and its own sales total.

* * *

Will the New Allocations Broaden the Market?

THE new broadcasting allocations of the Federal Radio Commission will go into effect November 11th. It is the great step toward perfect radio reception which the radio trade and public have been urging the Commission to attempt ever since its inception.

How great an influence this new plan will have upon the improvement of reception and how greatly it will increase business will not be seen immediately. But it is to be expected that the effect will be beneficial in both directions.

Certainly in theory the new set-up promises to clarify and improve broadcasting and therefore it will improve reception. And any step that results in greater public satisfaction with radio service will naturally be reflected, over a period of time, in increased sales of radio products.

Expansion of the market for radio apparatus is the goal of the industry. And the widest expansion can take place in those sections of the country which have not been served by good broadcasting under the old set-up. If, in practice, the new allocation plan carries out its theoretical intention of bringing good reception to every American home, public interest will be accelerated and more widespread demand for radio equipment will follow as a natural sequence.

* * *

The Business Outlook Has Never Been Better

AUTHORITIES agreed that general business and industrial conditions at the opening of the last quarter of the year were on a comparatively high plane. The momentum of the present good times is so great as to promise, as almost certain, their continuance at least through the remainder of the year.

For example, in the radio field, exports for the first eight months of 1928 show a gain of \$1,278,417 over a like period last year. The foreign trade of the United States in electrical equipment for the first eight months of 1928 has been considerably greater than in any year since 1922. Business is operating materially above the estimated normal; production in many industries is of

It's All Over Now!

It Happens in the Best Regulated Families

By BRIGGS



N. Y. Herald-Tribune

CABINETS?

Radio Retailing

A McGraw-Hill Publication

NOVEMBER, 1928

Vol. 8, No. 5

record proportions; profits are on the increase, and all three of these conditions bid fair to continue until the end of the year. There is little unemployment except in isolated localities. Consumer purchasing power, as indicated by check payments, volume of construction contracts awarded, purchases of new automobiles and sales of new life insurance, are the highest in the history of the nation.

The greatest of all new factors underlying the present period of nationwide prosperity is the material growth in new markets which have developed under the higher standards of living created by the increasing wage scales and the decreasing cost of living. *There is now a greater distribution of wealth* than ever existed in any country at any time. This increased consumer purchasing power has set up new markets and set into motion new economic forces which become factors in the general situation long before their presence is recognized. Another outstanding guarantee of the future is the fact that these new markets are not of the mushroom type, but have every indication of permanence.

* * *

Don't Buy Discounts

DISCOUNTS are again coming to the fore as a major topic of discussion in trade circles.

Yet larger discounts are not always the "open sesame" to larger profits. The successful management of a retail business depends upon principles far more fundamental than the size of the discount.

Let's enumerate some of these basic principles—1. Knowledge of the costs of doing business and strict adherence to the limits of those costs; 2. Establishing sound merchandising policies and sticking to them religiously; 3. Preparing sales and advertising plans and carrying them out vigorously; 4. Co-relating all of the various elements that make up a retail business and smoothing them out into a harmoniously functioning operation.

Profits, therefore, depend primarily upon *ability to merchandise properly*. The merchant who will train himself and his employees to make money on small discounts is investing in the best kind of business education.

* * *

Radio Act Is Held Constitutional

THE Radio Act of 1927 has been held constitutional by a decision of Judge Wilkerson in the District Court of Northern Illinois. This very definite judicial action should bring no small degree of stability to the broadcasting industry.

The circumstances, reported in detail on another page, were just this: Two Chicago stations whose power had been reduced by the Commission under the new allocation plan, sought an injunction restraining the Com-

mission from putting its order into effect, on the ground that the act was confiscatory and therefore unconstitutional.

In denying the injunction, Judge Wilkerson's decision ruled that Congress has the right to regulate the ether which is the common property of the people, and that the Federal Radio Commission, acting for Congress, was within its rights in exercising its regulatory power for the public interest, convenience and necessity.

With the course now more clearly charted broadcast stations can look forward to a greater degree of assurance in providing this public service. Knowledge that the Radio Act is constitutional and that the Radio Commission has the legal support of the courts will undoubtedly do much to keep broadcasters safe from further disturbance and distraction.

* * *

Good Will Is a Study in Humanity

IT SHOULD be the ambition of every enterprising business man to build good will. It is an intangible asset yet it influences satisfied customers to repeat purchases. It brings increased business.

The development of good will calls for a knowledge of individual and community customs and buying habits. To the merchant, every individual should become an interesting study in human nature. The entrance of every prospective customer into his store should be an adventure in friendship. The secret of good will lies in the mental attitude of the merchant himself toward his customers.

Merchandising is a service. The merchant who would build good will, gives as much as he can to his community and is not just trying to see how much he can get out of it. The man who builds his business in this manner, remembering that first he is a human being and a good member of society, and after that a business man, is bound to win a place for himself that will lift him far above his competitors.

* * *

The Old Adage About Honesty Is Still Good

THE recent case in New York City, wherein a radio dealer was indicted by the Grand Jury for selling radio receivers from which the serial numbers had been removed, carries a grave warning not only to the gyp fraternity but to the rest of the trade as well.

Dishonest retailers have long used this method to prevent identification of merchandise when selling at cut prices. It constitutes a felony in many States. The fact that this dealer was indicted by the Grand Jury should be a powerful argument to the trade that honesty in merchandising is the healthiest policy—both legally and economically.

Practical Service Methods

Conducted by
HENRY W. BAUKAT,
Technical Editor

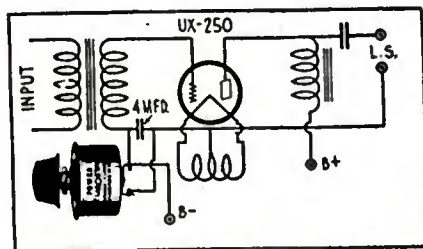
R.F. Transformers Also Condensers

A MATHEMATICAL study of radio-frequency transformer theories conducted by the radio section of the Bureau of Standards indicates that the effect of distributed capacitive coupling existing between the primary and secondary windings of a radio-frequency transformer must be considered if a close agreement between experimental and computed results is to be expected. The essential function of any transformer is the electromagnetic transfer of voltage or of energy. The two windings of the transformer, however, constitute the two plates of a cylindrical condenser. This results in an additional coupling generally increasing as the transformer dimensions are increased and as the two windings are brought closer together.

The effect of such coupling is detrimental in that it reduces the voltage amplification that can be obtained with a given transformer and tube and also necessitates a considerable increase in the mutual inductance between windings for useful operation. This increase in mutual inductance results in decreased selectivity.

C Bias for the 250 Power Tube

In employing the huge 250 type power tube in power amplifiers, either as a replacement for the smaller 210 type or in new equipment, the principal item is the heavy current drain. The B-voltage remains the same as for the 210 type, or namely around 400 volts; but the B current is now 55 milliamperes instead of 20 milliamperes per tube. This means that the power supply will have more work to do in feeding the 250 type tube with plate current. The transformer and chokes must be capable of supplying this additional current, and if two of the huge 250 type tubes are employed in push-pull amplification, it is quite likely that a special transformer,



Use of 250 tubes in power amplifier

feeding two 281 type rectifiers in full-wave hook-up, will be needed. The condensers may be the same as before, and the resistors which supply the rest of the receiver need not be changed. However, the real change comes in the C-bias resistance. This must now be a real, heavy-duty variable resistor since it must handle 55 milliamperes at 70 volts for a single 250 type tube, and 110 milliamperes at the same voltage when two such tubes are operated. The resistance must be accurately arrived at, necessitating variable resistance in the usual circuit where several unknown and changing factors exist. The arrangement shown in the accompanying diagram is offered as a suggestion. It comprises a power clarostat

inserted between the filament winding center tap and the B-negative, together with a by-pass condenser of 4 mfd. capacity. The resistance in this case may be set to the exact value necessary for tone quality, after which it will handle the heavy current flow without difficulty.

Push-Pull Amplification with Ordinary Transformer

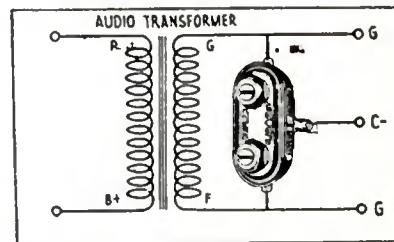
It is often desirable to apply the push-pull form of amplification, using the usual type of audio transformer which may be at hand. This may be done by securing an electrical mid-point across the secondary of the transformer, which serves for the C-connection. Now this electrical mid-point should be obtained by means

of a total resistance of the value found best by actual test for the conditions obtaining in the circuit, as well as the electrical mid-point by having the necessary values on each side of that connection. While fixed resistances may be employed

for this purpose, provided the exact resistance values are known in advance, it is generally preferable to use a potentiometer device with variable total resistance as well.

In our diagram is a simple means for obtaining the necessary electrical mid-point and total resistance across the transformer secondary for push-pull amplification. It will be noted that the two terminals of the transformer, shunted by the duplex clarostat, go to the grids of the two tubes, while the center terminal of the dual resistance goes to the C-connection. The tubes are arranged in the usual push-pull style, the two plates being connected to the ends of a center-tapped choke coil or transformer, the center-tap of which is connected with the B plus power source.

Because of the precise total resistance and mid-point obtained with this arrangement, high efficiency is realized even with the ordinary transformer, at a considerable saving to the radio experimenter.



Transformer-secondary resistance for push-pull amplification.

Obsolete Sets and Dynamic Speakers

Here is some sound advice, coming from the United Radio Corporation, that every service and salesman should read and remember:

"It has come to our attention that many of our jobbers and dealers have found fault with Peerless dynamic speakers when they connected them to radio receiving devices which were obsolete. These complaints have filtered through to us and, upon making an investigation of the situation, it was discovered that many jobbers and dealers were not familiar with the fact that the

present-day radio receiving devices contain improvements in both the radio and, particularly, the audio end of their respective circuits.

"In view of the above, we would like to point out the technical condition which exists when using dynamic speakers on obsolete or ancient equipment so that salesmen will be better fitted to explain the cause of poor reproduction and impress the trade with the importance of using modern equipment in all demonstrations.

"Let us take, for an example, a relatively obsolete radio receiver. If the audio system is not properly designed, it limits the frequency reproduction range of any speaker connected to it. Suppose that the mechanical frequency range is from 40 to 6,000 cycles, and the radio receiver's audio system is so designed that it will only pass musical frequencies from 200 to 3,000 cycles. Then it cannot be expected that because the speaker is of a dynamic type, that it in itself will supply portions of the missing frequency range. This loss will manifest itself in both the lower and higher frequency response.

"We recommend that the trade confine their demonstrations of Peerless speakers or, in fact, let us say any type of speaker, to radio receivers of the modern type which contain all the new improvements that have been made in the radio art over a period of the last three years.

"Good quality phonograph amplifiers, together with a good magnetic pick up, make excellent demonstration for periods in the day in which no satisfactory local broadcasting is available.

"Please do not forget that it is *impossible* to rejuvenate an ancient or obsolete radio receiver by means of a face-lifting operation of connecting a dynamic speaker on the out-put.

"Likewise, we suggest that the trade should not knowingly sell a customer a dynamic speaker, based on the demonstration and test in the salesroom, when it is understood that the set upon which it is going to be used

is of the obsolete type. Rather, point out the marked steps of advance which have been made in the circuits in the radio industry and sell the customer on a new and up-to-date radio receiver. The customer will then be able to enjoy the complete reproduction of everything his radio receiver will be able to deliver to the Peerless speaker and will have a duplicate of that which was originally demonstrated to him."

Why By-Pass Condensers Are Used for A.F. and R.F.

Several years ago the Dubilier engineering staff recommended by-pass condensers across the plate supply of audio frequency and radio frequency circuits, after an exhaustive study of the action of by-pass condensers. The idea was not received with much enthusiasm at the time, being looked upon as the making of a mountain out of a mole hill. Today, however, when volume and tone quality are considered of paramount importance to meet the requirements of the critical radio ear, by-pass condensers are widely employed in most manufactured and home-built receivers, whether socket-power or battery operated.

In the case of the B-power unit, the use of by-pass condensers for the various plate circuits improves the overall filter action of the B-power unit and decreases the hum or ripple to the vanishing point.

When B-batteries are employed as the source of power, the by-pass condensers act as low impedance paths and prevent audio-frequency regeneration which makes its presence known by howling or again by the so-called "motorboating." In any event, the use of by-pass condensers invariably leads to improved volume and tone.

Because of the fairly low voltage handle, with the exception of the by-pass condenser shunted across plus B maximum and minus B, low voltage condensers may be safely employed, of 1 or 2 mfd. capacity.

RADIO SET ANALYSIS									
OWNER <u>H. J. Marshall</u>			DATE <u>Aug. 15 '28</u>						
ADDRESS <u>1015 Prairie Ave. City.</u>									
NAME OF SET <u>6 tube tuned R.F., with eliminator</u>									
TUBE NO. IN ORDER	TYPE OF TUBE	POSITION OF TUBE 1 ST. R.F., DET., ETC.	READINGS, PLUG IN SOCKET OF SET						
			TUBE OUT OF TESTER		TUBE IN TESTER				
			A VOLTS	B VOLTS	A VOLTS	B VOLTS	C VOLTS	NORMAL PLATE M.A.	PLATE M.A. GRID TEST
1	201-A	1st R.F.	5.2	95	5.0	90	0	5.3	11.1
2	201-A	2nd R.F.	5.2	95	5.0	93	0	0.2	0.3
3	201-A	3rd R.F.	5.2	95	5.0	90	0	5.2	10.8
4	201-A	Detector	5.6	45	5.0	45	0	1.7	5.5
5	201-A	1st audio	5.4	0	5.0	0	4.5	0	0
6	171	2nd audio	5.2	157	5.0	150	41.0	5.0	off scale
7									
8									
9									
10									
SUGGESTIONS OR CHANGES MADE <u>New tube in socket #2. Repaired break to plate of 1st audio tube socket. Boosted B voltage on last tube.</u>									
BY <u>Smith Radio Shop - A.R. West.</u>									

Service Analysis Chart

This is an excellent example of a set analysis chart for the service man. These should be kept in carbon and used in checking bills. This particular chart is furnished by Jewell Electrical Instrument Co., with their checking instruments.



New Products for

This editorial section is prepared purely as a news service, to keep readers of "Radio Retailing" informed of new products.

Brunswick's Line of Radio Receivers and Panatropes

The Brunswick-Balke-Collender Company, 799 Seventh Avenue, New York City, announces its new line of radio receivers and Panatropes (combination radio sets and phonographs).



Five new Panatropes with Radiolas have been brought out by the Brunswick-Balke-Collender Company, 799 Seventh Avenue, New York.

The set in Model 3-KRO Panatrope has the t.r.f. circuit, single-dial control and a cone type electro-magnetic speaker. The cabinet is 49½ inches high and finished in American walnut. The intended retail price is \$395, with tubes.

The 2-KRO, with Radiola 18 and a cone speaker, incorporates Panatrope equipment of the exponential type. The walnut cabinet is 49 inches high. Intended retail price, \$250 with spring motor, and \$285 with electric motor, both prices including tubes.

The 3-KR-8 has Panatrope

equipment of the electrical type with Radiola 18 and a de luxe type 8-inch dynamic speaker driven by a super power unit employing a UX250 tube. The cabinet is of American walnut finish with overlays and carving. The intended retail price is \$750 with tubes.

The Panatrope equipment of the 3-NC-8 is of the electrical type with Radiola 62 and an 8-inch dynamic speaker. The walnut cabinet is carved and stands 50½ inches high. The intended retail price is \$700 with tubes.

Model 9-8 (without radio) has the Type E Brunswick two spring motor, 12-inch turntable and exponential type amplifier. The list price is \$95.—*Radio Retailing*, November, 1928.



MODEL 5NC8

(Above) This 9-tube superheterodyne A.C. set is contained in a highboy console of American walnut with overlays and carving. It is 49½ in. high. The intended retail price is \$375 without tubes.—*Radio Retailing*, November, 1928.



MODEL 5KRO

(Above) Enclosed in a console highboy of American walnut, with exterior parts in oxidized antique finish, this model has a 7-tube A.C. set, with a built-in electro-magnetic cone type reproducer. It lists at \$215, less tubes.—*Radio Retailing*, November, 1928.

MODEL 5NO

(Right) A 9-tube superheterodyne A.C. receiver in a cabinet of American walnut, 31 in. wide, 11 in. high and 10 in. deep. The intended retail price is \$175, without tubes. Designed for use with the model "A" speaker.—*Radio Retailing*, November, 1928.



MODEL 5KR

(Above, left) This table model has a 7-tube A.C. set. The cabinet is of walnut and measures 27½ in. x 9½ in. x 8½ in. This set is designed for use with the model "A" electro-magnetic speaker which retails at \$35. The intended retail price, less tubes and reproducer, is \$115.—*Radio Retailing*, November, 1928.



Eight-Tube Receivers

A new line of all-electric table and console radio sets is announced by the S. Freshman Company, 225 North Michigan Ave., Chicago, Ill. The set—known as the President—is a fully shielded, 8-tube, A.C. receiver, adjustable to a voltage range of from 95 to 140 volts. It has the single-dial, illuminated

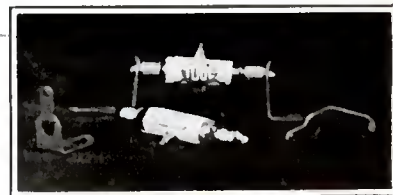
control, and built-in phonograph jack. Two 171 power tubes give exceptional volume, built to test full dynamic speaker power. The table model retails for \$60 and the console for \$149.50.—*Radio Retailing*, November, 1928.



Television Condenser Motor

Four types of television condenser motors are being made by the Interstate Electric Company, 4339 Duncan Avenue, St. Louis, Mo. The specifications are as follows: Type M2V, 1/15 hp., 1,800 r.p.m. for receiving sets employing 9 in. to 18 in. aluminum scanning disk, resistance controlled, 1,700 r.p.m. full load, price \$23. Type YIV, ¼ hp., 1,800 r.p.m., recommended for sets using 24 in. scanning disk, price \$30. Type Y-2V, ¼ hp., 1,200 r.p.m. for television sending set, price \$33. Type Y2S, ¼ hp., synchronous, 1,200 r.p.m., price \$44.

All are for use on 110-volt, 60-cycle, single phase current, and prices include motor and condenser.—*Radio Retailing*, November, 1928.



Vacuum Mica Condenser

The Tobe Deutschmann Company, Cambridge, Mass., has placed on the market the "Tipon" vacuum mica condenser. This is of the standard grid-leak size. In sizes from 0.0002 to 200 mmf. the list price is 40c. net. All other sizes to 0.006 mfd. The list price is 80c.—*Radio Retailing*, November, 1928.

Dealers to SELL

All announcements appearing on these pages are published without advertising considerations of any kind whatsoever.



Reproducers

The line of speakers and speaker units made by the Joy-Kelsey Corporation, 211 W. Wacker Drive, Chicago, includes the illustrated model 26, a dynamic cone which stands 30 in. high and is 18 in. wide. The intended retail price is \$56. Model 25, of the mantel type, is \$48.50 and Model 27, slightly larger, is \$65. The Model 23 speaker unit, complete with rectifier and step-down transformer, mounted in a pressed steel sub-base, to operate on 110 volt A.C. is \$39.50. A unit to operate on 80-115 volt D.C. is \$31.50 and one for 6 volt D.C. is \$29.50.—*Radio Retailing*, November, 1928.



Television Kits

Four complete essential experimenter's kits have been put on the market by the Insuline Corporation of America, 78 Cortlandt Street, New York City. Model 52 consists of 1 Bakelite scanning disc 48 holes (24 or 36 holes if desired), a Universal A. C. or D. C. motor, a push button speed adjustment, motor chuck, telescope with two lenses, screws and lens bracket Bakelite sub-base for motor, receptacle cord and plug for attachment, sub-base with socket for television lamp, picture frame shield, Bakelite pillars, brackets, screws, hardware and four-stage television amplifier. The intended retail price is \$52.50, without television and amplifier tubes. Model 65, same as Model 52, but with television tube, is \$65. Model B-1, without amplifier or television tube, is \$37.50. Model 45, same as B-1 but with improved motor, is \$45.—*Radio Retailing*, November, 1928.

A.C. Receivers

A number of all electric console receiver models have been marketed by The Slagle Radio Company, Fort Wayne, Indiana, a division of the United States Electric Corporation. Model 9 uses seven tubes. The cabinet is of walnut veneer. The list price is \$360.

Model 1029A is also designed for A.C. operation, and has a directional built-in loop. Its list price is \$500.

Model 1029-B uses eight 227's and two 171's in push-pull. The list price is \$600.

Both Model 1029-C at \$750, and Model 1029-D at \$850, use eight 227's and two 171's in push-pull. These prices do not include tubes.—*Radio Retailing*, November, 1928.



Console Receiver

The electric set made by the Shamrock Manufacturing Company, 168 Summit Street, Newark, N. J., is now available in a highboy console model with burl walnut panels. It is 53 in. high and 18 in. deep. The intended retail price is \$167.50.—*Radio Retailing*, November, 1928.

Receiver

The Federal Radio Corporation, Buffalo, N. Y., has introduced a new Ortho-sonic receiver, Model F-11. It operates on antenna and ground, with four stages of t.r.f., coupled



with the detector and two stages of amplification. It may be obtained for both battery or A.C. operation. The battery operated set lists at \$145.—*Radio Retailing*, November, 1928.



Dynamic Speaker

A new dynamic chassis has been brought out by the Sterling Manufacturing Company, Cleveland, Ohio. It has only one moving part, namely the moving coil and cone which are mechanically one integral part.

For 100-125 volt, 50-60 cycle A.C., the intended retail price is \$40; for 25 cycle, \$45; for 6 volt D.C., \$30, and for 110-150 volt D.C., \$35.

The unit in a two tone walnut finished table model lists at \$60 to \$75. The floor console model is priced from \$75 to \$90.—*Radio Retailing*, November, 1928.



Reproducers

A portable reproducer with a dynamic cone unit in a cabinet of walnut 15 inches high by 17 inches wide by 10 1/2 inches deep, has been added to the line of Newcombe-Hawley, Inc., St. Charles, Ill. It comes in three models—for 6 volt battery sets, 100-200 volt D.C. operation and 110-115, 60 cycle A.C. operation.

A table reproducer with a dynamic cone unit is also available in three models as given above, as well as a console reproducer with a dynamic cone.

The illustrated table reproducer has a magnetic cone mounted beneath the table, which is made of walnut.

A console reproducer air column unit, equipped with a 72 inch exponential tone chamber and genuine Nathaniel Baldwin rival unit, is also made. It requires no special amplifier. The cabinet is walnut with cloth covered grill, and a set compartment in the top.—*Radio Retailing*, November, 1928.

A.C. and Battery Sets

Battery and A.C. sets, featuring removable plug-in coils, especially made to provide for both short and high-wave reception, are included in the line of the Baldor Radio Co., Inc., 80 Fourth Avenue, New York. They are of the table type with single-dial control, phonograph pick-up and dynamic speaker connection. The intended retail price of the A.C. set is \$85, and of the battery receiver, \$45.—*Radio Retailing*, November, 1928.

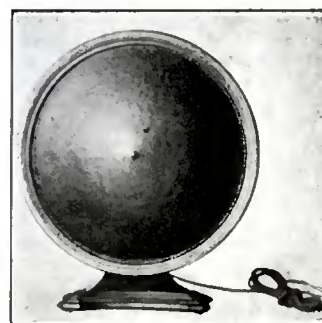


Battery Charger

The Acme Electric & Mfg. Co., Cleveland, Ohio, announces a new dry charger known as type D-2. It may be operated as a trickle charger, delivering 1/2 of an amp., or as a 2 amp. charger. The rectifier is of the dry type and has guaranteed life for 3,000 hours, according to the manufacturer, and can be readily replaced. The charger is finished in crystalline lacquer. The retail price is \$12 complete.—*Radio Retailing*, November, 1928.

Reproducer

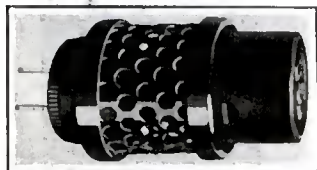
The Stromberg-Carlson Telephone and Manufacturing Company, Rochester, N. Y., has added a 14-inch cone to its reproducer line. It employs a new type of driving element and the armature is suspended in the middle instead of from one end, lessening its moment of inertia. The frame is of rugged die cast metal and the cone material is of seamless acoustic fibre. The intended retail price is \$22.50.—*Radio Retailing*, November, 1928.





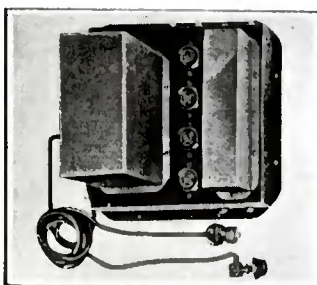
A.C. Receiver

The new 7-tube electric set for both direct and alternating current operation offered by the Colonial Radio Corporation, Long Island City, N. Y., has a built-in electric-dynamic speaker. The power plant transformer is equipped with an automatic voltage regulator for line voltages between 90 and 120. 280 type tubes are used for full wave rectification. The set has a phonograph pick-up jack, and two 171 type tubes in push-pull are used for power amplification. The prices depending on the cabinet, are \$268 and \$278, without tubes.—*Radio Retailing*, November, 1928.



Line Voltage Reducer

The Ward Leonard Electric Company, Mount Vernon, N. Y., is marketing a Vitrohm line voltage reducer, a little larger than a vest-pocket flashlight in size. It reduces line voltages of 125 volts or less to a safe value for the operation of A.C. sets drawing from 0.4 to 0.6 amperes. The intended retail price is \$2.—*Radio Retailing*, November, 1928.



Power Audio Amplifier

A new combination power audio amplifier and power pack, operating directly from 110-volt A.C. circuits, with an output of approximately 1.5 watts, and known as the 220 power audio amplifier, has been announced by the H. H. Eby Manufacturing Company of Philadelphia, Pa. This is the first of a series of combination power packs and audio amplifiers and is a two-stage transformer coupled unit, employing a 226 type A.C. tube in the first stage and two 171 tubes connected in push-pull fashion as the output stage. The power supply for the unit is obtained from a 280 full-wave rectifier.—*Radio Retailing*, November, 1928.

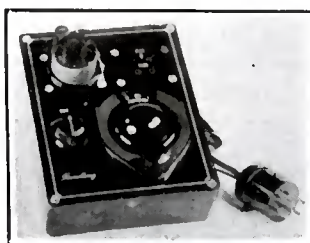
Reproducer

The illustrated Gothic design speaker of the Radio Foundation, Inc., 1 Park Place, New York City, is incased in a burl walnut cabinet and equipped with an electro-magnetic unit. The intended retail price is \$29.50. The same unit in a square cabinet with rounded corners is also \$29.50. The chassis mounted in a wooden housing for manufacturers is \$18.—*Radio Retailing*, November, 1928.



Short Wave Adapter

The Flewelling short wave adapter made by the Radio Products Co., Norwood Power Bldg., Dayton, Ohio, is designed for use on 60-70 volts. It will operate with any type of receiver by simply plugging it into a tube socket on the receiver. No change in the wiring is necessary. Intended retail price of unit in a Bakelite case, everything complete, is \$22.—*Radio Retailing*, November, 1928.



Consoles Cabinets

Two console cabinets of modernistic conception are offered by the I. A. Lund Corporation, 1018 South Wabash Avenue, Chicago. Model 511 has stripe mahogany doors with center ornaments. The side and tops are walnut. It will accommodate a set up to 21 inches wide by 11 in. high by 13 inches deep. The intended retail price without reproducer, is \$110.

Model 513 has natural grain blistered maple doors with beaded panels and figured burl overlay decorations. The intended retail price is \$98.—*Radio Retailing*, November, 1928.



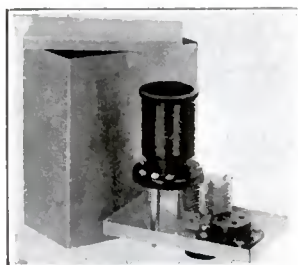
Panel Lamp Bulb

The LaSalle Radio Tube Corporation, 149 West Austin Avenue, Chicago, a division of the Matchless Electric Company, is now in production on its No. 41, 2½-volt, radio panel lamp bulb, the intended retail price of which is 14c.—*Radio Retailing*, November, 1928.



Drum Dials and Window

Silver-Marshall, Incorporated, 846 W. Jackson Blvd., Chicago, Ill., announces the production of drum dials S-M 806-R and 806-L with S-M 807 window. Also, there are two panel escutcheon plates S-M 808 (single) and S-M 809 (double). The total price of dial and window is \$3.—*Radio Retailing*, November, 1928.



Copper Stage Shield

A copper stage shield has been brought out by Silver-Marshall, Incorporated, 846 W. Jackson Blvd., Chicago, Ill. It is made of .014 sheet copper, with removable top and bottom. It is 5½ in. x 4½ in. x 2½ in., which size adapts it for use with the new S-M 5-prong, plug-in coils. The bottom is pierced for tube sockets, coil sockets, and midjet condenser assemblies. It is listed at \$1.25.—*Radio Retailing*, November, 1928.



Colored Resistances

Owing to a demand from several large radio manufacturers, the Polymet Manufacturing Corporation, 599 Broadway, New York City, has just placed on the market strip resistances made in various bright colors.—*Radio Retailing*, November, 1928.

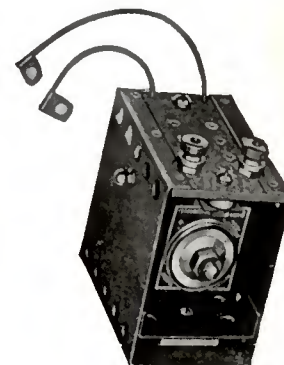
Grid Glow Tube Demonstration Set

The Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has placed on the market what is known as a "Grid Glow Tube Demonstration Set" for advertising and publicity work. It is mounted in a well finished wooden box on the top of which is a black Micarta panel, with a tube in a regular tube socket near the center of the panel. The dimensions of the box are 7 in. high, 7½ in. wide, and 11½ in. long. To operate connect the unit to a 110 volt, 25 to 60 cycle source, and make one adjustment of the variable condenser.—*Radio Retailing*, November, 1928.

Motor Generator

The Bodine Electric Company, 2254 W. Ohio Street, Chicago, Ill., announces an improved model of its standard motor-generator set. The principal changes are the incorporation of an improved filter system, and a change in general design permitting the filter and regulating rheostat to be enclosed in the base of the set, thereby protecting them from damage.

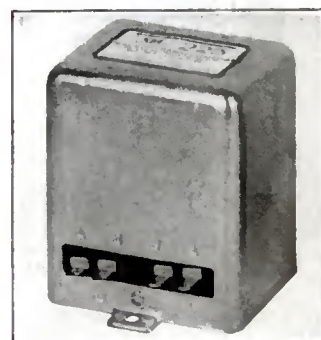
This radio motor-generator set converts direct current to single-phase, 60 cycle alternating current. The set delivers 250 watts, sufficient to operate any radio or radio-phonograph combination.—*Radio Retailing*, November, 1928.



Replacement Units

The Elkon replacement unit type BNK takes the place of the acid jars in types N and K Balkite trickle chargers. Special wire springs are provided which clamp the unit securely in place.

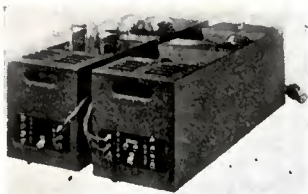
With the Elkon BNK, the charging rate of the type N is increased from 0.4 ampere to 0.8 and in the type K from 0.8 to a full ampere. The units are solid and dry and no water, or other liquid is used and no corrosion takes place. List price, \$5.00. The Type BJ replaces the acid jar in the Balkite type J Charger. Charging rates are increased 20 per cent besides having the advantage of dryness and freedom from attention. List price, \$7.50. Manufactured by Elkon, Inc., Port Chester, N. Y.—*Radio Retailing*, November, 1928.



Audio Transformer

Silver-Marshall, Inc., 846 West Jackson Blvd., Chicago, Ill., has placed on the market first and second stage audio transformers Nos. 225 and 226. The 225 is the first stage and the 226 is the second stage. These are manufactured under the Clough patent application. They are listed at \$9 a piece and are the same size as the 220 type.

Two other first and second stage audio transformers are also announced at this time Nos. 255 and 256. These are totally shielded in black japanned steel cases. They list at \$5 each.—*Radio Retailing*, November, 1928.



Powerizer

Powerizer PXP-250 is a powerful three stage push-pull amplifier. Push-pull 250 units may be added at will by means of the sectional units as made by Radio Receptor Co., 106 Seventh Ave., New York. Two units are sufficient to fill a house with at least 2,500 people. The device consists of one stage UY 227, one stage push-pull 171 and one stage push-pull 250. Has a tapped input and output. The intended retail price, less tubes, is \$250. — *Radio Retailing*, November, 1928.

Interference Eliminator

A new line of interference eliminators is being marketed by the Potter Manufacturing Company, Inc., 1950 Sheridan Road, North Chicago, Ill. They are made for operation on 110 and 220 volts A.C. Three sizes of units available for each type of line voltage. The list prices range from \$2.25 to \$6.50. — *Radio Retailing*, November, 1928.



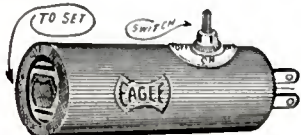
Home Power Amplifier

A new home power amplifier built into a compact unit with a Sterling dynamic speaker chassis is now being made by the Sterling Manufacturing Company, Cleveland, Ohio. The unit connects instantly with any A. C. or D. C. set.

It is designed to use either a 250 or 210 power amplifier tube. The unit furnishes the energy needed for providing the wide amplitude of vibration in the moving coil of the dynamic speaker. The intended retail price is \$38. — *Radio Retailing*, November, 1928.

Line Voltage Regulator

The Eagle Electric Manufacturing Company, 59 Hall Street, Brooklyn, New York, is putting on the market a line voltage regulator known as the "Prote-X-Tube." Model 240 with a handy on and off switch is \$2 and model 241, without switch, is \$1.50. — *Radio Retailing*, November, 1928.



Power Supplies

Two new power supplies have been brought out by Silver-Marshall, Incorporated, 846 West Jackson Blvd., Chicago. They provide fixed voltage taps for 22, 90, 135 and 180 volts and one variable 3-voltage tap for 22-90 volts. They are known as the S-M 670-B and 670-ABC power supplies. The 670-ABC model delivers 1.5 volts at 4 amperes; 2.25 volts at 3.5 amperes; and 5 volts at .5 ampere each for from one to five 226 type, two 227 and 2, 112A or 171A power tubes. Both models employ one 280 type rectifier tube, and both are provided in kit form or wired. The 670-B kit lists at \$33 and \$36 if wired. The ABC kit lists at \$35.50 and \$38.50 if wired. — *Radio Retailing*, November, 1928.



Cone Units, Chassis, Speaker, Microphone

A complete line of cone units and cone chassis, a microphone and a cone speaker have been announced by The Amplion Corporation of America, 531 W. 37th St., New York City. The cone units are B-104 and 105 listing at \$10 each. The chassis, featuring the B-104 unit and the electric shelter 103, lists at \$20. The microphone is imported from the company's English factory and is designed to operate on 6 to 30 volts without any carbon noises. It lists at \$100. The Amplion "Royal" cone speaker is priced at \$30. This company also makes a giant dynamic air-column unit for public addresses and band repeating in large halls and open spaces. It is designed to operate on 10 to 50 watts output. — *Radio Retailing*, November, 1928.

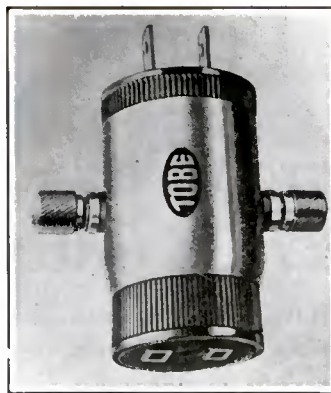
A. C. Set and Magnetic Speaker

The Simplex Radio Co., Sandusky, Ohio, presents a new all-electric 8-tube set, self-contained and entirely encased in a metal cabinet, available either for 25 or 60-cycle current, and featuring two 210 tubes in push-pull amplification, the other tubes employed being four 226's, one 227 detector and a 280 rectifier. It is a compact, trim table model receiver but the entire unit may be slipped into a console cabinet. The intended retail price, without tubes, is \$145.

The Simplex reproducer is a power motor (magnetic) cone designed especially for high power amplification and matched to the impedance of the set. — *Radio Retailing*, November, 1928.

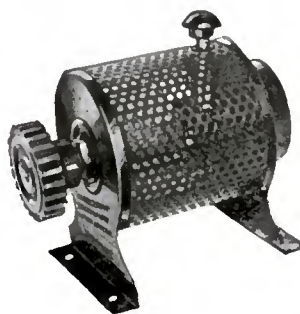
Resistovolt

The Insuline Corporation of America, 78 Cortlandt Street, New York City, has just placed on the market a new "Resistovolt" identical in purpose with the original Resistovolt, but made of nickel plated metal and incased in a perforated tube, which gives it the air cooling feature. The intended retail price is \$1.75. — *Radio Retailing*, November, 1928.



Four-Purpose Light Socket Aerial

The Tobe Four-Purpose Light Socket Aerial plugs into any electric lamp socket or convenient outlet as an antenna, doing away with the outdoor antenna and allows the use of the light socket for electrical purposes. Made by the Tobe Deutschmann Co., Cambridge, Mass. List price, \$1.50. — *Radio Retailing*, November, 1928.



Television Clarostat

A television clarostat has been developed by the Clarostat Mfg. Co., Inc., 285-7 North Sixth Street, Brooklyn, N. Y. It comprises a special power type clarostat, together with a short-circuiting push-button. The device has a resistance range of from 25 to 500 ohms. It dissipates up to 80 watts, and can govern either a universal or a condenser type motor, on A.C. or D.C., up to 1 horsepower. It is designed for the control of the scanning disk and has the push button control. The intended retail price is \$5.00. — *Radio Retailing*, November, 1928.

A. C. Chassis

The new A.C. 171 chassis, added to the line of Pierce-Airo, Inc., 113 Fourth Ave., New York City, is made of heavy gage, drawn and welded steel, housing all the component parts including power supply and is rigidly constructed throughout. It has a single illuminated control.

The amplification consists of one stage of audio combined with one stage of power push-pull amplifying transformers. The power supply is an integral part of the chassis. The chassis is finished in bronze Duco lacquer. The panel is finished in a natural grain burl walnut. — *Radio Retailing*, November, 1928.

Dynamic Speaker

A table-model dynamic speaker, known as Model 50, is being marketed by Temple, Inc., 1925 South Western Avenue, Chicago, Ill. It operates on either A.C., D.C., or battery, and is 14 1/2 in. x 11 in. x 6 1/2 in. It weighs 18 lb. List price: \$49. — *Radio Retailing*, November, 1928.



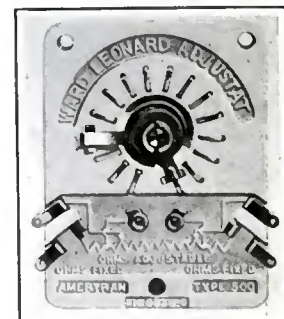
Tubes

The Raytheon Manufacturing Company, 238 Main Street, Cambridge, Mass., has added the following tubes to its line: 227, a detector-amplifier; X-226, an amplifier; X-171A, a power amplifier, and X-280, a full wave rectifier. — *Radio Retailing*, November, 1928.



Dual Adjustat

The Vitrohm dual adjustat, which the Ward Leonard Electric Company, Mount Vernon, N. Y., makes, is designed for use in all current supply units where adjustment of intermediate voltages is wanted. It consists of two fixed resistance sections each connected with an adjustable section. Sixteen adjustable resistance steps are covered by each of two moving contact arms. Two types—for 200 volt and 400 volt service—are available at \$8.50 each. The unit is also supplied to manufacturers in special resistance values to meet individual requirements. — *Radio Retailing*, November, 1928.



Correction

The power amplifier made by the L. S. Brach Manufacturing Corporation, Newark, N. J., listed on page 89 of our September issue has an intended retail price of \$55, less tubes, and not \$47.50, less tubes, as indicated.

What the Trade is Talking About

Judge Wilkerson Declares Radio Act of 1927 Constitutional

Stations WCRW and WEDC, Chicago, must abide by the Federal Radio Commission's ruling reducing their power from 500 to 100 watts

IN THE first ruling ever handed down on the constitutionality of the Radio Act of 1927—granting the Radio Commission the right to regulate the country's broadcasting stations—Federal Judge James H. Wilkerson, sitting at Chicago, October 9, declared that "the construction of plaintiff's plant and its operation prior to February 23, 1927, did not create property rights which may be asserted against the regulatory power of the United States if that power be properly exercised."

This decision was rendered in the case brought by two Chicago stations, WCRW and WEDC, owned and operated by Clinton R. White and Emil Denmark, who sued to enjoin the United States from enforcing the recent order of the Federal Radio Commission reducing the power of both stations from 500 to 100 watts.

Judge Wilkerson's decision, according to the consensus of opinion among prominent radio leaders gathered at Chicago for the Radio Show, has averted a possible repetition of the chaotic conditions which resulted after the breakdown of radio regula-

tion in 1926. It will be remembered that it was a ruling also by Judge Wilkerson in the famous WJAZ case which occasioned the 1926 disruption.

In his present decision, Judge Wilkerson said, among other things, that "the regulation of radio communication is a valid exercise of the power of Congress," and that "the act of February 23, 1927, is not invalid in whole or in part by reason of the indefiniteness of the standard (public interest, convenience and necessity) prescribed by Congress for the guidance of the Commission in issuing licenses," and in conclusion that, "upon the record presented I am not prepared to hold that the order of the Commission is contrary to the indisputable character of the evidence and therefore arbitrary and void."

CLAIMED PROPERTY RIGHTS INVADIED

THE stations, through Attorneys Ernest R. Reichmann and Henry K. Urion, brought suit seeking a temporary injunction to prevent H. D. Hayes, local Federal Radio Supervisor, and George E. Q. John-

son, U. S. District Attorney, from enforcing the commission's ruling, which was part of the new allocations. The injunction, of course, was denied.

Attorneys for the plaintiff argued that the property rights of Stations WCRW and WEDC were invaded by the cutting of their power. It was claimed that while the regulatory powers of the Commission under the act made it legal for it to cut the power of all stations equally, to curtail the power of some and not of others was discriminatory and confiscatory and that consequently the act was unconstitutional.

Defending the government's action, Attorney Louis Caldwell, general counsel for the Radio Commission, and Assistant U. S. District Attorney Allan Healy maintained that under its standard of public convenience and necessity the people had a right not only to reduce power and change wavelengths, but to bar stations from the air altogether, on the same ground that the government could order the removal of a bridge if its presence constituted an obstruction to navigation.

In their presentation of the case for the government, Attorneys Caldwell and Healy pointed out also that while WCRW's programs consisted mostly of phonograph records and WEDC presented foreign language programs to a limited audience, their power of 500 watts was sufficient to interfere with more important programs not alone originating in the Chicago district, but from distant points.

It is understood that Attorneys Reichmann and Urion intend to appeal from Judge Wilkerson's decision.

Television Demonstrations Popular at St. Louis Show



The attendance at the fourth annual Southwest National Radio Exposition, sponsored by the St. Louis Radio Trades Association, broke all previous records. An accurate check on the number of dealers attending showed that 1,100 registered this year as compared with 876 at the 1927 show.

In the oval, left to right, are: Harold W. Wrape, president, Federated Radio Trades Association; Graham McNamee, radio announcer; Julian E. Sampson, president, St. Louis Radio Trades Association; William F. Mackle, executive secretary of the St. Louis Association, and Phillips Carlin, radio announcer.

Plan to Unite Freshman and Freed-Eisemann

The proposed merger of the Chas. Freshman Company, Inc., New York, and the Freed-Eisemann Radio Corporation, Brooklyn, is now practically complete and awaits only the approval of the Freshman stockholders. If the merger is effected, Freshman will control the majority stock of the Freed-Eisemann Corporation.

The individuality of the two companies will be maintained and the products of each will be sold under their present trade marks. A new factory where both concerns will be under one roof is now sought.

The officers of the Freed-Eisemann Radio Corporation, upon confirmation of the plan, will be as follows: President, Joseph D. R. Freed; vice-president and secretary, Arthur Freed; vice-presidents, Arthur Trostler and Leo Freed; and treasurer, W. J. Keyes. Joseph D. R. Freed and Arthur Freed will become directors and vice-presidents of the Freshman company. Charles Earl, in addition to his duties as president of the Freshman company, will become chairman of the board of directors of the Freed-Eisemann Radio Corporation.

Music Industries to Meet During R.M.A. Week

At the regular fall meeting of the board of directors of the Music Industries Chamber of Commerce held at the Drake Hotel, Chicago on October 23, it was voted to hold the next annual convention at the Drake Hotel, concurrent with the R.M.A. radio trade show. The executive committee of the M.I.C.C. will confer with the show committee of the R.M.A. with a view to arranging both programs so as to avoid conflicting hours and subjects.

It is expected that many radio manufacturers will exhibit at both conventions which will take place the week of June 3, 1929. An overwhelming attendance of New York music dealers as a result of this proposed co-ordination of conventions is anticipated. Much of the program will be devoted to radio subjects.

High Dealer Registration At St. Louis Show

Surpassing the 1926 and 1927 shows, this year's Southwest National Radio Exposition, sponsored by the St. Louis Radio Trades Association, attracted a record crowd. The attendance for the six days was 94,869, 1,100 of this number were dealers, about 300 more than last year.

The national character of the show was maintained by the elimination of jobbers' names from the sixty booths. Three radio stations, broadcasting direct from the Crystal Studio in the building, provided entertainment during the show hours. Television apparatus and a demonstration of photoradio equipment drew many interested spectators.

THE FEDERAL RADIO COMMISSION has postponed the effective date of General Order No. 43, limiting duplicated operation on cleared channels to stations more than 300 miles apart, until the end of the next broadcasting-license period, January 31, 1929.

THE H. H. EBY MANUFACTURING COMPANY, INC., Philadelphia, has opened a Chicago office at 205 Wacker Drive, where E. R. Peel is in charge.

Radio Retailing, November, 1928



Presenting

Mr. and Mrs. Strassner on their favorite mounts, about to start on a canter. Mr. Strassner is president of the A-C Dayton Company, Dayton, Ohio, and also a member of the Hills and Dales Club.

THE MAGNAVOX COMPANY, Oakland, Calif., has issued a license to the Raytheon Manufacturing Company, Cambridge, Mass., to manufacture tubes under Magnavox tube patents pertaining to exclusive constructional design and processes. Magnavox has also licensed Charles Cory & Son, Inc., New York City, to manufacture anti-noise, marine-type telephone equipment and anti-noise transmitting equipment under its anti-noise and dynamic patents.

THE GOLD SEAL ELECTRICAL COMPANY, INC., 250 Park Ave., New York, has leased a new suite of offices at its present location, doubling the size of its quarters.

Federated Sets Date For 1929 Convention

The Board of Directors of the Federated Radio Trade Association at its meeting on October 11, formulated plans for the convention to be held in Buffalo next February 18, 19 and 20.

The idea of a serial number act to make it a misdemeanor to remove or deface serial numbers on radio merchandise was discussed and endorsed. A recent survey disclosed that there are no laws in any state pertaining to this subject. An act was drafted to be submitted to all state legislatures.

The Board voted to send a resolution to the Federal Radio Commission thanking them for their efforts to provide better broadcasting. It was reported that an application for membership had been received from the Radio Trade Association of Southern California.

Fada Window Display Contest

Three prizes of \$100, \$50 and \$25 each and three \$10 awards will be given to Fada dealers for the best window display during November and December. A clear print and description of the window should be sent to F. A. D. Andrea, Inc., Long Island City, N. Y., before January 15, 1929.

THE UNITED RADIO CORPORATION, Rochester, N. Y., announces that its dynamic reproducer has been adopted for use by the Charles Freshman Company, Thomas A. Edison, Inc., the Sonora Company and the Splittorf Radio Corporation.

THE AMERICAN TRANSFORMER COMPANY, Newark, N. J., which for years has been selling on a direct-to-dealer, C.O.D. basis, has changed to a direct-to-jobber, open credit basis of selling.

Official Reception Committee at Chicago Show



Here is the official reception committee for the Chicago radio show which recently closed. Front row, left to right: Burt Massee, vice-president, Palmolive Soap Company and E. E. McDonald, president, Zenith Radio Corporation. Back row, left to right: A. J. Carter, president, Carter Radio Co.; Arthur Walsh, vice-president, Thomas A. Edison, Inc.; Hon. Louis L. Emmerson, secretary of State of Illinois, who opened the show; U. J. Herrmann, managing director of the show; Corveth Wells, lecturer and African explorer, and G. Clayton Irwin, Jr., general manager of the show.

Begin Daily Farm Broadcasts

The third season of broadcasting farm and home information programs by the Radio Service of the U. S. Department of Agriculture, has been started. Farm flashes and other daily services of direct interest to the farmer are now being put on the air.

The 112 stations broadcasting these features, listed alphabetically by states, are:

Alabama, WAPI; Arizona, KFCB; Arkansas, KTHS, KUOA; California, KFSD, KFRG, KYA, KQW, KFWB; Colorado, KLZ, KGEW, KGHF, KGEK, KFXX; Connecticut, WCAC, WICC, WTIC; District of Columbia, WRC, WRHF; Florida, WDBO, WCOA, WJAX, WRUF; Georgia, WSB; Idaho, KFAU, KFSD, KSEI; Illinois, WJJD, WKBS, WLS; Indiana, WFBM, WOWO, WBAA; Iowa, KSO, KOIL, WOC, WHO, KTNT, KMA; Kansas, KFH, KSAC; Maine, WCSH; Massachusetts, WEEL, WTAG; Michigan, WJR, WWJ, WKAR, WASH; Minnesota, KSTP; Missouri, KMBC, WDAF, WHB, WOS, KMOX, WEW, WIL; Montana, KGH, KFBB, KUOM; Nebraska, KMMJ, KFAB; New Jersey, WNJ, WOR; New Mexico, KOB; New York, WGR, WMAK, WCAD, WHAM, WGY, WHN, WRNY, WIBX; North Carolina, WBT, WPTF; North Dakota, KYFR, WDAY; Ohio, WHK, WEAO, WAIU; Oklahoma, KFJF, KVOO; Oregon, KOAC, KOIN; Pennsylvania, WEDH, WBAK, WKJC, WLBW, WCAU, WFI, WJAS, WGBI; Rhode Island, WJAR; South Dakota, KFDY; Tennessee, WDD, WMC, WLAC, WSM; Texas, WDAG, KFDM, WFAA, WBAP; Utah, KSL, KDYL; Virginia, WRVA; Washington, KFOA, KGA, KHQ, KWSC; West Virginia, WVVA; Wisconsin, WKBH, WTMJ, WLBL; and, Hawaii, KGU.

THE NATIONAL BATTERY MANUFACTURERS ASSOCIATION, New York, has elected the following officers for the coming year: President, Ward S. Perry; first vice-president, J. B. Perlman; second vice-president, A. A. MacLean; treasurer, Paul M. Marko, Sr.; secretary, E. C. Handler; commissioner, W. J. Parker; and directors, L. A. Doughty and A. J. Baracree.

LANDAY BROS., INC., New York City, are opening two new stores in the metropolitan area, one at 583 Fifth Avenue and the other at 540 East Fordham Road, the latter making the third Landay store in the Bronx section.

THE KOLSTER RADIO CORPORATION has moved its executive offices to 39 Broadway, New York. The factory still remains at Newark, N. J.



Doing Nobly

This certainly looks like a difficult shot, L. E. Noble, president of the Federal Radio Corporation, Buffalo, N. Y., is trying to make. But—he seems to have a good grasp on the subject.

Radio Protective Association Elects New Directors

At the annual meeting of the Radio Protective Association held at the Palmer House, Chicago, on October 9, plans were made for the continuation of the association's campaign against the so-called radio trust. It was voted to demand immediate action by Congress on the Dill Bill to render unenforceable patents owned by a trust.

The following new directors were elected: I. R. Freed, Buckingham Radio Corp., Chicago; Ernest Kauer, CeCo Manufacturing Co., Providence, R. I.; Louis Mandel, Metro Electric Co., Chicago; E. A. Tracey, Northern Manufacturing Co., Newark, N. J.; Alex Weiss, Marti Electric Radio Co., West Orange, N. J.; and J. Weichers, Western Coil & Electrical Co., Racine, Wis.

Personnel Changes

CARL D. BOYD has been elected president of the Slagle Radio Company and the Slagle Manufacturing Company, Fort Wayne, Ind., succeeding L. S. Slagle, who has retired. Mr. Boyd recently joined the Slagle organization as director of sales.

H. T. MELHUSH has resigned as radio director in charge of the Radio Division of the National Electrical Manufacturers' Association, to become vice-president of the General Contract Purchase Corporation, in charge of its radio division.

KENNETH E. REED is now assistant to the president of the Federal Radio Corporation, Buffalo. His former position of sales manager has been filled by W. R. McAllister.

LESTER ABELSON has been transferred to the Atchison, Kan., plant of Steinite where he is general manager.

A. CROSSLEY, formerly head of one of the divisions of the U. S. Naval Research Laboratory, has joined Steinite's engineering staff.

EDGAR H. FELIX, technical writer and broadcasting and merchandising consultant, has joined the staff of the National Electrical Manufacturers Association, to specialize in radio problems.

L. F. CHADEAYNE, formerly with the Radio Corporation of America, has joined the Sonora staff as advertising manager.

WALLACE R. LYNN is now Pacific Coast representative, with offices in San Francisco, for the Belden Manufacturing Company, Chicago.

C. A. CRAIG has been appointed sales promotion manager by Sonora.

WILLIAM W. JABLON has been transferred to the sales staff of A. H. Grebe, Inc., New York, covering the central and southern states.

WILLIAM J. POHLMAN has been made manager of Zenith's new exploitation and publicity department.

E. C. CARLSON, formerly district advertising manager for R.C.A. in the Chicago territory, has been made assistant advertising manager in charge of sales promotion, with headquarters in New York.

S. H. GRAUBARD has been added to the staff of the Splittorf Electrical Company to take charge of condenser sales.

M. E. SEEGER and R. T. MORTLOCK have joined Slagle's sales staff.

LEWIS E. DORFMAN is now sales manager of the appliance division of the Gold Seal Electrical Company, New York.

FRANK P. HART is now with the Grigsby-Grunow Company, as assistant to the general sales manager.

A. B. DUMONT is now chief engineer of De Forest Radio Company, assisted by A. S. Hopping and M. O. Allen. All were formerly connected with the Westinghouse Lamp Company.

H. D'ALMAINE has become assistant sales manager of the Bodine Electric Company, Chicago.

E. C. HILL, formerly special field representative for the Federal Radio Corporation, Buffalo, N. Y., has been brought inside and made manager of the sales and service division.

L. D. HILDUSER has been made field manager for Sonora in Pennsylvania.

JAMES A. RAMSEY is with Kolster as district sales manager of the Pacific Coast territory.

J. D. MUGFORD is now with Sonora as director of publicity.

Tender Dinner to Dr. DeForest



Friends and business associates of Dr. DeForest recently gave him a dinner celebrating the reorganization of the DeForest Radio Company, Newark, N. J., at which the new policies and products of the company were announced. Reading from left to right are: Paul Staake, advertising manager; Dr. Lee DeForest; H. C. Holmes, general sales manager; James Caulfield, publicity counsel and Allen Dumond, chief engineer.

Dates of Radio Concerts For Schools Now Ready

The dates of the Walter Damrosch series of radio concerts for school children as outlined in this department in the August issue, have been announced. For grades 3 and 4, Friday mornings at 11 o'clock, November 9 and 23, December 14, January 4 and 18, February 1 and 15, March 1 and 15, April 5 and 19, and May 3. For grades 5 and 6, alternate Friday mornings at 11 o'clock, November 16, December 7 and 21, January 11 and 25, February 8 and 22, March 8 and 22, April 12 and 26, and May 10. For grades 7, 8 and 9, 11:30 on same dates as the grade 3 and 4 broadcasts. For high schools and colleges, same dates as for grades 5 and 6, but at 11:30.

The stations broadcasting this series are: WJZ, WBZA, WBZ, WBAL, WHAM, KDKA, WLW, KWK, WTMJ, WCCO, KVOO, WFAA, KPRC, WOAI, WHAS, WSM, WMC, WSB, KOA, WOC, WHO, WDAF, WRC, WOW, WJR, KYW.

Indicted for Having Sets Without Serial Numbers

Isaac Greenberg of Congress Radio, Inc., New York, was recently indicted by the Grand Jury, for having in his possession radio receivers from which the serial numbers had been removed. The charges were brought by the Grigsby-Grunow Company, Chicago, which intends to prosecute all cases where serial numbers have been removed from sets, making identification impossible.

Greenberg was indicted despite the fact that Magistrate Bushel, in a previous trial, had dismissed the case, holding that a radio set is not a mechanical device within the meaning of the law.

THE ACOUSTICS PRODUCTS CORPORATION, New York, has elected the following directors: For one year, Robert L. LeRoy, E. F. Gillespie and R. G. Martin; for two years, A. J. Drexel Biddle, Jr., Adam Stein, Jr., A. D. Mendes and John R. Dillon; and, for three years, P. L. Deutsch, Harris Hammond, John S. Snelham and Victor C. Bell. The following officers were appointed: Chairman of the board, Harris Hammond; president, P. L. Deutsch; vice-president, Adam Stein, Jr.; secretary, Robert LeRoy, and, treasurer, W. B. Puckett.

THE CORNISH WIRE COMPANY, 28 Church Street, New York City, announces that certain of its prices on Braidite were misquoted in its advertisement on page 142 of the October issue of *Radio Retailing*. The 25-foot length of solid Braidite was listed at 50 cents. This is in error and should be priced at 30 cents. The same length in stranded Braidite continues at 35 cents.

C. A. RICHARDS, export distributor for the Sonora Phonograph Company, has, at the request of the Republican National Committee, undertaken the formation of a Hoover-Curtis Export Committee.

THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, New York City, has elected I. A. Bennett to the Executive Committee and appointed Albert Pfaltz as publicity director.

THE RADIO MANUFACTURERS' ASSOCIATION has moved its New York office to 11 West 42nd Street.

THE NATIONAL ASSOCIATION OF BROADCASTERS, New York City, is now located at 11 West 42nd Street.

Desire New Lines

THE West Philadelphia Electric Supply Company, 5943 Market Street, Philadelphia, Pa., would like to act as distributor for a manufacturer of radio receivers.

A. B. Grant, 6503 South Halsted Street, Chicago, desires to act as manufacturer's agent for a few good lines in the Chicago district.

The A. MacIntyre Company, Hatton Building, Tampa, Fla., would like to get in touch with a manufacturer of a reasonably priced reproducer.

Radio-Electric Show to Be Held in Philadelphia

A combined electric and radio show, sponsored by the Philadelphia Electric Club, will be held at the Commercial Museum, Philadelphia, from November 17 to 24, inclusive.

This is the first radio-electric show the Club has managed and several special features to promote attendance are planned. It is expected that there will be between two and three hundred exhibitors. Pierre Brosseau is the managing director.

THE CLARK MUSIC COMPANY, Syracuse, N. Y., recently held its third annual radio show, displaying the complete fall line of radio receivers, reproducers and cabinets. The exhibition lasted one week. In connection with the show, a four-page Clark radio section was run in a Syracuse paper on the opening day.

THE ARCTURUS RADIO COMPANY has moved its offices to and opened another factory at 219 Elizabeth Avenue, Newark, N. J.

Special Prizes for Dealers In Yale Contest

The Yale Electric Corporation, Brooklyn, N. Y., has changed its name to the Bond Electric Corporation and rechristened its products under the brand name of "Bond."

Coincident with this change, a slogan contest has been inaugurated. \$10,000 in prizes will be awarded the winning slogans.

One hundred and twenty-three additional prizes amounting to \$2,500 are offered to dealers, awards being made on points earned by individual dealers for sales of Bond flashlights and batteries and for the length of time the window and counter displays are kept up. Another \$2,500 will be given to the jobbers' salesmen who sign up the greatest number of dealers for this campaign and whose retailers, collectively, have earned the greatest number of points in the dealer contest.

THE FRAY MANUFACTURING COMPANY, Chicago, a newly organized corporation, has purchased the entire plant and goodwill of the Mellotron Tube Company. The new company will manufacture a complete line of radio tubes under the brand name of "Mello-Tron." Fred S. Armstrong, treasurer of the Radio Protective Association, is president, and associated with him will be Raymond W. Armstrong, who has spent seven years in the lamp-development laboratory of the National Lamp Works of the General Electric Company.

THE DEFOREST COMPANY, Jersey City, N. J., has dismissed a suit which has been pending for about a year against Powel Crosley, Jr., president of the Crosley Radio Corporation, Cincinnati, Ohio. Mr. Crosley has become a member of the DeForest Board of Directors.

THE WIZ MANUFACTURING COMPANY, New York, maker of the Knight radio receiver, has contracted with the LaSalle Radio Corporation, Chicago, to use LaSalle tubes in its sets.

Listening to Its Sterling Qualities



This group of sales executives and engineers recently attended a laboratory test held by the Sterling Manufacturing Company, Cleveland.

From left to right they are: R. E. Tresise, president, Sterling Manufacturing Co.; E. F. Friedlander, Bailey Company; Joel Burtch, Sterling engineer; L. C. Eagan, Sterling district manager; Jack Stirm, Halle Bros. Co.; Elliott Dixon, Pennsylvania Rubber & Supply Co.; Ray Johnson, Erner Electric Co.; R. E. Clady, general manager, H. Lesser & Co.; and R. H. Borden, Buescher Music Co.

News of Jobbers and Distributors

Radio Wholesalers Ass'n Has Ten New Members

The Board of Directors of the Radio Wholesalers Association, a division of the F.R.T.A., met in Chicago on October 10. The tube situation and the change in discount of October 1 were discussed.

The Traffic Committee was instructed to do everything possible to secure better freight rates for wholesalers. Committees were appointed to investigate the insurance problem and to work out a national finance plan to enable members to finance their dealer sales.

The following new members were announced: K. W. Radio Corp., New York, Specialty Service Corp., Brooklyn, N. Y., Frederick H. Thompson Co., Los Angeles, Calif., Majestic Radio Corp., Kansas City, Mo., Harrisburg Standard Electric Corp., Harrisburg, Ill., Rochester Auto Parts Corp., Rochester, N. Y., Starter & Ignition Service Corp., Rochester, N. Y., B. W. Smith Co., Cleveland, Ohio, Charleston Electrical Supply Co., Charleston, W. Va., and the Straus-Frank Co., San Antonio, Tex.

FEDERAL RADIO CORP., Buffalo, N. Y., announces the appointment of the following distributors: The Swanson Electric & Mfg. Company, Evansville, Ind.; Brown & Sehler Company, Grand Rapids, Mich.; Sterling Electric Company, Minneapolis, Minn.; Fort Smith Radio Company, Fort Smith, Ark.; and Thomas H. Peacock, Calgary, Canada, for the territory of Calgary and Edmonton in the Province of Alberta.

THE VENUS RADIO CORPORATION, 142 Liberty Street, New York City, now has ready for distribution its fall catalogue. Several new lines have been added, including Venco duo-magnetic units, Dresner short-wave converter units, Ultratone air-column reproducers, and Readrite tube checkers and meters. Owing to the success of the mail order department this service for dealers will be continued as heretofore.

M. A. HARTLEY AND COMPANY, Northumberland and Gettysburg, Pa., have opened a branch at Staunton, Va., absorbing the wholesale business of the Snyder Electric Company of Staunton. They will act as distributors in Virginia for Day-Fan, All-American Mohawk, Kellogg and other radio lines.

WEDEL COMPANY, Seattle, Wash., has recently been appointed distributor for Apex receivers and will cover the western portion of the State.

Hold Two Dealer Meetings

The A. A. Schneiderhahn Company, Atwater Kent distributor at Des Moines and Sioux City, Iowa, recently held a dealer meeting at each of these two points.

The Sioux City meeting was attended by about three hundred A-K dealers and their wives. The Mayor of Sioux City and A. A. Schneiderhahn spoke. A banquet followed the meeting.

The convention at Des Moines was held at the Fort Des Moines Hotel with a large attendance of dealers and their wives. Governor Hammill, of Iowa, and Captain Sir Hubert Wilkins, the Arctic explorer, addressed the luncheon gathering. At this

meeting, Mr. Schneiderhahn presented to the dealers an analysis of the Des Moines territory, showing by county the number of farms and set owners, and the potential market for radio. A banquet and entertainment followed the business session.

F. A. D. ANDREA, INC., Long Island City, N. Y., has named the following distributors: the Michigan Automotive Supply Company, Detroit, Mich.; the Tel-Electric Company, Houston, Tex.; Graham-Seltzer Company, Peoria, Ill.; Esco Supply Company, Albany, N. Y.; Cohen & Hughes, Baltimore, Md.; and the Electric Appliance Company, Tulsa and Oklahoma City, Okla., and Dallas and San Antonio, Tex.

THE DIXIE RADIO-ELECTRIC AND SUPPLY has been organized in Tampa, Fla., to act as wholesaler in the surrounding territory. A line of parts, kits, radio receivers, as well as electrical supplies, will be carried.

THE LA SALLE RADIO CORPORATION, a division of the Matchless Electric Company, Chicago, has appointed the Scheffer-Rossum Company, St. Paul, Minn., and W. B. Knight, Los Angeles, Calif., as distributors.

D. W. MAY, INC., Newark, N. J., formerly Majestic distributor, is now carrying the Crosley-Amrad line.

THE SHAMROCK MANUFACTURING COMPANY, Newark, N. J., has added the Central Electric Company, Fort Wayne, Ind., and Irwin Winston, Cleveland, Ohio, to its list of jobbers.

MOREY AND COMPANY, Cambridge, Mass., has been named distributor for A. H. Grebe & Company, Inc., New York, in the states of Massachusetts, New Hampshire and Vermont.

AK Dealer Meetings

One of the largest of the many Atwater Kent dealer meetings held recently was that of Parks and Hull, Inc., Baltimore, Md. Nearly 400 dealers attended the luncheon, business meeting and banquet.

At Shreveport, La., the Interstate Electric Company, held a meeting of its dealers. The Radio Sales and Supply Company, Denver, Colo., held its third annual convention, the most successful to date. Arkansas dealers assembled in Little Rock for a meeting at the Rainbow Garden under the auspices of 555, Inc. At Wichita, Kan., the dealers of the Goodin Radio Corporation, 140 strong, conducted a meeting, and more than 500 dealers from the southwest gathered at Dallas, Tex., to attend the annual merchandising conference of the Harrison Smith Company.

THE POST & LESTER COMPANY, Boston, Mass., New England distributor for F. A. D. Andrea, Inc., recently held a meeting of its retailers at Bridgeport, Conn. Among those who attended from the Fada plant were R. M. Klein, general manager; C. M. Sherwood, metropolitan sales representative; F. X. Rettenmeyer of the engineering staff, and H. J. Winsten, advertising counsel.

The Radio Distributing Corporation, Newark, N. J., R.C.A. distributor, has installed a sales promotion department, under the direction of Paul R. Krich, vice-president of the company. Through this department, R.C.A. dealers will be actively assisted in selling, servicing and advertising their products.

THE ROYCRAFT COMPANY, Minneapolis, Minn., Majestic distributor, has established two warehouse stocks and branch offices in North Dakota, one at Fargo and the other at Minot. Harry D. Frishberg is in charge of the Fargo office and Ross Opie will manage the Minot branch.

THE FREED-EISEMANN RADIO CORPORATION, Brooklyn, N. Y., has added the General Ignition Company, Milwaukee, Wis., and the Crescent Electric Supply Co., Davenport, Iowa, and Madison, Wis., to its list of distributors.

THE SAMPSON ELECTRIC COMPANY, Chicago, acted as host to two hundred and sixty mid-western dealers on a trip to the Atwater Kent factory at Philadelphia, two specially chartered trains being required to transport the radio retailers.

THE ROBERTS EMPIRE ELECTRIC COMPANY of Houston, Tex., has taken over the distribution of the Mohawk electric radio sets for Houston and South Texas, according to an announcement by R. R. Roberts, president.

BARRETT ELECTRICAL SUPPLY COMPANY, St. Louis, Mo., distributors of the Freed-Eisemann line are broadcasting the "Treasure Chest of Melody" hour, in a program tie-up for the Freed-Eisemann dealers of that district.

THE RADIO DISTRIBUTING COMPANY, 910 West Jackson Boulevard, Chicago, has been appointed distributor for the Champion Radio Works, Inc., Danvers, Mass.

THE GOODNOW SPECIALTIES COMPANY, Keene, N. H., has been named distributor by the Splitdorf Radio Corporation, Newark, N. J.

Ten Dollars and Costs!



Not knowing which corner, Maurice Landay and B. D. Colen, members of the Greater City Distributing Company and the Musical Products Distributing Company, jobbers of New York City, parked on both sides, so they'd be sure to get a ticket.

Rectifying Tubes—Continued

Name and Address of Manufacturer	Trade Name and Model Number	List Price	Full or Half Wave Rectifier	Filament or Gaseous Type	Filament Terminal Voltage	Filament Current Amperes	Maximum A.C. Input Voltage per Plate (See Note)	Maximum D.C. Output Current Milliamperes	D.C. Output Voltage at Max. D.C. Output Current
Hytron Corp. 19 Oakland St., Salem, Mass.	Hytron—X-280 X-281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 85	260 620
Jaeger Research Labs., Inc. 280 Park Ave., Weehawken, N. J.	Jaeger—JX-280	4.50	Full	Filament	5.0	2.0		125	
Ken-Rad Corp. Owensboro, Ky.	Ken-Rad Archatrons—280 281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 110	260 620
La Salle Radio Corp. 149 W. Austin Ave., Chicago, Ill. (A division of Matchless Electric Co.)	La Salle—LS-280 LS-281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 525	125 110	
Magnetron Corp. Magnetron Bldg. Hoboken, N. J.	Magnetron—280 281 Super-Rex	4.25 7.50 4.00	Full Half Half	Filament Filament Filament	5.0 7.5 5.0	2.0 1.25 .50	300 750 330	125 110 50	260 620
Matchless Electric Co. —See La Salle	Radio Corp.								
National Tube Mfrs. Inc. 1890 E. 40 St., Cleveland, Ohio	Royal—R-280 R-281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 110	
Neptron Corp. Salem, Mass.	Neptron—X-281 X-280	7.50 4.25	Half Full	Filament Filament	7.5 5.0	1.25 2.0	750 300	85 125	620 260
Northern Mfg. Co. 365 Ogden St., Newark, N. J.	Marathon—280 281	4.50 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 110	260 620
Perryman Electric Co. 33 W. 60 St., New York, N. Y.	Perryman—P.R.-280 P.R.-281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 110	
Radio Corp. of America 233 Broadway, New York, N. Y.	Radiotron—UX-280 UX-281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 700	125 85	260 620
Raytheon Mfg. Co. 238 Main St. Cambridge, Mass.	Raytheon—BH BA Raytheon—Ray-X-280	4.50 7.50 4.25	Full Full Full	Gaseous Gaseous Filament			350 350 300	125 350 125	300 200 280
Sonatron Tube Co. 108 W. Lake St. Chicago, Ill.	Sonatron—SH-85 X-213 X-280 Y-216B X-281	4.50 5.00 4.25 7.50 7.50	Full Full Full Half Half	Gaseous Filament Filament Filament Filament					
Sunlight Lamp Co. 288 Springfield Ave. Newark, N. J.	Crusader—SLX-280 SLX-281 SLX-85MA	4.50 7.50 4.50	Full Half Full	Filament Filament Gaseous	5.0 7.5	2.0 1.25		125 85 85	260 620
Supercraft Prod. Corp. 225 W. 46 St., New York, N. Y.	Supercraft—SPX-480 SPX-481	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 85	260 620
Sylvania Prod. Co. Emporium, Penna.	SX-280 SX-281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 110	260 620
Tele vocal Corp. 588 12th St., West New York, N. J.	Tele vocal—TC280 TC281	4.25 7.50	Full Half	Filament Filament	5.0 7.5	2.0 1.25	300 750	125 40	
United Radio & Electric Corp. 500 Chancellor Ave. Irvington, N. J.	Ureco—X-213 X-216 X-280 X-281 2-L	5.00 7.50 4.25 7.50 2.50	Full Half Full Half Half	Filament Filament Filament Filament Filament	5.0 7.5 5.0 7.5	2.0 1.25 2.0 1.25	220 550 300 750	65 65 65 110	170 470 260 620

Neon Tubes for Television

Daven Corp. , Newark, N. J.	Daven Television Lamp, Type F-2080, Price \$12.50.
Raytheon Mfg. Co. , Cambridge, Mass.	Raytheon Kino-Lamp, Price \$12.50.

Special Tubes

Manufacturer's Address	Trade Name and Model Number	List Price	Recommended Use	Operating Current	D.C. Operating Voltage	Mean Voltage Drop
Radio Corporation of America 233 Broadway New York, N. Y.	Radiotron—UX-874 UV-876 UV-886	\$4.75 6.50 6.50	Voltage Regulator* Current Regulator† Current Regulator†	10-50 ma. 1.7 amp. 2.05 amp.	90	50 50
*Designed to keep output voltage of B-power units constant when different values of "B" current are drawn. †Designed to insure constant input to power operated radio receivers despite fluctuations in line voltage.						
Northern Mfg. Co. 365 Ogden St. Newark, N. J.	376 377	\$6.50 1.75	Ballast Protective Tube	1.7 amp. 90 ma.		50 90

After the Sale—What Then?

(Continued from page 53)

7. Follow Up: It has been assumed that the customer has been satisfied with the radio set, or that arrangements have been made to satisfy. Now the time is ripe for a follow-up. Does the customer have friends or relatives who might be interested in radio? Have any of the neighbors seen the set and heard it? Are there any prospects in the neighborhood?

This completes the seven steps. The salesman has been

selected because he has an attractive appearance, pleasing personality, initiative and adaptability. He has analyzed his products and then taken action. He has closed a satisfactory sale and has made sure of this by checking through on the after-sale condition. Then he has taken advantage of the opportunity by following up where good will has been created.

Result: more sales.

This Month's Phonograph Records

Listing the latest records of the leading manufacturers

Latest BRUNSWICK Records

Brunswick-Balke-Collender Co.,
629 So. Wabash Avenue,
Chicago, Ill.

- | Record No. | Title and Recorder |
|------------|---|
| 201 | In the Garden
Sweet Hour of Prayer—McFarland and Gardner |
| 228 | Get Along Home, Cindy
Darby's Ram—Lunsford |
| 253 | Ben Dewberry's Final Run
The Brakeman's Blues—Frank Marvin and His Guitar |
| 254 | The Bum Song
Hallelujah, I'm a Bum—Francis Luther |
| 255 | Indiana
On the Banks of the Wabash Far Away—Kanawha Singers |
| 256 | Devil's Dream
Chicken in the Barnyard—Kessinger Brothers |
| 257 | A Fiddlers' Contest
Satisfied—The Tennessee Ramblers |
| 258 | The Old Account Was Settled Long Ago
Dwelling in Beulah Land—McGhee, Welling |
| 260 | Times Am Gittin' Hard Blues—Wiggins Brothers |
| 259 | My Grandpappy's Gun—Seth Wiggins
The Preacher Got Drunk and Laid His Bible Down
Medley of Mountain Songs—The Tennessee Ramblers |
| 3968 | Marcheta
I'm Waiting for Ships That Never Come In—Nick Lucas |
| 3972 | Faust, Soldier's Chorus
Song of the Anvil—"Famous Forty" Elks Chorus |
| 3984 | Headin' Home
Old Fashioned Locket—Wendell Hall |
| 4003 | Thunderer March
On Wisconsin—U. S. Military Academy Band |
| 4018 | Don't Keep Me in the Dark, Bright Eyes
If You Don't Love Me—Sisson and Orchestra |
| 4019 | Think of Me Thinking of You
My Window of Dreams—Gaylord |
| 4020 | When Polly Walks Through Hollyhocks
Ten Little Miles from Town—Bernie and Orchestra |
| 4021 | Parade of the Wooden Soldiers
Ragging the Scale—Anglo Persians |
| 4022 | The Whole World Is Waiting
The Shadow Song—The Blackstone Trio |
| 4023 | Anita
Twelve O'Clock Waltz—Green's Novelty Marimba Band |
| 4025 | Sweet Ella May
When You're Smiling—The Clevelanders |
| 4026 | Waiting and Dreaming
Do You, Don't You—Straight and His Orchestra |
| 4027 | Peter on the Sea
Oh! Mary Don't You Weep—West Virginia Institute Glee Club |
| 4028 | Got Everything
Four or Five Times—King Oliver and Dixie Syncopators |
| 4029 | The Bum Song
Hallelujah, I'm a Bum—Francis Luther |
| 4030 | Bandanna Bables
Magnolia's Wedding Day—Leslie's Blackbirds Orchestra |
| 4031 | I Must Have That Man
Baby—Adelaide Hall |
| 4032 | I Love You Truly
Rye—Jesse Stafford and His Orchestra |
| 4033 | There's a Rainbow 'Round My Shoulder
Sonny Boy—Jolson |
| 4034 | Carmen
King for a Day—Regent Club Orchestra |

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| 4035 | King for a Day
I Can't Give You Anything But Love—Harry Richman |
| 4037 | Pickin' Cotton—Johnson and His Orchestra
Suppose Nobody Cared—Davis and His Orchestra |
| 4039 | Hawaiian Twilight
Dreamy Hilo Bay—Hanapi Trio |
| 4040 | Anything You Say
Mississippi Mud—Cotton and Morpheus |
| 4041 | Gotta Big Date with a Little Girl
You're a Real Sweetheart—Gall-Rini |
| 4042 | Hindustan
Cannon Ball Rag—Ben Bernie and Hotel Roosevelt Orchestra |
| 4043 | Moonlight Madness
Revenge—Harold "Scrappy" Lambert |
| 4044 | Don't Mess Around with Me—The Hotsy Totsy Gang
Jubilee Stomp—The Washingtonians |
| 4045 | Out of the Dawn
Memories of France—Henry Burr |
| 4049 | All of the Time
Flower of Love—Colonial Club Orchestra |
| 4050 | There's a Rainbow 'Round My Shoulder
My Gal Sal—Tom Gerunovich and Roof Garden Orchestra |
| 4051 | Ace in the Hole
I'm a Ding Dong Daddy (From Dumas)—Jay C. Flippen |
| 4053 | Moonlight Madness
Broken Hearted Baby—Arrowhead Inn Orchestra |
| 4054 | Woman Disputed
Beggars of Life—Harold "Scrappy" Lambert |
| 4055 | In the Garden
Sweet Hour of Prayer—McFarland and Gardner |
| 4056 | Nola
The Glow-Worm—Ohman and Arden |
| 4058 | Roses of Yesterday—Ben Bernie and His Hotel Roosevelt Orchestra
Where the Shy Little Violets Grow—Colonial Club Orchestra |

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| 4059 | Blue Shadows
Once in a Lifetime—Vincent Lopez and His Casa Lopez Orchestra |
| 4061 | Grieving
Paradise—Harold "Scrappy" Lambert |
| 4069 | Good Night
I Tore up Your Picture When You Said Good-Bye—Carter's Orchestra |
| 15145 | Ave Maria
The Nut Tree—Elisabeth Rethberg |
| 15175 | Cavalleria Rusticana, Brindisi
Cavalleria Rusticana, Siciliana—Mario Chamlee |
| 15186 | For You (Pour Toi)
By the Bend of the River—Grace Moore |
| 15187 | Chiquita
Valse (Opus 64, No. 2)—Max Rosen |
| 15725 | Moonlight Madness
Out of the Dawn—Harry Richman |
| 20070 | Dear Old Southland
Limehouse Blues—Red Nichols and His Five Pennies |
| 20071 | Danube Waves Waltz
"Southern Roses Waltz"—Brunswick Concert Orchestra |
| 50150 | Alb. 12-Pt. 1 |
| 50151 | Alb. 12-Pt. 2 |
| 50152 | Alb. 12-Pt. 3 |
| 50153 | Alb. 12-Pt. 4 |
| 50154 | Alb. 12-Pt. 5 |
| 50155 | Alb. 12-Pt. 6 |
| 50156 | Prelude to Khowantchina
Marche Militaire—Minneapolis Symphony Orchestra |
| 57011 | Cuckoo Waltz
The Love Dance—Municipal Band |
| 57012 | Play Gypsies,
Dance Gypsies—Brunswick International Orchestra |
| 57015 | Gold and Silver
Millicent—Municipal Band |
| 77008 | Caucasian Sketches—International Concert Orchestra |
| 263 | Comin' Round the Mountain—Uncle Dave Macon and Sam McGee
Governor Al Smith—Uncle Dave Macon |

Latest COLUMBIA Records

Columbia Phonograph Company
1819 Broadway
New York City

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|---------|--|
| 167-M | Tallahassee
The Zephyr—Efrem Zimbalist |
| 164-M | Homing
Hindu Slumber Song—Barbara Maurel |
| 165-M | Sylvia
The Last Hour—Alexander Kisselourgh |
| 162-M | Tango
L'Arlesienne: Minuet—José Echantz |
| 163-M | Lord Peter's Stable Boy—Percy Grainger—Piano; Ralph Leopold—Harmonium
Shepherds Hey—Instrumental Columbia Symphony Orchestra |
| 50091-D | Old Vienna—Parts 1 and 2—Ignaz Friedman |
| 50098-D | Silent Night, Holy Night
Christmas Melodies: Noel, Adeste Fideles—Paul Whiteman and His Orchestra |
| 50092-D | The Messiah: Overture (Handel)
The Messiah: Pastoral Symphony (Handel)—Sir Thomas Beecham and Orchestra |
| 50093-D | The Messiah: Surely He Hath Borne Our Griefs (Handel)
The Messiah: Worthy Is the Lamb (Handel)—Sir Thomas Beecham and The British Broadcasting Company's Choir |
| 50094-D | The Messiah: Every Valley Shall Be Exalted (Handel)—Hubert Eisdell
The Messiah: His Yoke Is Easy (Handel)—Sir Thomas Beecham and The British Broadcasting Company's Choir |

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| 50097-D | O Holy Night—Columbia Mixed Chorus
Nazareth—Columbia Mixed Chorus |
| 1566-D | Angels from the Realms of Glory
The Birthday of a King—Columbia Mixed Chorus |
| 1576-D | Jingle Bells
The Quilting Party—Shannon Quartet |
| 50095-D | Jeannine, I Dream of Lilac Time
Gypsy—Paul Whiteman's Orchestra |
| 50096-D | Traviata Selections—Parts 1 and 2 (Verdi)—Dajos Bela's Orchestra |
| 1567-D | Cavalleria Rusticana: Intermezzo
Tales of Hoffman: Barcarolle—Columbia Symphony Orchestra |
| 1565-D | Angela Mia (My Angel)
If You Don't Love Me—Pipe Organ—Emil Velazco |
| 1590-D | Angela Mia (My Angel)
I Can't Give You Anything but Love—Violin Solo—Harold Leonard |
| 38002-F | Eloping
At Midnight—Berkas Bela Hungarian Gypsy Orchestra |
| 38003-F | On Board
Sunlight—Jahrl's Swedish Novelty Quintette |
| 1558-D | The Sidewalks of New York
In the Good Old Summertime—Paul Whiteman and His Orchestra |
| 1573-D | Shim-Me-Sha-Wabble
Clarinet Marmalade—Ted Lewis and His Band |
| 1561-D | Once in a Lifetime
Vaniteaser—Leo Reisman and His Orchestra |
| 1562-D | Just Another Night
My Sorority Sweetheart—Paul Ash and His Orchestra |
| 1575-D | Someday, Somewhere (We'll Meet Again)
Out of the Tempest—Ben Selvin and His Orchestra |

- 1592-D Avalon Town
Come on, Baby—*Clicquot Club Eskimos*
- 1586-D I Can't Make Her Happy (That Old Girl of Mine)
Heartbroken and Lonely—*Ipana Troubadours*
- 1574-D Bless You! Sister
You're Just a Great Big Baby Doll—*California Ramblers*
- 1557-D Flower of Love
Masquerade—*The Knickerbockers*
- 1588-D When Sweet Susie Goes Steppin'
Dusky Stevedore—*Thelma Terry and Her Play Boys*
- 1587-D The Whistling Farmer Boy
Golden Friendships—*The Fillmore Band*
- 1560-D Two Black Crows in the Jail House
—Parts 1 and 2—*Moran and Mack*
- 1578-D Just a Sweetheart
Roses of Yesterday—*Ukelcle Ike*
- 1563-D Sonny Boy
I Still Keep Dreaming of You—*Ruth Etting*
- 1572-D Somebody Else May Be Telling
Her Something
My Heart Cries Out for You—*The Whispering Pianist*
- 1584-D Mississippi Mud
I Must Have That Man!—*Lee Morse and Her Blue Grass Boys*
- 1589-D What D'Ya Say?
Ev'rybody Loves You—*Jack Little*
- 1571-D If I Lost You
I Never Thought—*Seger Ellis*
- 1564-D Paradise
Dolores—*Maurice Gunsky*
- 1591-D Anything Your Heart Desires
Dog-gone!—*The Nifty Three*
- 1559-D Syncopated Yodelin' Man
Jazbo Dan and His Yodelin' Band—*Roy Evans*
- 1585-D Who Said I Was a Bum?
Wanderin'—*Vernon Dalhart*

Latest EDISON Records

Thomas A. Edison, Inc.,
Orange, N. J.

- 52381 Blue Shadows—*Duke Yellman Orch.*
Imagination—*Winegar's Penn. Boys*
- 52386 It's Sinful to Flirt
Careless Love—*Ernest V. Stoneman*
- 52389 Sleep, Baby, Sleep
That's Grandma—*Jack Parker and Will Donaldson*
- 52390 Vaniteaser
All of the Time—*Golden Gate Orchestra*
- 52391 Take Your To-Morrow
Sonny Boy—*Piccadilly Players*
- 52393 Echo d' Amour—*Ursula*
Twilight Frolics—*Dietrich-Hollinshead*
- 52395 Highland Fling—*John Baltzell*
Scotch Reel—*John Baltzell and Samuel C. Shults*
- 52397 All of the Time
Pickin' Cotton—*The Rollickers*
- 52398 Saviour, Again to Thy Dear Name—*Metropolitan Quartet*
- 52399 'Cause I Feel—*Golden Gate Orch.*
Lonely Little Bluebird—*Al Lynn's Music Masters*
- 52401 Eat and Grow Thin
Etiquette Blues—*Bob Pierce*
- 52402 Roses of Yesterday
It Must Be Love—*Palais d'Or Orch.*
- 52403 In a Monastery Garden
Entr' Acte and Barcarolle—*Edison Concert Orchestra*
- 52404 My Angel (Angela Mia)
Revenge—*Buddy Sheppard*
- 52405 Nagasaki
It Goes Like This—*Jack Kaufman and the 7 Blue Babies*
- 52406 Yascha Michaeloffsky's Melody
King for a Day—*Arthur Fields*
- 52407 Last Night I Dreamed You Kissed Me
Dear, When I Met You—*J. Donald Parker*
- 52394 Orpheus Overture—Part 1
Orpheus Overture—Part 2—*Edison Concert Orchestra*
- 52410 I Can't Give You Anything But Love
I Wanna Be Loved By You—*Green Brothers' Novelty Band*
- 52416 Get Out and Get Under the Moon—*Golden Gate Orchestra*
Do You? Don't You Love Me?—*Duke Yellman's Orchestra*
- 52413 Jack of All Trades
Who Said I Was a Bum?—*Frank Luther and His Pards*
- 52414 As We Sat Beneath the Maple on the Hill
I'll Meet My Mother After All—*Posey Rorer and the North Carolina Ramblers*
- 80398 to 80901 Trio No. 1 in B Flat (Schubert) Parts 1 to 8—*N. Y. Trio*

- 52417 Raquel
Grieving—*B. A. Rolfe and His Palais d'Or Orchestra*
- 52418 Somewhere a Voice Is Calling
Mavis—*Frank Munn*
- 52421 Fashionette
The Roses Honeymoon—*Murray Kellner's Dinner Music Ensemble*
- 52422 Twelve O'Clock Waltz
My Blackbirds Are Bluebirds Now—*Billy Murray and Walter Scanlan*

- 52427 I Will Magnify Thee, O God
O Lord, How Manifold Are Thy Works—*Metropolitan Quartet*
- 53429 Jeannine, I Dream of Lilac Time
My Angel (Angela Mia)—*Henrietta Kamern*
- 60078 Tesorito (My Precious One)
Claveles de Espana (Pansy of Spain)—*Rondalla Usandizaga*
- 52392 The Rosary
Ballet Music from "Rosamunde"—*Kathleen Parlow*

Latest VICTOR Records

Victor Talking Machine Co.,
Camden, N. J.

- 21433 Treasures Untold
If Brother Jack Were Here—*Jimmie Rodgers*
- 21567 Circus Days
The Man on the Flying Trapeze—*Mac (Harry McClintock)*
- 21629 Fugue in D Major—Part 1
Fugue in D Major—Part 2—*W. G. Alcock*
- 21628 Precious Hiding Place
Wonderful Story of Love—*Moody Bible Institute Trio*
- 21635 Way Up On Clinch Mountain
The Arkansas Traveler—*Jilson Setters*
- 21636 Memphis Yodel
Lullaby Yodel—*Jimmie Rodgers*
- 21637 He's With Me All the Way
Let Me Live Close to Thee—*The Stamps Quartet*
- 21638 Will You Miss Me When I'm Gone?
Little Darling, Pal of Mine—*Carter Family*
- 21639 If I Could Just Stop Dreaming
Missin' My Pal—*Irene Beasley*
- 21644 There's a Whippoorwill a' Calling
Steamboat—*Vernon Dalhart-Carson Robinson*
- 21645 Darling, Where Have You Been So Long?
I'm Goin' to Georgia—*Tenneva Ramblers*
- 21646 Crime of the D'Autremont Brothers
Smoky Mountain Far Away—*Johnson Brothers*
- 21647 The Rosary
Old Black Joe—*Sam Ku-West*
- 21648 The Two Little Orphans
The Raging Sea, How It Roars—*Ernest Stoneman and the Blue Ridge Corn Shuckers*
- 21649 Georgia Blues
Thomastown—*Bill Helms and His Upson County Band*
- 21655 What a Friend
Nothing Between—*Pace Jubilee Singers with Hattie Parker*
- 21656 Death May Be Your Pay Check
Sin Is to Blame For It All—*Rev. F. W. McGee*
- 21657 Peaches in the Springtime
Evergreen Money Blues—*Memphis Jug Band*
- 21658 Shreveport
Shoe Shiner's Drag—*Jelly-Roll Morton's Red Hot Peppers*
- 21659 Clarice
Snake Eyes—*"Tiny" Parham and His Musicians*
- 21669 Norma—Overture—Part 1
Norma—Overture—Part 2—*Victor Symphony Orchestra*
- 21671 I'm Gonna Move to Louisiana—Part 1
I'm Gonna Move to Louisiana—Part 2—*Jim Jackson*
- 21673 Hail! Hail! the Gang's All Here
California, Here I Come—*Nat Shilkret and the Victor Orchestra*
- 21674 One Step to Heaven
How About It?—*Henry Busse and His Orchestra*
- 21675 In a Bamboo Garden
Anything You Say—*Roger Wolfe Kahn and His Orchestra*
- 21676 Roses of Yesterday
My Window of Dreams—*Waring's Pennsylvanians*
- 21677 Sunbeams
Once In a Lifetime—*Johnny Johnson and His Statler Pennsylvanians*
- 21678 Paradise—*Waring's Pennsylvanians*
Grieving—*Paul Whiteman and His Orchestra*
- 21680 Low Down—*The Virginians*
Blazin'—*Coon-Sanders Orchestra*
- 21681 Jeannine, I Dream of Lilac Time
King for a Day—*Jesse Crawford*
- 21682 Some Sweet Someone
I Wanna Be Loved By You—*The High-Hatters*
- 21683 Sonny Boy—*George Olsen and His Music*
Beggars of Life—*The Troubadours*
- 21684 I Wanna Be Loved By You
Is There Anything Wrong in That?—*Helen Kane*

- 21686 Who Said I Was a Bum?
Jack of All Trades—*Bud Billings*
- 21688 I'm Sorry, Sally
I Can't Give You Anything But Love, Baby!—*Shilkret's Ryth-Melodists*
- 21689 That Old Sweetheart of Mine—*Don Bestor and His Orchestra*
If I Lost You—*Jean Goldkette and His Orchestra*
- 21690 Mr. Moore Blues
When You Lose Your Daddy—*Ida May Mack*
- 21691 Brown Mamma Blues
Trouble-Hearted Blues—*Ishman Bracy*
- 21692 My Man Has Quit Me
Black Name Moan—*Bessie Tucker*
- 21693 Get Low-Down Blues
Kansas City Breakdown—*Bennie Moten's Kansas City Orchestra*
- 21694 A Wild Man in Town
A Lie Was Told, But God Know'd It—*Elder Richard Bryan*
- 21695 Late Hours
Kind Daddy—*Douglas Williams Four*
- 21600 Ain't It a Shame?
Watermelon—*Utica Institute Jubilee Singers*
- 21700 Roses of Yesterday
Just a Sweetheart—*Lewis James*
- 21701 Doin' the Raccoon—*George Olsen and His Music*
It Goes Like This—*Johnny Johnson and His Statler Pennsylvanians*
- 21704 The Bum Song—No. 2
The Big Rock Candy Mountains—*"Mac" (Harry McClintock)*
- 21713 Just a Night for Meditation
Roses of Yesterday—*Jesse Crawford*
- 21714 The St. Louis Blues
The Voice of the Southland—*Gene Austin*
- 21715 High Up on a Hill Top
What a Night for Spooning—*Waring's Pennsylvanians*
- 21716 I Loved You Then as I Love You Now—*The Troubadours*
Forever—*Ben Pollack and His Park Central Orchestra*
- 1344 The World Is Waiting for the Sunrise
Rose in the Bud—*Reinold Werrenrath*
- 1345 Old Folks At Home
Dixie—*Mary Lewis*
- 1346 Tosca—Vissi d'arte
Cavalleria Rusticana—*Voi lo sapete—Maria Jeritza*
- 1347 Angela Mia (My Angel)
Femmena 'ngannatora (Betrayed Woman)—*Tito Schipa*
- 3050 Standchen—Serenade
Still wie die Nacht (Calm As the Night)—*Hulda Lashanska-Paul Reimers*
- 6847 Prelude in D Flat (Chopin)
Prelude in A Flat Major (Chopin)—*Ignace Jan Paderewski*
- 6848 On Wings of Song
Jota (de Falla) 2. Puck (Grieg-J. Achron)—*Jascha Heifetz*
- 8103 The King's Henchman—Oh, Caesar, Great Wert Thou!
The King's Henchman—Nay, Maccus, Lay Him Down—*Lawrence Tibbett*
- 35933 Metropolis—Part 1
Metropolis—Part 2—*Paul Whiteman and His Concert Orchestra*
- 35934 Metropolis—Part 3
Metropolis—Part 4—*Paul Whiteman and His Concert Orchestra*
- 35936 Walkure—Magic Fire Scene
Deux Arabesques—*Julius Schendel*
- 21733 Sonny Boy—*Elliott Shaw*
Forever—*Lewis James*
- 21734 I Loved You Then As I Love You Now
Sally of My Dreams—*Franklyn Baur*
- 21727 Where Were You—Where Was I?—*George Olsen and His Music*
Right Out of Heaven—*The High Hatters*
- 21729 Here's That Party Now in Person—*Nat Shilkret and the Victor Orchestra*
Come on, Baby!—*Ted Weems and His Orchestra*
- 21728 Sonny Boy
I Loved You Then As I Love You Now—*Jesse Crawford*

What Is Good Service Practice?

(Continued from page 49)

"Do service calls lead to sales?"

Although 91 per cent of the dealers who replied to this question answered yes, the small amount of sales attributed to service indicates that this customer-contact opportunity has not been thoroughly cultivated for new business. The music trade has not learned, or apparently has not realized, the extent to which a good service department will lead to radio sales, especially of accessories, and frequently of new sets. In the first place the contact is undesired—dreaded, in fact—if we interpret correctly the comments of the dealers. Secondly, the extent of "free service"—some say a year and others twelve calls—is such as to make it necessary to give customers only as much time and attention as will avoid serious complaint. Finally, and perhaps worst of all, the service man of the average music store is not equipped or informed to develop the sales possibilities of service contacts. This is explained in the reply to our next question. Before we state it, however, let us see if our analysis does not lead to this conclusion:

RECOMMENDATION No. 4.—If nine out of ten dealers find that service leads to sales, even to a small extent, this potential source of new business should be more adequately cultivated.

CAPITALIZING THE SERVICE MAN

THE reason the music trade has not made more sales through its service contacts is found in the answers to our question:

"What salary or commission is paid service men?"

An average straight salary of \$131 a month is paid service men employed by music stores, which is too little to attract good men, while the average straight commission is 11.5 per cent. The average salary-and-commission combination is \$100 a month and 4 per cent commission.

The tendency to pay service men commissions rather than straight salary indicates that the service man is gradually being educated to sales possibilities, and that the revenue from his service is becoming a more considerable factor. The tendency to pay the service man straight commissions, however, must be restricted in order to control the service. A man solely on commission is likely to be more alert to his own interest than his employer's. A combination salary and commission to service men appears to be the more satisfactory middle ground. This combination arrangement offers an oppor-

tunity for the music store to employ better service men, increase service revenue, and take advantage of sales prospects through service contacts. We therefore submit:

RECOMMENDATION No. 5.—Better paid service men on a combination salary and commission basis, trained to watch for sales opportunities.

REAL PROFITS IN SERVICE

IN SUMMING up the experience of the music trade in radio, as shown by our 1928 survey, we found that the gross revenue of 6.55 per cent from service exceeds the average service expense of 5.18 per cent of costs. This would indicate, by one method of figuring, that the music-radio merchant can net better than 20 per cent profit on service, which is more than he makes in net profit on merchandise. There are examples of increased service profits shown throughout the survey. Specific examples were brought out in answer to the question:

"What do you charge for antenna installation?"

The average charge for this service is now \$10.80, as against an average of \$8 indicated in the *Radio Retailing* survey made in 1925.

One place where the music merchant unquestionably has cut his service costs is in reducing his variety of lines. Where he took on eight or ten lines in the earlier stages of his radio merchandising experience, he has now cut these to two or three standard makes. By doing so he has simplified his service problems.

Some dealers service only the sets they sell; this, of course, restricts service as a money-making factor of the business and reduces its sales possibilities.

In some circumstances the sales and service men of the music store are the same. This may work out to advantage in the smaller communities and neighborhood stores of urban territory, where personal relationships with customers are more intimate. It is also necessary in some cases that the small dealer personally take care of his own service as well as sales. This, of course, is a condition that should be outgrown as rapidly as possible.

Summarizing, in conclusion, it is safe to say that the music trade, generally, is learning how to handle radio service adequately. A little more knowledge, gained through experience, and a more strict adherence to the "standards of practice" outlined in this article, and the music merchant will find radio service a definite source of sales and profit.



A Radio Display for the Football Season

THIS radio window installed by the Powers Furniture Co., was timed to appeal to the football-loving public of Portland, Oregon. The names of the opposing colleges are prominently shown and a neatly framed sign in the center gives the necessary information for tuning in to receive the broadcasting of the local big game. A large cartoon drawing at the rear supplies the college touch.

New Radio Patents

SEPTEMBER 18, 1928

- 1,684,408. Acoustic System. Alexander McL. Nicolson, New York, N. Y. Assor. to Western Electric Company, Incorporated, New York, N. Y.
- 1,684,445. Signaling System. Richard K. Honlman, Bloomfield, N. J. Assor. to American Telephone and Telegraph Company.
- 1,684,519. Apparatus for Automatic Regulation of Different Wave Lengths for Wireless Receivers. Friedrich Wilhelm Maximilian Ludfig Scheerbarth, Altona-Bahrenfeld, Germany.
- 1,684,736. Radio Vision Studio Equipment. Charles Francis Jenkins, Washington, D. C.
- 1,684,917. Adjustable Condenser. Lloyd A. Hammarlund, Rockville Center, New York. Assor. to Hammarlund Manufacturing Company.
- 1,684,933. Radio Attachment for Talking Machines. Eugene A. Wildmann, Brooklyn, N. Y., and Frank D. Lewis, West Orange, N. J. Assor. to (by mesne assignment) Pathé Phonograph & Radio Corporation.
- 1,684,939. Lighting and Ignition Switch. Ernest A. Bohlman, Chicago, Ill. Assor. to Kellogg Switchboard and Supply Company, Chicago, Ill.
- 1,684,956. Loud Speaker for Radio Receiving Apparatus. Alfred H. Haag, Baltimore, Md. Assor. of fifteen one-hundredths to E. Hayward Fairbanks, Merchantville, N. J.
- 1,684,964. Variable Condenser. James Lyons, Jr., New York, N. Y. Assor. to self and Leo H. Schwabacher, trustees, New York, N. Y.
- 1,684,973. Contract-Protecting Means for Vacuum Tubes. Sterling G. Sears, Brooklyn, N. Y. Assor. by mesne assignments to Naylor Radio Corporation, New York, N. Y.
- 1,685,043. Radio Receiving Circuit. James M. Cartwright, Clarksdale, Miss.
- 1,685,050. Electromagnetic Sound Reproducer. William H. Gerns, East Orange, N. J. Assor. to Brandes Laboratories, Inc., Newark, N. J.
- 1,685,075. Intertransposition of Sound and Electrical Energy. Nils E. Lindenblad, Shoreham, N. Y. Assor. to Radio Corporation of America.

SEPTEMBER 25, 1928

- 1,685,086. Loud-Speaker Unit. Miller Reese Hutchinson, Llewellyn Park, N. J. Assor. by mesne assignments to Acoustic Products Company, New York, N. Y.
- 1,685,253. Double-Grid Thermionic Tube. Max Fred von Ardenne, Berlin, Germany. Assor. to Radio Corporation of America.
- 1,685,326. Thermionic Vacuum Tube. James Denny Jordan, Owensboro, Ky. Assor. to The Ken-Rad Corporation, Owensboro, Ky.
- 1,685,579. Rheostat Construction. David Wald, New York, N. Y.
- 1,685,603. Grid Leak. Edward V. Gluck, Woodhaven, N. Y.
- 1,685,652. Loop Aerial. Timothy Thrift, Cleveland, Ohio.
- 1,685,763. Radio Receiving System. Louis Cohen, Washington, D. C.
- 1,685,766. Support for Vacuum Tube. James H. Mosher, Schenectady, N. Y. Assor. to General Electric Company.
- 1,685,767. Adapter for Vacuum Tubes. Clark R. Phiffer, Schenectady, N. Y. Assor. to General Electric Company.

OCTOBER 2, 1928

- 1,685,803. Logging and Indicating Device for Radio Receiving Sets. Robert C. Bower, St. Louis, Mo.
- 1,685,821. Direction Finder. August Leib, Berlin, Germany. Assor. to Gesellschaft für Drahtlose Telegraphie m.b.H., Berlin, Germany.
- 1,685,875. Radio Appliance. Albert B. Fishwick, Cincinnati, Ohio.
- 1,685,913. Recording and Reproducing of Sound Waves. Lloyd Espenschied, Kew Gardens, N. Y. Assor. to American Telephone and Telegraph Company.
- 1,685,923. Wireless Signaling Apparatus. Samuel E. Leonard, Jr., East Cleveland, Ohio.
- 1,685,979. Loud Speaker. Porter H. Brace, Wilkinsburg, Pa. Assor. to Westinghouse Electric & Manufacturing Company.
- 1,685,994. Radio Vacuum Tube. Hubert M. Freeman, East Pittsburgh, Pa. Assor. to Westinghouse Electric & Manufacturing Company.
- 1,686,005. Wave Signaling System. Harry W. Houck, East Orange, N. J. Assor. by mesne assignments to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.
- 1,686,018. Vacuum-Tube Circuits. Siegmund Loewe, Berlin, Germany. Assor. to Westinghouse Electric & Manufacturing Company.

- 1,686,192. Loud Speaker. William H. Vidos, Maplewood, N. J. Assor. to Gloria Manufacturing Corp., Newark, N. J.
- 1,686,334. Condenser. George Merle, Sr., Brooklyn, N. Y.
- 1,686,378. Variable Electric Condenser. George W. Heath, Newark, N. J.
- 1,686,385. Microphone. Hugu Lichte, Kiel, Germany. Assor. to Signal Gesellschaft mit beschränkter Haftung, Kiel, Germany.
- 1,686,465. Antenna for Radio Receiving Sets. Louis C. Poirier, Merrill, Wisconsin.

OCTOBER 9, 1928

- 1,686,621. Radio Receiving Circuit. Siegmund Loewe, Berlin, Friedenau, Germany. Assor. to Radio Corporation of America.
- 1,686,677. Radiolog. Glenn A. Bishop, Evanston, Ill.
- 1,686,755. Method of and Apparatus for Operating Electrical Amplifiers. Edward H. Loftin, New York, N. Y. Assor. to Edward H. Loftin, trustee.
- 1,686,963. Aerials for Wireless Signaling. Thomas Lydwell Eckersley, Danbury, Essex, England. Assor. to Radio Corporation of America.
- 1,686,974. Rectifying and Filtering System. Fred H. Kroger, Brooklyn, N. Y. Assor. to Radio Corporation of America.
- 1,686,998. Method of Removing Static. Charles W. Woodruff, Columbus, Ohio.
- 1,687,011. Loud Speaker. Lionel Fleischmann, Berlin - Wilmersdorf, Germany. Assor. to Gesellschaft für Drahtlose Telegraphie m.b.H., Hallesches, Berlin, Germany.
- 1,687,061. Antiparasite Receiver for Wireless Communication Systems. Henri Jean Joseph Marie de Regnaud de Bellescize, Paris, France.
- 1,687,062. Filter for High-Frequency Oscillations. Henri Jean Joseph Marie de Regnaud de Bellescize, Toulon, France.
- 1,687,063. Electric Signaling. Henri Jean Joseph Marie de Regnaud de Bellescize, Paris, France.
- 1,687,225. Frequency-Translating Circuits. Eugene Peterson, New York, N. Y. Assor. to Western Electric Company, Incorporated, New York, N. Y.
- 1,687,245. Amplifying. Raymond A. Heising, Millburn, N. J. Assor. to Western Electric Company, Incorporated, New York, N. Y.
- 1,687,253. Negative Impedance Device. Marius Latour, Paris, France. Assor. to Latour Corporation, Jersey City, N. J.
- 1,687,293. Radio Loud Speaker. John W. H. Hanley, New York, N. Y.
- 1,687,295. Interference Elimination. Alfred Hübner, Berlin - Friedenau, Germany. Assor. to Siemens & Halske, Berlin, Germany.
- 1,687,359. Loud Speaker. Nathaniel Baldwin, East Mill Creek, Utah.
- 1,687,364. Radio Transmitting System. Lee de Forest, New York, N. Y. Assor. to De Forest Radio Telephone & Telegraph Company, Jersey City, N. J.
- 1,687,371. Radio Reception Instrument. Jesse C. Leeper, Des Moines, Iowa. Assor. by direct and mesne assignments of forty-five one-hundredths to Grant E. Brayton, and ten one-hundredths to Clarence R. Townsman, Des Moines, Iowa.
- 1,687,420. Dialless Radio. Dale D. Bast, Braddyville, Iowa.

DESIGNS

SEPTEMBER 18, 1928

- 76,345. Radio Dial Escutcheon Plate. Charles P. Hanson, Evan, Minnesota.
- 76,346. Radio Cabinet or Similar Article. Joseph John Heyman, Chicago, Ill. Assor. to Milano Furniture Company, Chicago, Ill.

SEPTEMBER 25, 1928

- 76,370. Cabinet for a Sound-Reproducing Instrument or the Like. Nathan P. Bloom, Louisville, Ky.
- 76,408. Radio Cabinet. Isaac Arynson, Lund, Chicago, Ill.
- 76,430. Radio Cabinet or Similar Article. Morris Stettner, Brooklyn, N. Y.
- 76,431. Radio Cabinet or Similar Article. Morris Stettner, Brooklyn, N. Y.

OCTOBER 2, 1928

- 76,488. Radio Cabinet. Isaac Arynson, Lund, Chicago, Ill.
- 76,489. Radio Cabinet. Isaac Arynson, Lund, Chicago, Ill.
- 76,512. Radio Cabinet. Everett Worthington, Chicago, Ill. Assor. to Brandes Laboratories, Inc., Newark, N. J.
- 76,513. Loud-Speaker Cabinet. Everett Worthington, Chicago, Ill. Assor. to Brandes Laboratories, Inc., Newark, N. J.
- 76,514. Radio Cabinet. Everett Worthington, Chicago, Ill. Assor. to Brandes Laboratories, Inc., Newark, N. J.
- 76,515. Radio Cabinet. Everett Worthington, Chicago, Ill. Assor. to Brandes Laboratories, Inc., Newark, N. J.

REISSUES

OCTOBER 2, 1928

- 17,091. Means for Securing Knobs and Dials to Instrument Shafts. Henry J. Kasch, Dayton, Ohio. Assor. to Kurz-Kasch Company, South Broadway, near Dayton, Ohio.

Radio Trade-Marks

The following is a report of trade-marks favorably acted on by the United States Patent Office during the past month and which, unless opposed, will be duly registered. Any one believing that such registration would be an infringement of his own rights may oppose the application or seek its cancellation.

The editors of *Radio Retailing* have arranged with Lester L. Sargent, Patent Attorney, of 1115 K Street, Washington, D. C., by whom this report is furnished, to make an advance search without charge on any trade-mark any reader may contemplate registering if he will communicate either with the editors of *Radio Retailing* or with the attorney direct.

SEPTEMBER 18, 1928

"S" on picture of oak leaf, for radio electron tubes, used since June 1, 1927, Sylvania Products Co., Emporium, Pa. Ser. 268,710.

SEPTEMBER 25, 1928

"Flintox," for radio condensers and electron tubes and battery charging rectifiers, used since April 8, 1928, Stewart Battery Co., Chicago, Ill. Ser. 261,153.

OCTOBER 2, 1928

(No radio trade-marks)

OCTOBER 9, 1928

"PremieRadio," for radio receiving sets adapted for insulation in, or for combination or association with pianos and grand pianos; radio receiving sets having as cabinets or inclosures therefor parts of pianos, used since June 9, 1924, Premier Grand Piano Corporation, New York City. Ser. No. 209,429.

"Super MasTenna," for radio antenna, used since June 1, 1928, Gustin-Bacon Manufacturing Co., Kansas City, Mo. Ser. 269,116.

"Talk for" Themselves, for electron tubes, used since January, 1927, Champion Radio Works, Inc., Danvers, Mass. Ser. No. 269,462.

"Dynamic," for radio loud speakers, used since August, 1927, Karl K. Jensen, doing business as Jensen Radio Mfg. Co., Oakland, Calif. Ser. No. 270,428.

"Bond" enclosed in octagonal-elliptical design, for dry and also for wet "A," "B," "C" batteries for radio, storage batteries for radio, radio power units, "A," "B," and "C" eliminators, dry cells for radio, radio electron tubes, condensers, etc., used since July 26, 1928, Yale Electric Corporation, Jersey City, N. J. Ser. No. 270,564.

"Far-go," for batteries and battery parts, used since September, 1925, Lyon Battery Works, Louisville, Ky. Ser. 270,970.

"Guard," for electric storage batteries and parts thereof, used since August 10, 1927, The Reliable Storage Battery & Plates Mfg. Co., Chicago, Ill. Ser. 271,199.

OCTOBER 16, 1928

"Ardola," for radio receiving sets, used since October, 1926, Albert E. Caldwell, doing business as the Ardola Co., Galesburg, Ill. Ser. No. 253,136.

"Semper Sursum" displayed on ribbon depending from table on which is seated a biological monstrosity having the body of a lion and the wings and head of an eagle and holding a shield by one upraised paw, the shield bearing a monogram design including the letters HGK Co., for electrical commodities or parts thereof made wholly or in part of India rubber or of synthetic or other artificial resins; battery casings, panels, rods and sheets, dials for and other parts of radio sets, wing nuts and thumb nuts, knobs, handles, plugs, bolts, binding posts, and binding post head—radio horns (loud speakers) insulators, and insulating wire supports, conduits, vibrating diaphragms, sound mufflers, couplings, impregnated paper for electrical insulation, and articles made therefrom, used since 1887, Dr. Heinrich Traun & Sohne, Vormalis Harburger Gummi-Kem-Compagnie, Hamburg, Germany. Ser. No. 262,980.

"Lin-A-trol," for automatic regulators for electric current used in radio and electrical work, used since January 9, 1928, Radial Company, New York City. Ser. No. 271,134.



PERFORMANCE



The popularity of Thordarson Radio Transformers is based primarily on Superior Performance.

Without superior performance, Thordarson never could have attained or maintained its dominant position as the most important transformer source for leading manufacturers of radio receiving sets.

Without superior performance, the strong set builder preference for Thordarson Transformers could not have withstood the extravagant claims of transient competition.

Without superior performance, the parts trade, despite the myth of a diminishing market, never could have shown the 85 per cent increase over last season's sale of Thordarson Transformers.

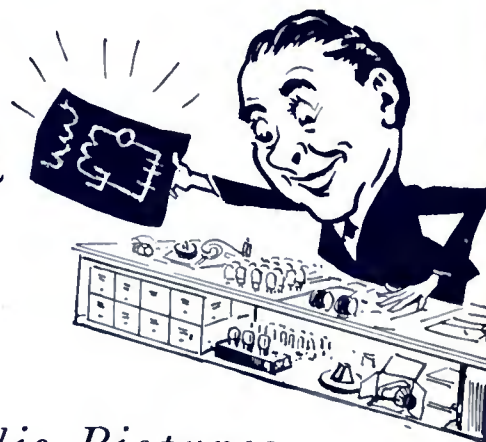
THORDARSON ELECTRIC MFG. CO.
500 W. Huron St., Chicago, Ill.

THORDARSON

RADIO
TRANSFORMERS

SUPREME IN MUSICAL PERFORMANCE

Experimental Data for Dealers



Parts—Short Waves—Television—Radio Pictures

How I Get Satisfactory Television Results

By PAUL HEASLEY

The Buckeye Radio Service Company, Akron, Ohio

HAVING been active in radio since 1912, and having served as an operator of amateur and commercial transmitting stations, I naturally have been interested in the development of television. Although now in the merchandising end of the business I have found it advisable to experiment with the latest possibilities of the radio tube.

Here briefly is the result of my first-hand experience to date—presented for whatever benefit it may be to fellow dealers:

1. Clear television reception is now the rule, not the exception—but it did not materialize until after I switched from a brush to a sparkless type of driving motor.

2. I am getting pictures from the Jenkins station, 3-XK Washington, D. C., 340 miles from Akron.

Inasmuch as Jenkins had actually started broadcasting pictures on a definite schedule, on a wave length of 46.72 meters, during which time the experimenter had ample time to make necessary adjustments, this was the system decided upon. A neon tube was purchased from the Raytheon people and a three-stage resistance coupled amplifier from the Daven Company. This composed the major part of the equipment necessary to study the function of the neon tube on incoming television signals. Having a National shield-grid receiver already in use for logging 3-XK, it was my intention to get this much of the apparatus functioning properly before proceeding with the reproduction of the picture. This end of the circuit worked beautifully from the very beginning. The next step, however, offered unforeseen difficulties.

A National 48-hole scanning disc mounted on an induction type of motor was then installed. As this motor had centrifugal starting brushes, which normally throw out at a predetermined speed, it was hoped that running the motor under this throw-out position and varying the current by an adjustable rheostat would cause the motor to act as a series wound affair and that control could thus be obtained. This plan failed as the brushes would spark, the resulting noise in the receiver completely upsetting things.

Experiments with other brush types of motors produced no better results. I was told that an A.C. motor must have brushes to obtain variable speed and I thought I was licked. However, I then purchased a

condenser type, variable speed motor, manufactured by the Interstate Electric Company of St. Louis, Missouri. This motor runs on A.C. and has no brushes.

Here I would point out that the matter of obtaining a proper driving motor is a very important one. From the time the new motor was installed I obtained fairly clear reception.

Without having the slightest idea of just how fast to run the motor I gradually reduced speed until the shifting dots before me took definite form and assembled themselves into the image of a girl bouncing a ball.

The proper speed was lost almost immediately

and upon coming back to the correct speed again, the picture formed itself. After a few minutes practice, it was possible to hold the picture at all times.

FRAMING was the next difficulty encountered. My object frequently would be cut in two at the middle. The reason for this was that at the transmitter they were scanning, let us say, the upper left hand part of the picture while I was scanning half way down although both scanning disks were running at the same speed. By slowing down twenty-four lines of scanning or speeding up twenty-four lines the picture would then frame perfectly.

Everything is now operating in a manner which has exceeded my fondest expectations. My present apparatus cost less than \$150 and should serve me for a long time. By using interchangeable discs with different numbers of scanning holes, reception can be had from other stations.

Television offers a fertile field for the experimenter who has found broadcasting dull and the matter of developing new receiver circuits unprofitable. I see no rea-

Television Schedules

The only information obtainable after contacting all stations known to be experimenting with television

STATION	LOCATION	WAVE-LENGTH IN METERS	HOLES IN SCANNING DISC	R.P.M. OF MOTOR	SCHEDULE OF TRANSMISSION
WGY	Schenectady, N. Y.	379.5	24	1260	Tues.-Thurs. Fri. 1:30-2 P.M.
2 XAF	Schenectady, N. Y.	31.4	24	1260	Sun. 10:15-10:30 P.M. E.S.T.
2 XAD	Schenectady, N. Y.	21.96	24	1260	
3 XK (Jenkins)	Washington, D. C. Radiomovie	46.72	48	900	Mon.-Wed.-Fri. 8 P.M. E.S.T.
WRNY	New York	326	48	450	From 11 A.M. on, every hour on the hour during time WRNY broadcasts.
2 XAL		30.91			Mon., 6:40 to 7 p.m. Tues., midnight to 12:20 A.M. Sat., 3:40 to 4 P. M.
1 XAY (wlex)	Lexington, Mass.	Building	new apparatus.	Will be on air shortly.	
WCFL	Chicago, Ill.	483.6	48	900	Daily, except Sunday, from 1 to 2 P. M.
9XAA	Chicago, Ill.	63 to 67	48	900	Irregular
KGFI	Los Angeles, Calif.	212.6	48	Unknown	1-6 A.M. P.S.T.
WKBI	Chicago, Ill.	215.7	48	900	Have applied for license.
WIBO	Chicago, Ill.	305.9	45 3 spirals	900	Mon.-Wed.-Fri.-1 A.M. Thur.-Sat.-1:30 A.M.

NOTE—R.P.M. of motor divided by 60 equals number of pictures sent per second. Also the number of holes in the scanning disc spiral correspond to the number of lines scanned per picture.

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*Whether socket power or battery operated
you'll find Faradon in the better sets*



Faradon quality and durability hold the integrity of the quality radio manufacturer. There are more than 20 years of production experience behind each unit.

Put this reputation behind your sales arguments by stocking Faradon and Faradon equipped sets.

WIRELESS SPECIALTY
APPARATUS COMPANY

Jamaica Plain, Boston, Mass., U. S. A.

Established 1907

*Electrostatic
Condensers
for all
Purposes*

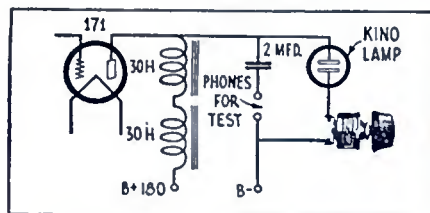
Faradon

son why this latest development will not stimulate a revival of the experimenter's market now that it has been proved that it is possible to obtain television reception consistent with the development of the art.

The question will be asked: What will the dealer who invests his money in experimenting with television at this time derive from his efforts? The answer is that he will be prepared to meet the problem of selecting the proper apparatus when the time comes and of advising intelligently both old and young concerning this fascinating subject. A dealer who has first-hand knowledge of television will find himself in an advantageous position, such a knowledge will enhance his standing in the community and, by increasing his reputation as a radio expert, should stimulate sales not only for television and complete outfits but for the more orthodox items of radio equipment as well.

The Neon Lamp

The construction of the tube is quite simple. There are two flat metal plates placed parallel and very close together. They are one and one-half inches square, presenting an area of two and a quarter square inches. They are mounted so that both plates present a clear surface. In this



The neon lamp circuit

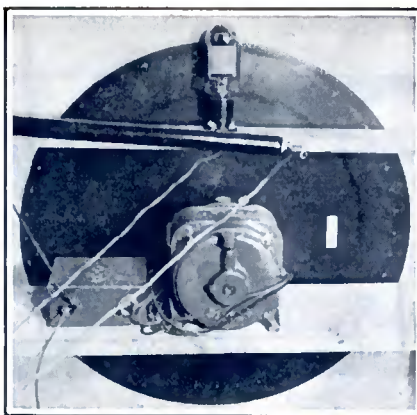
way either plate can be used as the anode. These plates are in a space containing a pressure of only about two millimeters of neon gas.

The operation of the tube is both simple and strange in that it violates some of the cherished notions as to how electricity ought to behave. If we impress a voltage greater than about 220 volts between the plates of the tube, the negative one glows with a vivid salmon pink light. This light tells us that the very fundamental elements of electricity and matter are performing for us. The presence of neon gas within the otherwise evacuated space does two things, at least. It fills the space within the tube with particles of gas, molecules and with a few free electrons.

When current is passing through the neon tube, most of the voltage drop occurs just in front of the negative electrode or cathode. The positive "ions," which carry part of the current, acquire tremendous velocity in this region and, when colliding with the molecules just at the surface of the cathode, produce ionization of these molecules. The emission of light occurs when ionized molecules regain their normal form and, since such a tremendous number of ionized molecules are formed in this region, the light appears to come from the cathode itself.

When the current through the tube is changed due to a change in impressed voltage, the amount of light emitted is changed. This fact is made use of to reproduce the picture. A resistance must be connected in series with the tube because like all gas conductors it has a negative resistance coefficient.

The Raytheon neon lamp takes about 220 volts to start it and requires at least this much under normal conditions. We find



Motor and scanning disc arrangement used by Heasley—crude but satisfactory.

that with about 235 volts B-battery and a 1,000 ohm current limiting resistance, the tube operates very satisfactory. This resistance is computed on the basis of a 15 milliamper current which the tube takes on the average. The dynamic resistance of the tube is about 1,000 to 1,500 ohms which makes it desirable to operate the neon lamp from a tube such as the 171 whose impedance it matches fairly well.

The glow over the surface of the neon lamp cathode plate is uniform. This is explained by another peculiar fact about gas conductors. The drop in voltage along any path between the plates is the same and so there is no tendency normally for the glow to concentrate in any one spot. The plates are put very close together to prevent glowing between the plates. What prevents this is the fact that an electron between the plates does not have room enough to get going fast enough to knock a molecule apart should it collide with one.

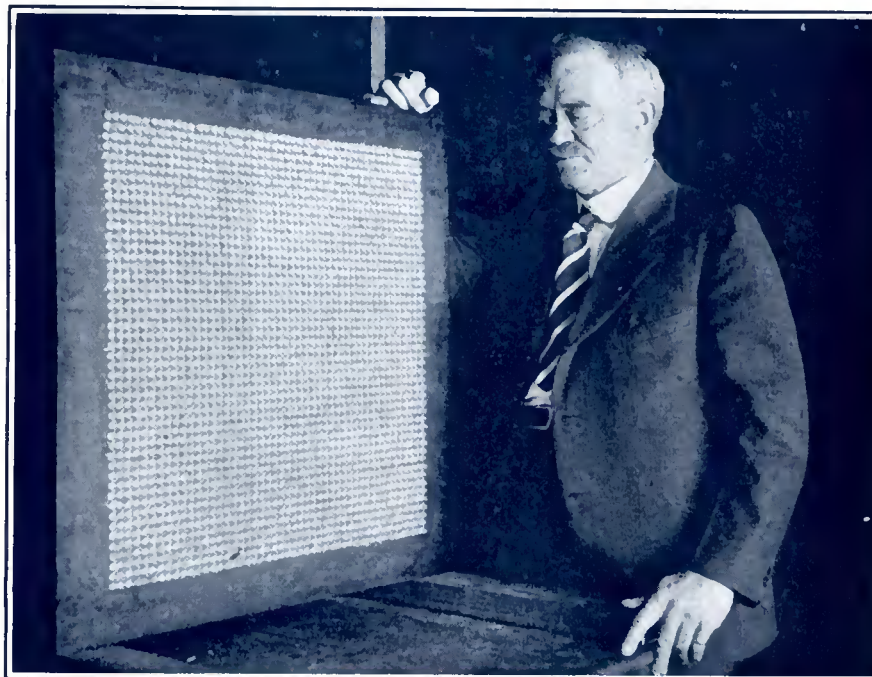
Controlling Scanning Disc Speed

From the Interstate Electric Company, St. Louis, Mo., we get the following advice for controlling the speed of scanning discs as used in television. The scanning discs as used today for television reception are anywhere from 9 to 24-in. in diameter, and $\frac{1}{8}$ in. or $\frac{1}{4}$ in. thick, usually of aluminum. These discs may be driven by our size M2V, 1/15 hp. Baldor motor, which has ample power for this purpose. As a matter of fact, with a 15-in. disc perfectly true the motor may run up to within 50 to 75 revolutions of synchronous speed which is 1,800 r.p.m.

Now, in order to reduce this speed to what is required, it is only necessary to place a series resistance in the circuit, with a means of short circuiting about 15 per cent of the total resistance in the form of a key. For example, a disc 15 in. in diameter, $\frac{1}{8}$ -in. thick with a required speed of 1,080 there is required a fixed resistance of 160 ohms with a key shunting around 25 to 30 ohms.

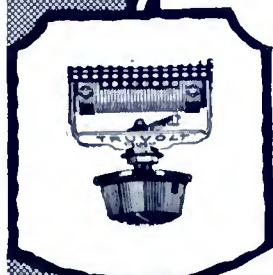
While this method of operation has proven successful, there is another means of obtaining a somewhat more staple operation, which is to load the motor in some way (a flat disc is practically a frictionless load), as for example, by a fan. If then we place say six small blades, 1 in. by 2 in. on the side of the scanning disc, we will have accomplished the result we are looking for; namely, a slight load on the motor, enabling the operator to hold the speed of the disc more nearly constant because the motor responds to changes in speed much more readily if loaded than otherwise. The motor now requires only 30 ohms fixed resistance with approximately 5 ohms short-circuited with a key assuming a 15 in. diameter and a speed of 1,080 revolutions per minute.

New Television Screen



A total of 2,304 tiny light-sensitive cells is contained in the new radio-vision apparatus invented by C. Francis Jenkins of Washington, D. C. This board, literally clustered with photoelectric cells, will eventually be used for the broadcasting of baseball games and other outdoor events. When used as a receiver, 2,304 tiny neon lamps or lights will be employed and the outfit will be installed in a theater.

In Constant Demand ELECTRAD RADIO CONTROLS



THERE are good reasons why Electrad Resistances sell readily to radio builders and fans. Years of proven results have built fan confidence in these units. Radio authorities specify them for leading popular circuits. Consistent Electrad advertising is keeping the story of their quality and performance before the minds of your customers.

Electrad Specializes in a Full Line of Controls for All Radio Purposes Including Television

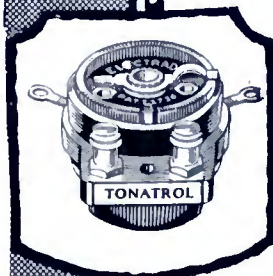
TRUVOLT ALL-WIRE RESISTANCES

U. S. Patent No. 1676869 and Patents Pending

Admittedly superior for control of voltages in B-Eliminators. Their air-cooled design and unique construction make for unusual accuracy and permit the carrying of much greater current loads without breakdown.

Truvolt Variables simplify B-Eliminator construction by eliminating difficult calculation and making all adjustments easy. 22 Stock Sizes, \$3.50 each.

Truvolt Fixed Resistances are adjustable to different set values by the use of sliding slip taps—an exclusive Truvolt feature. Made in all desired resistance values and current ratings.



TONATROL TRADE MARK

A Complete Line of Volume Controls

Exclusively Licensed by Technidyne Corporation Under U. S. Patent Nos. 1593658, 1034103, 1034104.

In Electrad TONATROLS, we offer the perfected and efficient means of volume and sensitivity control. And because of the necessity of specialized volume control in A.C. circuits, we have designed types of Tonatrols to meet the exacting A.C. requirements.

Tonatrols are Variable Resistors of the famous Royalty type. They are made plain, or with battery or power switch attached. \$1.50 to \$3.00.

Tear Out
and Mail
This
Coupon

ELECTRAD,
Inc.,
Dept. K-11,
175 Varlek Street
New York

Please send me FREE circulars on the Electrad line of resistances, also complete dealer information.

Name.....

Address

ELECTRAD



Check Your Condensers

Sprague Hi-volt Midgets meet every requirement in A. C. set construction. Small, compact and dependable, they are safe for continuous A. C. operation up to 550 volts, 60 cycles, and up to 750 volts D. C.

Waterproofed with asphalt covering and special process of triple impregnation. Capacities from .00007 to .1 MFD, in new direct-to-panel eyeletting model.

SPRAGUE SPECIALTIES COMPANY
Quincy, Massachusetts



BEEDE Socket Test Kit

A complete and efficient test kit at a very low price

Simply remove tube and insert Socket Meter.



Contains an individual meter for each test and makes mistakes impossible

List of Meters in Kit

- 1 No. 50 Plate Voltage Tester, 0-300 v.
- 1 No. 55 Grid Bias Tester, 0-50 v.
- 1 No. 60 A.C. Filament Tester, 0-7½ v.
- 1 No. 75 A.C. Line Tester, 0-150 v.
- 1 Adapter for 5-prong sockets.
- Leatherette Carrying Case.

LIST PRICE \$15.00—Dealers \$9.00.

If your jobber cannot supply you we will ship direct at dealers' price.

Write us about other Beede Products.

Beede Electrical Instrument Company
136 Liberty St., New York

MANUFACTURERS and MARKETS

*Devoted to the Problems
of the Manufacturer in
the Design and Distribu-
tion of Radio Apparatus*

American Radio Manufacturers Developing World Market

American radio manufacturers, like American automobile builders before them, are aggressively developing a world-wide market for their products, and exports of radio sets and accessories have now almost reached the \$10,000,000 a year mark, Charles H. Winship, Jr., an executive of the Lektophone Corporation, owners of the basic patents on controlled-edge cone speakers, stated on his return from London.

"Since 1922 the radio export business has increased four-fold, and there is hardly a single country in the world today where American radio sets and accessories are not being sold," Mr. Winship said. "The United Kingdom, including Canada, Australia and New Zealand, purchased nearly \$6,000,000 worth of radio equipment during the past year, accounting for nearly two-thirds of our total export business. Italy, Spain and Japan imported about one-fourth of this amount, and China's imports totaled about \$100,000 during 1927.

"Although the radio export business is only now getting under way, due to the intensive development of our domestic field, the foreign market for American products is sound and considerable expansion in this direction is expected within the next few years."

The Lektophone Corporation, under whose patents the principal radio manufacturers in the United States are licensed, completed negotiations with Standard Telephones and Cables, Ltd., London, the principal radio and electrical equipment manufacturers and operators in Great Britain, to represent the corporation in Europe. The Lektophone Corporation together with Standard Telephones and Cables, Ltd., now own and control basic patent letters in practically every country in the world. Graham Amplion Co., Ltd., and Celestian Co., Ltd., largest British manufacturers of radio sets after the Standard Co., were also licensed.

Latest Federal Court Decisions on Patents

VALIDITY: Tungsten.—Where the product claims covered substantially pure tungsten having characteristics of ductility and high tensile strength, made into wire form and having fibrous structure, and the product was obtained by a special process whereby impure oxid of tungsten was reduced, held: The claims were invalid, since they were directed to a product of nature, and its characteristics. Claims 24, 26, 27 and 28, Patent 1082933.—General Electric Company v. The De Forest Radio Company et al. (Circuit Court of Appeals for

the Third Circuit, 1928.)—Yearly Index Page 1940, Col. 1 (Volume III.)

CONTRIBUTORY INFRINGEMENT: Tungsten Wire.—Where defendant ordered and purchased a special size of tungsten wire, made by a concern manufacturing the wire under a process now admitted to be the process of the patent in suit, for use in his radio tubes, held: This constituted contributory infringement, defendant being not an innocent customer making a casual purchase. Patent 1082933.—General Electric Company v. The De Forest Radio Company et al. (Circuit Court of Appeals for the Third Circuit, 1928.)—Yearly Index Page 1904, Col. 1 (Volume III.)

Wants Radio Manufacturers' Literature

Radio manufacturers who are interested in the French market should send printed matter concerning their product to Lucien Spellmann, care of the French Commercial Attaché, 245 Fifth Avenue, New York City. Mr. Spellmann is also interested in getting information about neon tubes for television purposes.

Agency for Radio Parts Desired in China

The Bush Federal, Inc., exporters and importers, 252 Victoria Road, Tientsin, China, desire to communicate with American manufacturers of radio parts with a view to obtaining an agency. Communications should be addressed to Irving B. Bush, of the above mentioned firm.

Standardized Catalog and Data Sheet

A very good suggestion comes to us from the Eason-Goldsmith Company, of Grand Rapids, Mich., regarding the standardization of data and catalog sheets by manufacturers. As we all well know, various sizes and shapes are now used according to the preference of the individuals who get these sheets out. It is suggested that a good standard sheet would be about 8½ in. x 11 in., and have a standard punch of two or three holes in it so that it will fit most of the binders which are now on sale and used in offices in general. This would mean that each dealer could have in one folder all the various pamphlets that are of interest to him.

Not only will this help the dealers, but manufacturers will be helping themselves, inasmuch as there is now a great waste of this type of material, sent out by the manufacturer, due to its not being all of standard size.

English Broadcast Service Increased

A new regional radio transmitting scheme for the British Isles, just approved by the British Broadcasting Corporation, calls for the installation of eight high-power stations of 50,000 watts each, according to Louis G. Pacent, president of the Pacent Electric Company of New York, recently returned from a visit to England. The transmitters are to supplement twenty-one existing stations of the broadcasting company's network. The plans also call for generous use of short-wave transmitters operating simultaneously with the chain to carry British programs regularly to this and other countries, he said.

The new development is part of a growing plan to improve the general tone and quality of English radio offerings. About 75 per cent of the programs now consist of talks or speeches and most of the presentations are poor in quality. Radio manufacturers recognize the condition and are doing everything possible to get the broadcasters to improve things.

Mr. Pacent said broadcasting studio managers do not place their microphones properly for the best results and general studio technique is far behind that which is recognized as standard here. Moreover, British set makers are taxed by the Government according to the number of radio tubes or "valves" utilized in the receivers; therefore many set makers attempt to "get too much out of a set," which results is overload and distortion, he said. He said he was also surprised to find that 80 to 90 per cent of the sets manufactured in England are of the portable type, which as a class are not capable of reproducing radio programs with the greatest quality and power. On the other hand, the sets, being pushed to the limit for the greatest "gain per tube," are electrically more efficient than ours. He differentiated sharply between electrical efficiency and the ability to receive with the utmost fidelity.

The highest power broadcaster now in use in England, according to recent reports, is that of Daventry near London, which utilizes 25 kilowatts (25,000 watts) of power for its long wave (1,600 meter) broadcaster and about 5,000 watts for the medium wave station. Other stations of the British Broadcasting Corporation chain use regularly not more than 5,000 watts each.

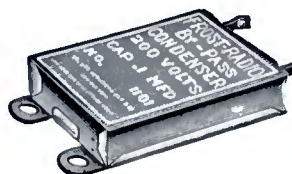
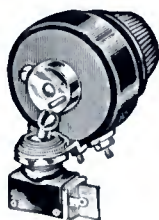
New Speaker on Dutch Market

A new reproducer of the electrodynamic type was introduced into the Dutch market during the June quarter by the Philips' Radio Works of Eindhoven, Holland. The new speaker is spoken of as being far superior to any yet seen.

FROST-RADIO

Correct Engineering

YOU realize that the difference between radio parts of quality and those of mediocrity is more than a matter of design—it is a question of correct engineering. Frost Parts are the result of long and painstaking study by radio engineering minds of the highest rank. Hundreds—sometimes thousands—of experiments are made by our research engineers before actual production is begun. The result: Guaranteed precision, and absolute certainty of performance.



Write for our complete catalog.

Our 16 page catalog, printed in two colors, will be mailed to you promptly upon receipt of the coupon below filled out with your name and address. It's a valuable book that you should have. Send for your copy today.

HERBERT H. FROST, Inc.
Main Office and Factory, ELKHART, IND.

HERBERT H. FROST, INC., ELKHART, IND.

Send me your new Catalog of all Frost-Radio Parts, including the new items listed in Radio Retailing.

Name
Address
City State



AC and DC Realistic 7 Tube Electric Receivers

Self-Contained Chassis and Cabinet Models

PIERCE-AIRO Electric Receivers are laboratory products commercially produced, resulting in a quality receiver at a quantity price. Being high grade products and embodying the latest principles of design and construction, PIERCE-AIRO Electric Receivers fill the most exacting requirements of modern radio reception and offer dealers and jobbers an unprecedented opportunity for bigger sales and more profits. All models with self-contained power supply—perfected electric operation.

Write for prices and discounts or send for a sample Pierce-Airo Electric Receiver for test in your own store.

PIERCE-AIRO, Inc. 113-R Fourth Ave
New York City

X-L LINK

*the only unit
that completely links
your Radio to the Light Socket*

with the following indispensable features—**POSITIVE LINE VOLTAGE REGULATION**, absolute protection against excessive voltage on tube filaments, lengthens tube life. **ANTENNA and GROUND** connections with no external wires afford greater selectivity. **COMPLETELY FUSES** and protects instrument and tubes from burning out. **ELIMINATES FIRE HAZARD.** *One wire from the light socket to the set is all the wiring used.* DEALERS find it sells itself when demonstrating sets, besides simplifying installation service. An unusually neat and attractive unit of buffed silver finish and brown bakelite trim.

Send for Bulletin.

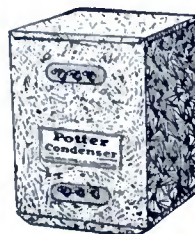
X-L RADIO LABORATORIES

1224 Belmont Avenue
Chicago, Ill.



LIST PRICE
\$5.75

Potter Condensers



Have been selected by leading manufacturers for use in the finest radio sets making it safe for you to follow their good judgment.

Operation of your radio set and power amplifier is insured with the use of Potter Condensers.

Potter T-2900 Condenser Block for the single 250 type tube amplifier—\$20.00.

Potter T-2950 Condenser Block for the push-pull 250 type tube amplifier—\$22.50.

Potter R-171 Condenser Block for power packs arranged for output for the 171 type power tube—\$12.75.

Potter Interference Eliminator

The remedy for man-made static. Radio broadcast programs no longer need be spoiled by interference from oil burners, ice machine motors, vacuum cleaners, etc. The simple remedy is to connect a Potter Interference Eliminator to the interfering device.



Potter Manufacturing Co.

North Chicago, Ill.

A National Organization at Your Service

THE following listing is a regular monthly feature which will be corrected or added to in accordance with up-to-date information received from parts manufacturers. All radio parts manufacturers are here listed, together with the main parts that each manufactures for

use in the assembly of a radio receiving set or power supply device. The diamond in the column following the manufacturer's name indicates the items made. Manufacturers are requested to supply corrections or additions for this permanent listing.

Radio Retailing, November, 1928



Carter

RADIO OUTLET PLATES

DEALER sales on Carter Outlet Plates are always "spotty." There are no dealers doing a *fair job* on these items. They do one of two things: put it over big, or just don't start.

What are your sales on Outlet Plates going to total for November? Carter Outlet Plates are made in sixteen different styles and combinations to meet all the usual installation requirements. Specified and used by modern architects and contractors. Write for attractive book, showing wiring suggestions.

"The majority's choice"



The Influence Behind the Purchase

(Continued from page 57)

things you didn't need. The place where we bought our first set sold my husband a hundred feet of aerial wire and then a lot more to connect it up. Later on, when we had trouble, another man came in to fix it and he said it was too much and made it shorter. I guess he was right because we had very little trouble after that.

If the radio store would send out the same man to take care of my set, I wouldn't have to explain it all each time and they wouldn't keep contradicting each other about what is wrong. We have had three men come out on service calls and each one of them has advised us to do something different. I don't believe any of them, now.

When I walk out of a store without buying a set or making an appointment for a demonstration, I do think it is awfully poor policy for the salesman to be irritated or impertinent. I want to know what I can get elsewhere and I'm not ready to buy without looking. If he is really polite, I may come back.

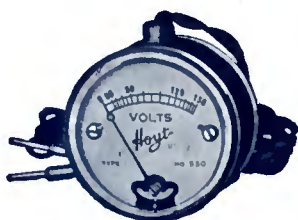
I went into one radio department in a stationery store where there didn't seem to be anyone to pay any attention to me at all. I walked out finally without even being asked what I wanted.

I think too much attention is paid to the furniture side of radio. I don't believe women are really so much interested in matching their Davenport sets as the radio men seem to think. What we want most of all is a set which will do what we expect of it. After that question is settled, I do, of course, consider appearance.

Hoyt

OFFERS to the RADIO SERVICE MAN

A COMPLETE LINE OF TESTING EQUIPMENT; from the Universal Set and Tube Tester, Model 500, which combines all meter ranges necessary in one convenient and compact portable case, to the newest meter in the Hoyt line for testing line voltage—No. 550. All are Hoyt quality in accuracy, ruggedness and dependability.

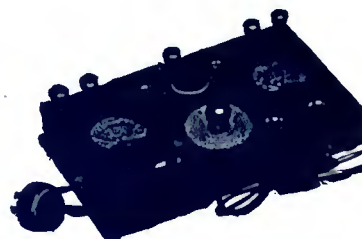


TYPE 550 A.C. POCKET
VOLTMETER
A. C. LINE TESTER
List Price, \$3.75

For complete information
consult your jobbers'
salesman, or write us on
your letterhead.



UNIVERSAL A.C. D. C. SERVICE
SET TESTER
(Model 500)
List Price, \$90.00



UNIVERSAL TUBE TESTER
(Model 400)
List Price, \$30.00

HOYT ELECTRICAL INSTRUMENT WORKS
857 BOYLSTON ST., BOSTON, MASS.

New Dollars

on the air
ready for you to harvest

Increased tone range means
Increased Salability

LISTEN to the new Splitdorf Radio with its new "250" HEAVY DUTY Tube, electrically co-ordinated with the Oversized Dynamic Speaker—and you'll agree that Splitdorf has inaugurated a new era in Radio Tone Production. It has put new dollars on the air for you—beyond the reach of competition.

Not one tone in the whole range of the orchestra—from the deep, vibrant bass to the highest treble—escapes perfect reproduction on the new Splitdorf. And not one listener fails to be amazed at its astounding clarity and tonality, now seven times stronger than with the old "171" tube.

There's really nothing to match the satisfaction it gives—nor the increasing sales, which Splitdorf's introduction of this HEAVY DUTY tube is building for its dealers everywhere. Do you know about Splitdorf's remarkably low discounts?

Write for details about franchise rights and territorial protection.



All Splitdorf models, except the \$135 Abbey Jr., are equipped with the "250" HEAVY DUTY tube, and phonograph jack.



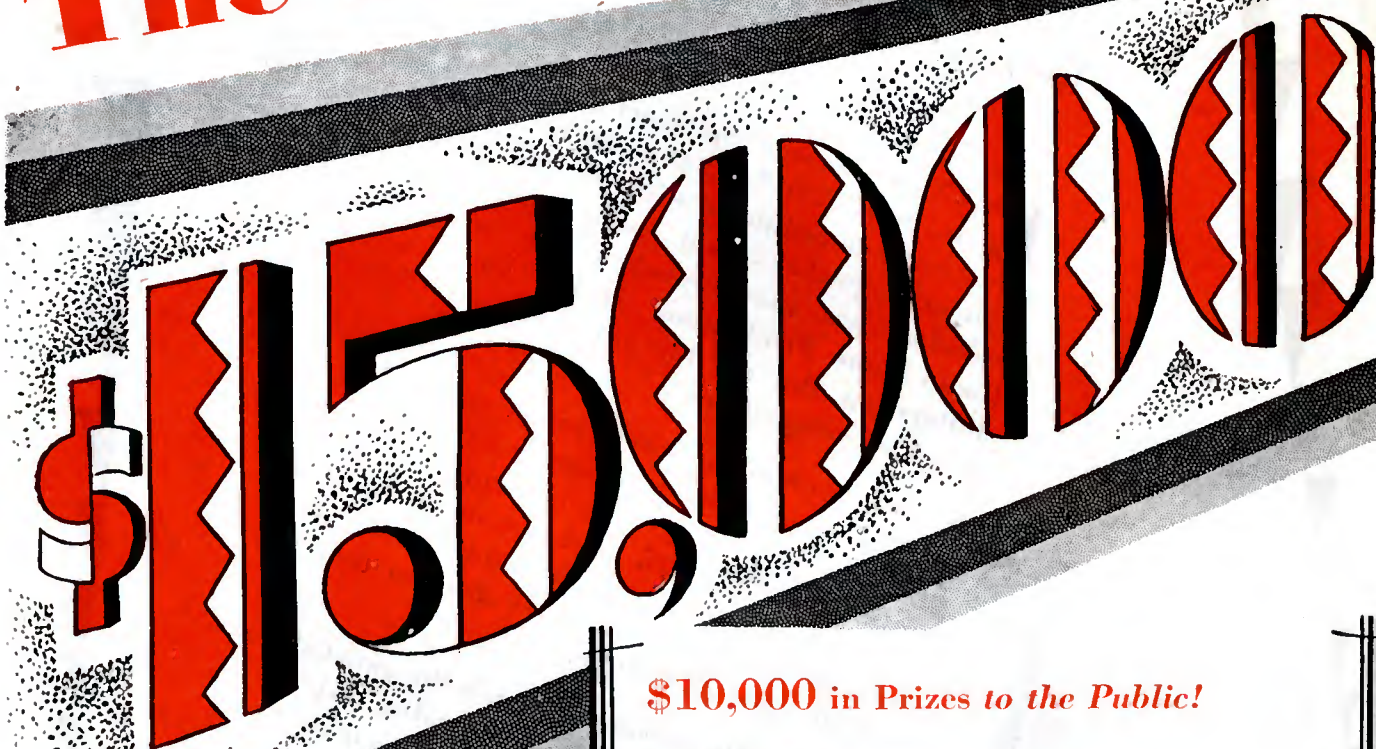
THE COMO
Italian Antique Model in two-toned walnut. Two oversized dynamic speakers, and power amplifier for two "250" HEAVY DUTY tubes. This Senior model is 44" high and 36" wide.
Price, without tubes \$490
Other models from \$135 to \$850

SPLITDORF

RADIO

Stirring an Entire Nation **Bringing thousands of Customers** **into Dealers' Stores !**

The Great National BOND



\$10,000 in Prizes to the Public!

\$2,500 in Prizes to Retailers!

\$2,500 in Prizes to Jobbers' Salesmen!

From Maine to Mexico—from the Statue of Liberty to the Golden Gate—all America is going BOND! . . . From every quarter come enthusiastic trade reports on the amazing volume of business which this spectacular selling effort is developing.

Little wonder, when you consider the dynamic force behind this drive! . . . A \$500,000 appropriation by the Bond Electric Corporation to acquaint the public with the change in its trade-name from "Yale" to "BOND"—to introduce its remarkable new line of *colored* Flashlights—to let every man and woman in the

country know of the unique advantages which BOND Batteries and Flashlights hold for them!

\$500,000 for advertising and selling, including seven startling color-pages in the Saturday Evening Post—dramatic big-space newspaper advertisements in 97 key cities—sensational radio programs over 22 important stations—striking window-displays and selling helps! . . . All tying in with the great \$10,000 Slogan Contest which has sent sales soaring and is whooping up business in general for all *authorized* BOND Dealers.

into **Action!**

(formerly **Yale Electric Corp.**)

PRIZE CONTEST

**A Contest
planned directly to
bring Customers into Your Store!**

In each of the newspaper and magazine advertisements and in the radio broadcasting, only *five* of the six principal BOND features are described. To learn about the sixth or "mystery feature" of BOND Flashlights and Batteries the public is directed to a counter card displaying this feature which can be seen only in the store of an *authorized BOND dealer*.

Also, the special Contest Window Display—supplied free to authorized BOND Dealers—directs the public to come into *your* store to learn about the "mystery feature".

In all the advertisements and in the window display, the public is instructed to secure Contest Blanks through the dealer.

\$2500 in Awards to Dealers!

Every Retailer has a Good Chance to Win!

In addition to the \$10,000 consumer prizes, we have appropriated \$2500 for Dealer Prizes, to be distributed among those retailers extending the best cooperation during the Contest period. Any dealer in the country may enter this contest and *any* dealer—*large or small*—has an equal chance to win one of the big Cash Awards!

Special Jobbers' Salesmen Contest—

\$2500 in Awards!

We don't want to leave the hard-working representatives of the jobbers out of the prize-winning. So we have planned a special contest for Jobber Salesmen, also with big Cash Prizes. Full details will be supplied upon request.

Get your Share of the Big Holiday Business!

Don't delay a moment in "getting in" on this great drive. The campaign already is in full swing and gaining momentum every day! In a more convincing way than ever before BOND is proving its right to leadership in the Flashlight and Battery field. If you haven't stocked up on BOND, do so *now*—your jobber will supply you with full particulars! If more convenient, address your inquiry here.

BOND ELECTRIC CORPORATION

formerly

Yale Electric Corporation

JERSEY CITY, N. J.

San Francisco

Chicago

Manufacturers of

Radio "A", "B"

and

"C" Batteries,
Storage and
Dry Batteries,
Flashlights,
Mono-Cells.



RADIO DEALERS

What a chance to bring in scores of new customers for batteries and radio sets, too—by becoming an authorized BOND dealer and participating in this campaign!



COLOR!

BOND again leads the field in offering the first flashlights equipped with *colored* Easy-Grip Fibre Tubes. Ask your jobber to show you Assortments 700 and 900.



PUBLIC appreciation of a quality product, translated into sales through dealers, has made this year's Freed-Eisemann Success.

From the eight-tube all-electric table models at \$125.00 to the magnificent Dynamic Eighty-Five in the beautiful Hamilton Console illustrated,* Freed-Eisemann sets are running true to form—the radio famous since broadcasting began.

FREED-EISEMANN RADIO CORPORATION
BROOKLYN NEW YORK

*All Freed-Eisemann Sets
are designed for use
with Dynamic Speakers*

* Made by Hamilton Manufacturing Company
for Freed-Eisemann Jobbers and Dealers

**FREED-
EISEMANN**
The Magnifying Tone
RADIO

*Builders of Fine RADIO
Since Broadcasting Began*



All-Electric A. C. Combination

This combination of Model 801-A Series B Receiver, with Model 435-A Reproducer attached to the cover, is a completely self-contained radio. Price of set, \$98, without tubes. Attachable reproducer, \$16. Price of combination without tubes, \$112—\$115 west of Rockies.

- ☒ 7 Tubes—Push-Pull Power
- ☒ Electric Ear Tone Test
- ☒ Phonograph Pick-up Receptacles
- ☒ Four Tuned Circuits
- ☒ Built-in Light Socket Aerial
- ☒ Attachable Reproducer
- ☒ Calibrated Wave-Length Dial, Illuminated

REALISM in RADIO
THRU THE
Electric Ear
TRUE TONE BY TEST

STEWART-WARNER

All-Electric A. C. Radio

This marvelous new "800" group has carried the country by storm. Let these big business-bringing features win for you this season:

A Push-Pull Power Stage that means better reception—handling increased power without distortion.

The Exclusive Stewart-Warner Electric Ear Test, which records minutest vibrations of music as played, and the same music re-created by the Stewart-Warner set. Comparing these records, our engineers make adjustments which give to Stewart-Warner sets their UNMATCHED REALISM OF TONE.

Phonograph Pick-up Receptacles—for playing phonograph records through the new reproducer with results equal to any new-type phonograph. **Built-in Light Socket Aerial**—you can make home demonstrations without using any other aerial. One control for tuning, one for volume. Safety cartridge fuse.

New Stewart-Warner Acceptance Plan—opening to you a vast new market, with every sale practically a cash sale for you.

Tremendous advertising campaign and fullest selling cooperation. Territories going fast. Send coupon for full information.

Complete line of approved Console Cabinets, made exclusively for Stewart-Warner by the Buckeye Manufacturing Co., Springfield, Ohio. Sold by Studner Bros., Inc., National Sales Agents. Consoles have built-in reproducers.



No. 1
\$42.50



No. 2
\$52.50



No. 3
\$62.50



No. 4
\$72.50



No. 5
\$87.50

(Prices slightly higher west of Rockies)

STEWART-WARNER SPEEDOMETER CORPORATION, Chicago

22 years in business—world-wide service—50 million dollars in resources—4th successful radio year

MAIL COUPON TODAY

Stewart-Warner Speedometer Corporation
1826-1852 Diversy Parkway, Chicago
Tell me how I can boost my radio business.

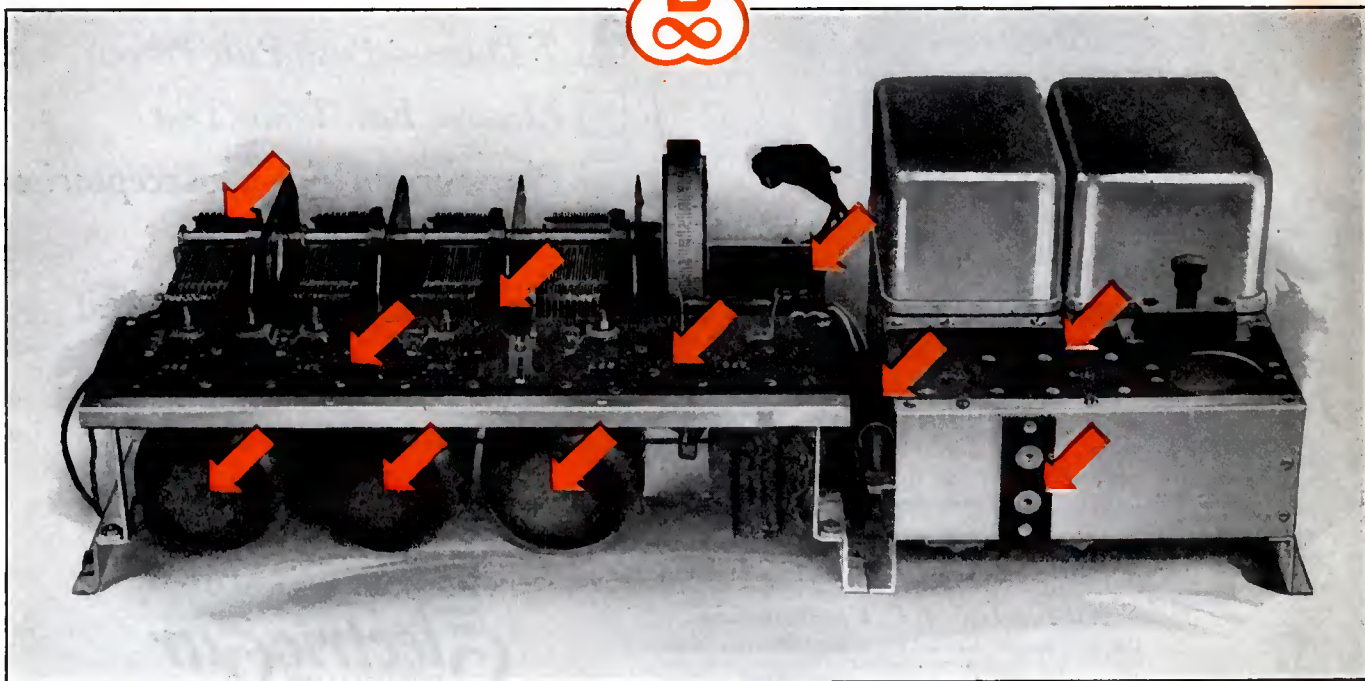
Name _____

Address _____ City _____

RR-11

STEWART-WARNER

The voice of authority in radio



Chassis of Eveready Receiver—Bakelite Materials indicated by arrows. Made by National Carbon Co., New York

The New Eveready Radio Receiver uses Bakelite Materials

Inside and outside of the new Eveready A. C. Receiver, Bakelite Materials are used to insulate the electrical elements within, and for the exterior tuning and control knobs.

Bakelite Laminated strips are used for tube, volume control and condenser plate mountings, and for loud speaker terminal strip. Radio frequency and variometer coils are wound on Bakelite Laminated tubes.

Tuning and control knobs are of Bakelite Molded.

In adopting Bakelite Materials the makers of the Eveready Receiver followed the practice adhered to by the leading radio manufacturers since the early days of the industry. It suggests how important it is for radio dealers to make sure that the sets and parts which they sell are insulated with Bakelite Materials.



Write for Booklet 39, "Bakelite in Radio."

BAKELITE CORPORATION

247 Park Avenue, New York, N. Y. Chicago Office: 635 W. 22nd Street
BAKELITE CORP. OF CANADA, LTD., 163 Dufferin St., Toronto, Ontario Canada

BAKELITE

REGISTERED



U. S. PAT. OFF.

THE MATERIAL OF A THOUSAND USES

"The registered Trade Mark and Symbol shown above may be used only on products made from materials manufactured by Bakelite Corporation. Under the capital 'B' is the numerical sign for infinity, or unlimited quantity. It symbolizes the infinite number of present and future uses of Bakelite Corporation's products."

LISTEN IN

on this business conference!

Leaders in many fields of industry and trade will meet with the editors and publishers of The Associated Business Papers, Inc., November 15 and 16 at the Roosevelt Hotel, New York, to discuss trends in business and cooperative trade development.

If you cannot drop in for these sessions, as we cordially invite you to, you can—by tuning in your radio—hear Mr. William Butterworth, President of the Chamber of

Commerce of the U. S., speak on "Business Cooperation as a Public Asset." The National Broadcasting Company, recognizing the importance of the conference to business, will broadcast this key address over the stations named below.

The editors of this publication, which is a member of The Associated Business Papers, Inc., believe that you will want to be sure to hear at least Mr. Butterworth's contribution to this important conference.

Listen in November 16

9:30 P. M. Eastern Standard Time 7:30 P. M. Mountain Standard Time
8:30 P. M. Central Standard Time 6:30 P. M. Pacific Standard Time

WEAF New York	WLIT Philadelphia
WGN Chicago	KSD St. Louis
WGR Buffalo	WGY Schenectady
WCAE Pittsburgh	WOC Davenport
WRC Washington	WOW Omaha
WTAG Worcester	WJAR Providence
WCCO Minneapolis	

(Subject to change. See station programs in local newspapers November 16)

THE ASSOCIATED BUSINESS PAPERS, INC.
52 Vanderbilt Avenue, New York



The A.B.P. is a non-profit organization whose members have pledged themselves to a working code of practice in which the interests of the men of American industry, trade and professions are placed first—a code demanding unbiased editorial pages, classified and verified paid subscribers, and honest advertising of dependable products

FOR RADIOLA 18 OR 60

THIS entrancing Radio Master Cabinet is built especially to provide a fit setting for the Radiola Models 18 or 60. The interior of butt walnut is arranged for installation of this mechanism after removal from the original cabinet. Equipped with 100A Cone Speaker. Photography can only suggest the splendid beauty of this cabinet in the modernist tone. Doors of matched oriental walnut with inlays of carpathian elm, maidou burl and ebony, provide a rich play of color and grain which only rare, mellow woods in the hands of America's foremost furniture designers can offer. Radio Master Cabinets are made for every set and in a complete range of prices. Beautiful—honestly sturdy—profitable—you will like to sell them. Send for our proposition.



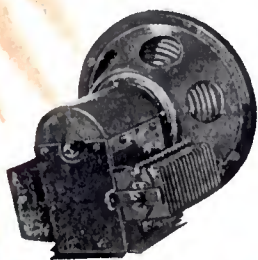
*Radio Masters are made
for all Table Sets*

RADIO MASTER CORPORATION BAY CITY, MICH.

DEMAND—SALES—PROFITS

—Quality must back them up!

\$50.00



Dynamic Unit Chassis

A.C. Model A510—For A.C. light socket operation, equipped with dry disc rectifier and powerful transformer 110 v., 60 cycles, List \$40. In Baffle Box. \$2.50, net, extra.



Model A51 { A.C. 110 volts, 60 cycles. \$50
D.C. 110 volts. \$45
Equipped with O'Neil Dynamic Unit. Finished in a beautiful two-tone walnut to match the popular sets. Size — 14 1/4 in. wide x 14 in. high x 11 in. deep.

Model 502 { A.C. 110 volt, 60 cycle. \$70
D.C. 110 volt. 65
Length 29 in., width 18 1/4 in., height 29 in.
Model 503 { A.C. 110 volt, 60 cycle. \$70
D.C. 110 volt. 65
Length 32 in., width 14 in., height 29 in.

The exquisite beauty and sturdiness of this table-speaker is so apparent from the illustration that word description is hardly necessary. It will fit perfectly the furnishings of any surroundings. Finished in two-tone radio walnut color to match the new popular radio sets. Made in two sizes as specifications above.



AND does in an O'Neil Radio Speaker! An unusually good dynamic speaker combined with an attractive cabinet provides instantaneous "eye-appeal." Retailing at only \$50.00.

Sales resistance being practically nil, O'Neil speakers move quickly and easily. And your profits are correspondingly greater.

You can't afford to overlook this opportunity for making big money through handling an all quality line of Radio Speakers—Speakers that bring the artist right into your home. There is no rattle—no distortion—nothing but absolute fidelity to the artist throughout the entire broadcast.

Volume sales are further assured by the very moderate prices of O'Neil Speakers. The model A 51, retailing at \$50.00, is the one to use as your leader. If big profits interest you so will the O'Neil line of Radio Speakers. Write at once giving us the name of your jobber and we'll send you the full details of our dealer's proposition.

O'NEIL MANUFACTURING CORPORATION

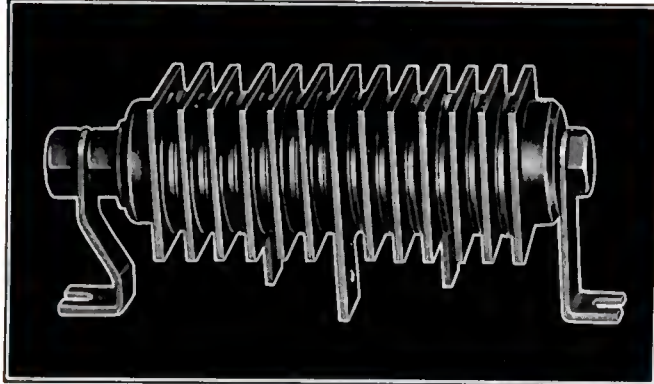
—the famous O'NEIL Radio Speakers

West New York, New Jersey

O'NEIL*
DYNAMIC SPEAKER

* O'NEIL speakers are licensed under the Lektophone Patents.

Pat. Applied for



The B-L Rectifier B-24, illustrated at left, is a full-wave unit with an output capacity of from 1 to 3 amperes at 8 to 12 volts. It is equipped with special horizontal mounting brackets for dynamic speakers, etc. List Price, \$6.00.

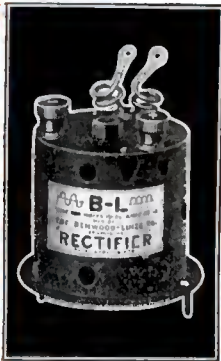
Reliability

Because of their compact design, wide range of application and their ability to furnish smooth unfailing power, B-L Rectifiers have been adopted as standard by many of the largest dynamic speaker and power equipment manufacturers.

B-L Rectifiers are long-lived. They are Dry... Noiseless... Durable... Compact. Are furnished in standard capacities—single or full wave with standard or special mounting brackets, or built to your specific needs.

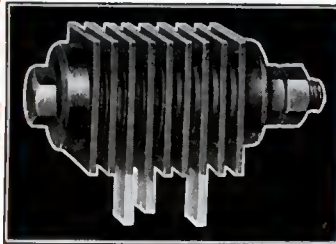
The Benwood Linze Company
St. Louis, Mo., U. S. A.

Pat. Applied for



A-20, B-L Rectifying Unit is for replacing electrolytic rectifiers in trickle chargers and power devices. List price, A-20, 40 and 40 P. \$4.50 each.

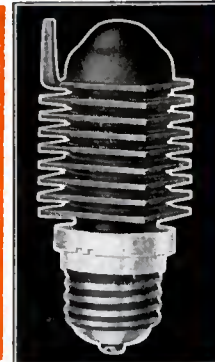
Pat. Applied for



B-12 and B-16, B-L Units, are full-wave rectifiers with an output of 1 to 3 amperes at 6 to 8 volts. For trickle chargers, dynamic speakers and "A" power devices. List price, B-12... \$4.50 B-16... \$5.00.

Send for Booklet explaining the characteristics and application of B-L Rectifying Units. A post card will bring it.

Pat. Applied for



C-110, B-L Rectifying Unit is a single-wave rectifier for replacing charger bulbs. Furnished with either Edison or double-contract screw base. List Price, C-110 \$4. C-210 \$4. C-310 \$4.

B-L
RECTIFIERS



The Senior

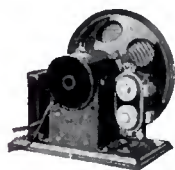
Radio's greatest speaker value! The Senior will deliver the output of any set up to and including five and six tube Neutrodyne, Super-heterodyne, etc. using 201-A type tubes. Great volume, range and sensitivity. 54 in. air column. Price, \$25.00
The Junior--2 colors--\$15.00

—Pacific Coast Prices slightly higher.

A Speaker to

The Barcelona

A very attractive speaker table of Spanish design equipped with a 54 inch air column. A beautiful cabinet that is also designed to accommodate any standard radio set. Price, \$42.50



Dynamic Unit

Decisive improvements in power reproduction due to special Operadio designs. Will handle output of largest sets without trace of distortion, blasting or rattling regardless of stages of power amplification.



The Bel Canto

Can be had with 84 in. air column or Dynamic Unit, 6 volt D. C. or 110 volt D. C. or A. C. [with or without an Operadio 4 or 5 tube amplifier]. Amplifier may be used in combination with air col. or Dynamic Unit. Prices, \$80 to \$275

The Line Complete ~\$15.00 to \$275.00

OPERADIO offers a complete line of Speakers to meet every requirement—at every price level. Air column speakers of the successful Bloc Type in three beautiful Table Models and one Dynamic Table Model and three Handsome Cabinet Models equipped with air columns of various lengths or with Operadio Dynamic units, either type with or without amplifier. Dealers find Operadio the greatest profit builder...with unusual turnover.

Manufacturers
Operadio Mfg. Co.
St. Charles, Illinois
Greater Chicago District

Sales Department
The Zinke Company
1323-25 S. Michigan Ave.
CHICAGO, ILLINOIS

OPERADIO

Bloc Type and Dynamic SPEAKERS

better any Set!



The Westminster

The newest and finest of Operadio Air Column Speakers. May be connected to any set and will handle the output of any standard amplifier up to and including the 171 tube. Has 61 inch air column. Price, \$35.00

The Geneva

A table model Dynamic Speaker, scientifically constructed with a sound, ing board giving maximum baffle effect. Beautiful in design and finished in rich walnut. Furnished with Operadio Dynamic Unit. 6 volt D. C. \$55; 110 volt D. C. \$60; 110 volt A. C. \$70



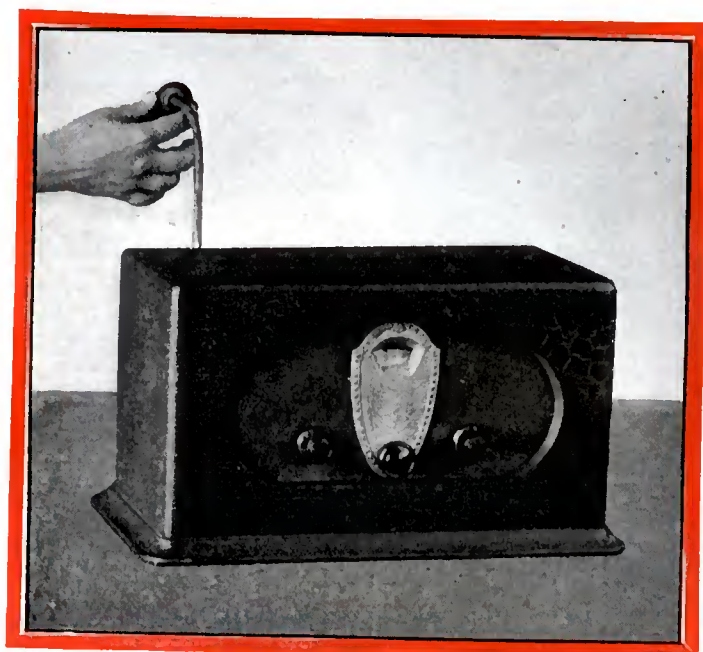
The St. Charles

A cabinet model Dynamic Speaker, will handle and give tremendous volume with undistorted tone fidelity. For sets employing power tubes or equipped with separate amplifiers using power tubes. 6 volt D. C. \$70 110 volt D. C. \$80 110 volt A. C. \$90



PROFIT SEASON IS HERE!

THE SET THAT
SELLS THE
MILLIONS



and the **ACME** AC-7

at

\$65⁰⁰
LESS
TUBES

will be the outstanding
sales success—



ECLIPSING all previous records,
the ACME AC-7 Radio Receiver
is selling the millions today as it

never has before.

Profit season is here, *your* season to let the ACME AC-7
earn big profits for you.

People want this new ACME when they see it—they *buy*
it when they've heard the clear, colorful tone. The selec-
tivity and sensitivity are marvelous.

The ACME AC-7 uses seven AC tubes. All electric—no
batteries, no fuss—compact—powerful, gets the distant
stations that radio bugs want.

Write today for dealer franchise—sell ACMEs this fall—
sell the millions and watch your profits grow.

THE ACME ELECTRIC & MFG. COMPANY

1448 Hamilton Ave., Cleveland, Ohio

Representatives in principal cities

Established 1917

Member R. M. A.

EXQUISITE DISTINCTION

Amazing Economy

Buckeye Console Cabinets are exquisite examples of the cabinet-maker's art. They are made of selected Walnut and fine American gum woods, the grains carefully and expertly matched. Finished in beautiful hand-rubbed lacquer; decorated simply but richly with carving, marqueterie, or antique brass.

Small wonder, then, that discriminating buyers prefer the outward beauty of Buckeye

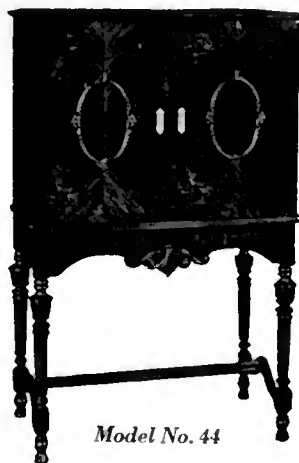
cabinets for their homes. Appearance is 25% of your sales battle—and you can buy no finer cabinet beauty than Buckeye furniture—although you can, and probably do, pay a great deal higher price.

Write *today* for complete information, attractive illustrations, and price lists. Learn how Buckeye Radio Furniture will help to sell your receiving sets.

BUCKEYE MANUFACTURING COMPANY SPRINGFIELD, OHIO
National Sales Agent, Studner Bros., Inc., New York City, 67 West 44th St.; Chicago, Ill., 28 East Jackson Blvd.



Model No. 44



Model No. 44

Buckeye
RADIO FURNITURE

ATWATER KENT

RADIO



MODEL 40

MODEL 40 A. C. The 1929 improvement on the famous Model 37. More powerful, more sensitive. New sealed power unit. **FULL-VISION** Dial. Satin finished in dark brown and gold or deep golden bronze and gold. Requires six A. C. tubes and one rectifying tube. For 110-120 volt, 50-60 cycle alternating current. Without tubes, \$77.

\$ 77
(without tubes)

MODEL 41 D. C. Satin finished in brown and gold or golden bronze and gold. **FULL-VISION** Dial. For 110-120 volt direct current. Requires five D. C. tubes and two power tubes. Without tubes, \$87.



ATWATER KENT RADIO

The World Likes a Winner

TODAY'S profit is important, tomorrow's even more so. For six years, Atwater Kent Radio has been the consistent profit maker for dealers. It never goes back—always ahead. 1928 sales three times bigger than last year's. When you

feature Atwater Kent Radio you're not gambling. The record (*no other manufacturer has made 2,000,000 receivers*) tells you you've got a winner. Reputation *does* count. Make a profit *now* and be assured of the profit of tomorrow.

ATWATER KENT MANUFACTURING COMPANY A. Atwater Kent, Pres. 4733 WISSAHICKON AVE., PHILADELPHIA, PA.

On the air—every Sunday night—Atwater Kent Hour—listen in!

Model 52 A. C., combining receiver and speaker in satin-finished compact cabinet. FULL-VISION Dial. Uses 6 A. C. tubes and 1 rectifying tube, with automatic line voltage control. Without tubes, \$117.

"Radio's Truest Voice"

Atwater Kent Radio Speakers: Satin finished—some in dark brown and gold, some in deep golden bronze and gold. Models E, E2, and E3, same quality, different in size.

Each, \$20



ONE Dial Receivers licensed under U. S. Patent 1,014,002

Prices slightly higher west of the Rockies



MODEL 42 A. C. Similar electrically to Model 40, with addition of automatic line voltage control. Many refinements in cabinet design—crowned lid, panelled corners, ball feet. FULL-VISION Dial with over-size numbers. Requires six A. C. tubes and one rectifying tube. For 110-120 volt, 50-60 cycle alternating current.

Without tubes, \$86



MODEL 44 A. C. Extra-powerful, extra-sensitive, extra-selective. Crowned lid. Panelled corners. Ball feet. Automatic line voltage control. Local distance switch. FULL-VISION Dial with over-size numbers. Requires seven A. C. tubes and one rectifying tube. For 110-120 volt, 50-60 cycle alternating current.

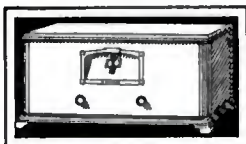
Without tubes, \$106



Model 52 in the home of Booth Tarkington



R EFINEMENT that brings *increased radio profit*



Balkite A-5—*The Table Model. Walnut cabinet, by Berkey & Gay.*

Balkite A-3—*The same, in a simple, but slightly, all-metal case.*

Balkite A-7—*Housed in a beautifully hand-carved walnut cabinet by Berkey & Gay. Completely equipped, including dynamic speaker.*

\$175.00 to \$450.00
Less tubes

CABINETS
BY
Berkey & Gay

Engineering refinement—that sums up Balkite Radio. Refinement that is obvious in the exterior elegance of the cabinets, in the simplicity of the chassis, in the quality of reception. Refinement that has produced radio that is not competitive with any other line you sell. Instead it opens up a new market, the same market that is served by a fine car.

Balkite gives you a higher unit of sale to offer to that portion of the public that demands finality in its purchases. A receiver to offer to those who want authentic furniture—Balkite is housed by Berkey & Gay. A receiver that duplicates in a simple engineering job the kind of reception that hereto-

fore has been confined to the laboratory. A receiver to serve a market that has never been properly served in radio before—a market that increases your volume.

Balkite is so simple, dependable and fool-proof that your profit is clear—service is reduced to a minimum.

Again, Balkite makes your lower-price line easier to sell. Properly shown and demonstrated it results not only in direct Balkite sales, but raises the price average of other purchases in your store.

Balkite engineering refinement brings your radio profit to a maximum. Fansteel Products Company, Inc., North Chicago, Illinois.

FANSTEEL

Balkite Radio

RADIO'S
Most Popular Model
the
Bremer-Tully
Seven-Seventy-one

A.C. Electric

Seven Tubes

Push-Pull
Power Audio

Tone Control
a new and
exclusive
B-T Feature

Dynamic
Drive



Dynamic
Speaker

Genuine
Walnut
Cabinet

Matched
Sliding
Doors

A new and
Distinctly
Different
Furniture
style

The tremendous popularity of the B-T 7-71 originated the present vogue in radio furniture.

A distinct departure from ordinary radio cabinet design it won the instant approval of the public. At all the shows it is the "pick" of the crowd.

Here is a market already pre-sold—a market that you can tap for bigger and better profit. Are you prepared to capitalize on it?

Start now—mailing the coupon is the first step.

Bremer-Tully Manufacturing Co.

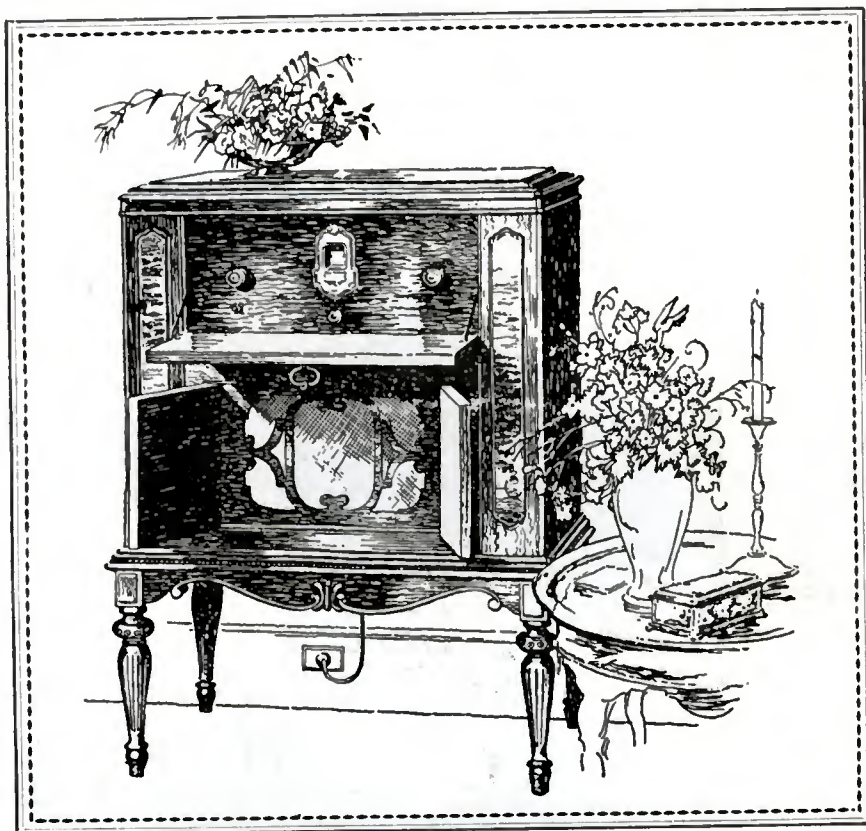
656 Washington Blvd., Chicago, Illinois

Dealer

Street

City State

FADA Radio



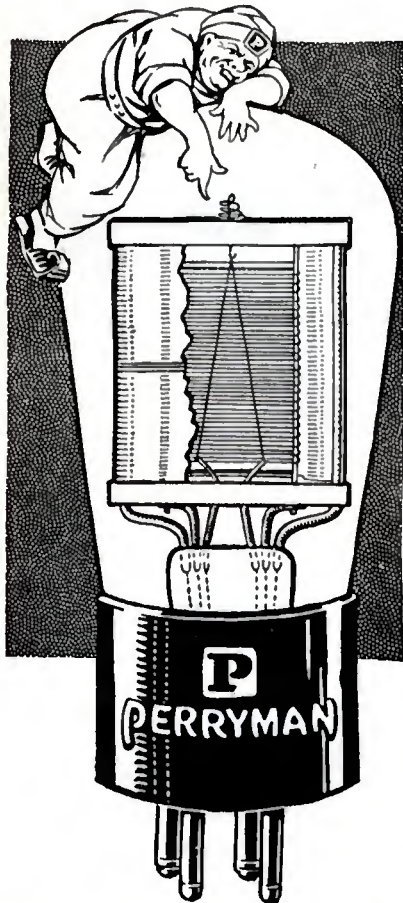
PROOF OF THE PUDDING!

Thousands of Fada "70's" throughout the country are daily proving our claim that they will show superior performance over any other radio, regardless of price. They are also showing Fada dealers real profits in quick turnover. And Fada "70", like all Fada sets, keeps service costs down by its dependable performance in the home.

Write or wire for details concerning a Fada franchise in your territory

F. A. D. ANDREA, INC. ♦ LONG ISLAND CITY, N. Y.

P PERRYMAN RADIO TUBES



*More Hours of Service
per tube ... because of the*
SHOCK-PROOF BRIDGE

WHOLESALE PLEASE NOTE

Proof that we have an interesting proposition for wholesalers will be furnished to you on request. Not by us alone, but by Perryman Wholesalers who have been with us for years and who will write you directly, telling you of their experiences with regard to sales, profits and cooperation.

Elected!

Elected by engineers because the construction is fundamentally sound and the performance unsurpassed.

Elected by dealers because of the extra profit and our cordial cooperation.

Elected by consumers because they get their money's worth—and more.

If you are interested in Perryman Radio Tubes, we suggest that you anticipate your requirements by several months. Perryman Tubes are selling as fast as we can make them.

PERRYMAN ELECTRIC COMPANY
INCORPORATED

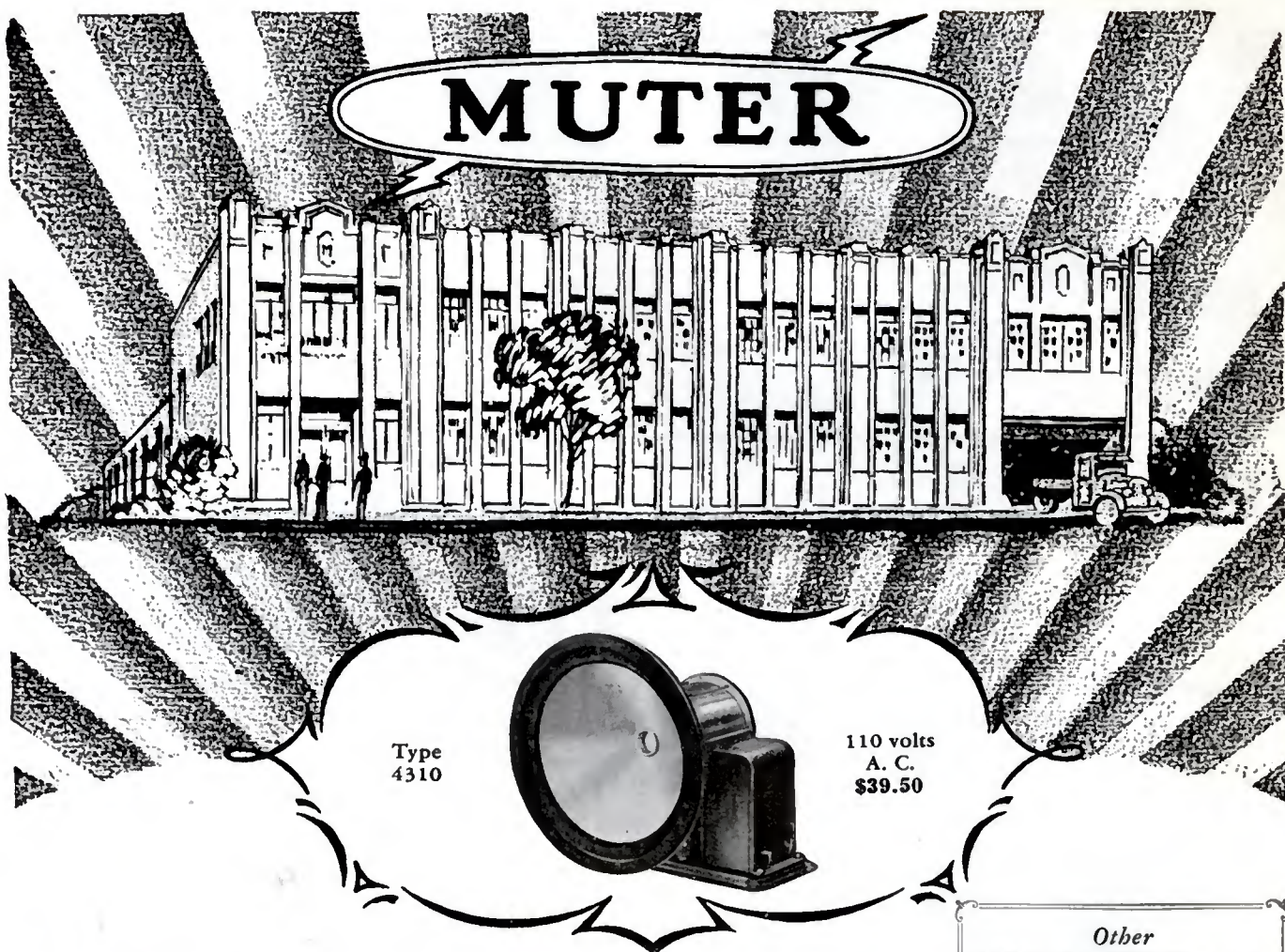
33 West 60th St. NEW YORK, N. Y.

Laboratories and Plant: NORTH BERGEN, N. J.



PERRYMAN RADIO TUBES
A Complete Line of Standard Equipment for every Radio Purpose



Type
4310110 volts
A. C.
\$39.50

Muter Dependable Dynamic Type Speaker

THE Dynamic Speaker with its superlative performance is this season's outstanding radio sensation. It has changed the radio set from a mechanical reproducer of sounds to a musical instrument supreme. The distinctive tone of the various new manufactured receivers can be attributed almost entirely to the Dynamic Speaker, and this same improvement can be embodied in any set by the attachment of a Muter Dependable Dynamic.

Dependable Dynamic Speaker Unit

Power	Type	Price
6 volts D. C.	4306	\$29.50
90 volts D. C.	4390	33.00
110 volts A. C.	4310	39.50

Table Model in Solid Walnut Cabinet

Power	Type	Price
6 volts D. C.	4406	\$49.50
90 volts D. C.	4490	53.00
110 volts A. C.	4410	59.50

Spinet Console Model of Solid Walnut

Power	Type	Price
6 volts D. C.	4506	\$64.50
90 volts D. C.	4590	68.00
110 volts A. C.	4510	74.50

LESLIE F. MUTER COMPANY

8440 South Chicago Avenue / / Chicago

Other MUTER DEPENDABLE Products

Dynamic Speakers
By-Pass Condensers
Filter Condensers
Fixed Condensers
Rheostats
Tubestats
"B" Eliminators
Resistance Amplifiers
Phone Plugs
Antenna Kits
Lead in Insulators
Panel Switches
Knife Switches
Ground Clamps
Interference Eliminators
Clarifier and Tone Filter
Soldering Lugs
A. C. Power Units
Neutralizing Condensers
Trimming Condensers
Audio Transformers
"B" Power Unit Trans-
formers
Choke Coils—A.F. and R.F.
Grid Leaks
Power Resistances
(tapped and variable)
Antenna Plugs
Lightning Arresters
and many others.

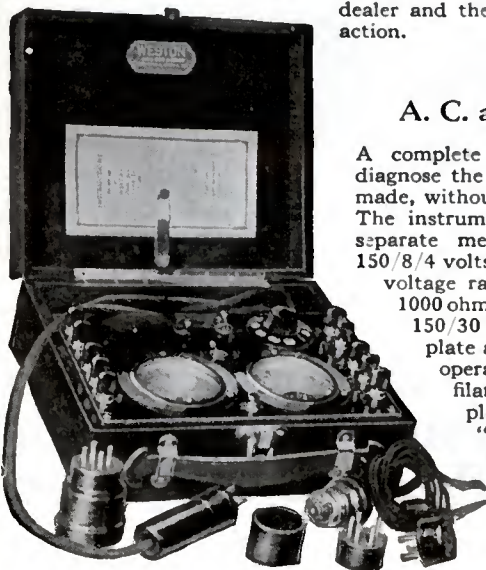
*The Complete Quality
Popular Priced Line*

An investment that pays dividends

An indicating instrument is an essential part of the equipment of every good radio receiver installation, since it aids in maintaining efficient operation, secures the best reception and fully protects the financial investment.

To dealers and service men the selection of instruments is highly important. Testing equipment which insures reliability not only increases the efficiency of servicing work, but it is a factor in securing business—for the ability to quickly and accurately diagnose set troubles, as well as to test and certify tubes and other merchandise in a customer's presence, instills confidence and makes every purchaser a booster.

Illustrated and described herewith are four instruments selected from the complete Weston Radio Line because of their great utility as service instruments. Moreover, the small portable instruments are popular items of merchandise for over-the-counter sales. All four instruments represent a profitable investment on either side of the counter benefiting both the dealer and the customer on every transaction.

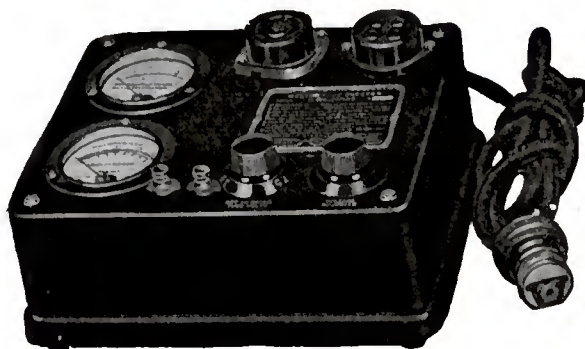


Model 537
A. C. and D. C. Radio Set Tester

A complete servicing outfit that will quickly diagnose the trouble in any type of radio receiver made, without need for any additional equipment. The instruments provided are equivalent to ten separate meters:—a 3-range A. C. Voltmeter, 150/8/4 volts; a D. C. Volt-Milliammeter with five voltage ranges—600/300/120/60/8 volts (all 1000 ohms per volt); and two current ranges—150/30 milliamperes. Tests filament, grid, plate and cathode voltages under actual operating conditions. Determines filament current requirements and plate current drain. Locates "shorts" between grid and plate as well as distortion in the audio system due to tube overloading. Provides for filament circuit and general continuity tests and also serves as a rapid tube tester.

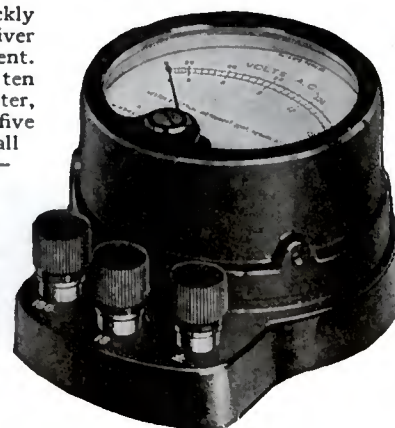
Model 533
Counter
Tube Checker

Requires no batteries. Operates direct from an A. C. light socket—or any other A. C.—60 cycle—90 to 130 volt—source of supply. Will test every type of tube—A. C. or D. C.—having filament voltages of 1.5, 2.5, 3.3, 5 or 7.5 volts, including rectifying type tubes. Proper voltage regulation is obtained quickly with the voltage adjusting dial and voltage indicator.



A. C. and D. C. 3-Range Voltmeters

The excellent characteristics and performance of these portable models command the attention of all who appreciate the finest workmanship and demand un-failing reliability. They are enclosed in bakelite cases—black for D. C. and mottled red and black for A. C. instruments. D. C. Voltmeter—750/250/10 volts—1000 ohms per volt. A. C. Voltmeter—150/8/4 volts.



A. C. and D. C. Single
and Double-Range
Instruments

These instruments are identical to the model shown in the top illustration in design and electrical characteristics, except that they are made as single and double-range instruments with binding posts instead of pin-jacks. They are furnished as D. C. double-range voltmeters (125 or 1000 ohms per volt) and as single and double-range D. C. Ammeters. For A. C. testing, they are made as single-range Ammeters and Milliammeters and double-range Voltmeters.

WESTON ELECTRICAL INSTRUMENT CORPORATION
581 Frelinghuysen Ave., Newark, N. J.

WESTON

RADIO

INSTRUMENTS



Bring the touchdown into your store with a Pam Amplifier

PAM 16 or 17
Price, Without Tubes
\$125.00

BRING the game and business straight into your own store—all its thrilling moments; the cheers; the between-quarters music. And all so clearly, so perfectly reproduced that never is there any sense of straining your ears to avoid missing something.

You can control the reception from a whisper to a "volume magnificent" from normal room volume to that which neighbors blocks away can easily understand.

Sell the PAM Amplifiers with radio sets, loud speakers, headphones, etc., for bringing the game to apartment houses, hospitals, hotels, schools, etc.

Crowds will welcome your sales message through the use of our MIK 1 in addition to

the PAM—for you have brought the game to them.

The Samson PAM 16 is for ordinary and the PAM 17 for dynamic type speakers for which it supplies field current. Both are built in accordance with AIEE Standards and Underwriters' Requirements. These amplifiers are completely AC operated and are designed to run from 105-120 volt, 50-60 cycle AC lighting circuits.

Send for handsome folder RR2—describing the above and other Samson PAM Amplifiers which are also a "Sound Investment,"

Main Office: Canton, Mass.
Manufacturers Since 1882

Samson Electric Co.
MEMBER
RMA

Factories at Canton and
Watertown, Mass.

The Authorized Furniture for All ATWATER KENT Radios

Fill in and add up
the figures and see
at how low a price
you can sell this
fine combination:

Atwater Kent
Receiver \$——
Atwater Kent
Speaker \$——
Tubes \$——
Cabinet with
Phonograph
and Motor \$135.00

TOTAL \$——



The Biggest Value in Combinations

You will find no other combination phonograph and radio cabinet that allows you to make so low a combination price or to give so great a combination value as Red Lion 115.

And this combination cabinet is the latest model of the Red Lion line, up-to-date in every detail of design and construction.

Note these points particularly: The cabinet comes to you with phonograph already installed, and the phonograph is already equipped with an electric motor—no hand-winding, or extra expense for a motor.

The cabinet design is of the most modern, all-concealing type. When the doors are closed, one sees only a very beautiful piece of furniture—there is no hybrid effect.

Red Lion 115 is both the most advanced achievement and the greatest value among combination cabinets.

RED LION CABINET COMPANY . . . RED LION, PA.

*An absolutely
Startling Value!*



Designed with the most advanced engineering improvements — such as standard heater type tubes employing push-pull amplification.

CONSOLE ELECTRIC

finished in exquisite Burled Walnut Cabinet with

DYNAMIC SPEAKER

*employing the matched—impedance principle
to afford absolutely remarkable tone!*

\$167⁵⁰
LESS TUBES

A SET that is synchronized to a hair's breath and balanced to perfection! . . . Another Shamrock achievement — another value to set the pace for competition! The response has been tremendous! . . . Write for details—territory is going fast.

SHAMROCK
DYNAMIC ELECTRIC

152 Summit Street
NEWARK, N. J.



At CHICAGO, too,

the Edison Radio led the field!

The same amazing story! The same astounding interest! . . . At the Chicago Radio Show the Edison Radio was again the center of attention—just as it was at the Radio World's Fair in New York.

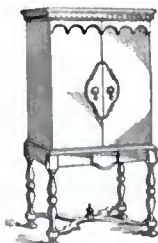
Dealers, consumers, radio engineers—all were satisfied that the long-awaited Edison Radio justified every expectation held for it. Orders and more orders poured in . . . splendid proof

that this most asked-for radio in America has struck gold.

What better way to make sales than to bring this buying interest to your store. What *easier* way to sell than to offer the beauty of the Edison cabinets and the perfection of Edison performance. What more dependable name in industry to tie to—than Edison. Thomas A. Edison, Inc., Orange, N. J.

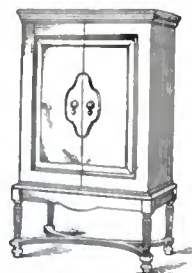


Model R-2
Radio with
Dynamic
Speaker.
Price,
including
Dynamic
Speaker,
less tubes:
\$260.



Model R-1
Radio with
Dynamic
Speaker.
Price,
including
Dynamic
Speaker,
less tubes:
\$315.

Model C-2
Radio and
Electric
Phonograph.
Price,
including
Dynamic
Speaker,
less tubes:
\$495.



Model C-1
Radio and
Electric
Phonograph.
Price,
including 2
Dynamic
Speakers,
less tubes:
\$1100.



The **EDISON RADIO** TRADE MARK Thomas A. Edison *and* **RADIO-PHONOGRAPH COMBINATIONS**

Edison Distributing Corporation

ATLANTA
155 So. Forsyth St.

DENVER
1636 Lawrence St.

ORANGE, N. J.

BOSTON
96 South St.
KANSAS CITY
1215 McGee St.
PITTSBURGH
909 Penn Ave.

CHICAGO
3130 So. Michigan Ave.
MINNEAPOLIS
608 First Ave. N.
RICHMOND
1204 East Main St.

DALLAS
500 Elm St.
NEW ORLEANS
128 Chartres St.
SAN FRANCISCO
1267 Mission St.

CLEVELAND: B. W. Smith, Inc., 2019 Euclid Ave.

OGDEN: Proudfit Sporting Goods Co., 2327 Grant Ave.

PHILADELPHIA: Girard Phonograph Co., Broad and Wallace Sts.
ST. LOUIS: Silverstone Music Co., 1114 Olive St.

Carryola Announces A NEW Electrically Driven Porto Pick-Up



Hand in Hand With Your Radio Sales

Here it is—just what radio owners want—convenient and perfect reproduction of phonograph records through their radio. This new electrically driven Carryola Porto Pick-up does all of this.

Powered by the new Prime Electric Motor. No bothersome winding! The new Prime Motor is the latest in induction type motors—no brushes—cannot burn out—speed regulator—absolutely fool proof and trouble proof. Equipped with the famous Carryola Electric Pick-up—leader of pick-ups. Perfect tone reproduction. Beautiful portable case of brown DuPont fabrikoid. Handsome hardware fittings. And what a price; \$57.50 List.

The price, combined with the quality of the product and the demand, is sure to bring volume sales and big profits.

This new CARRYOLA added to our line of famous Carryola Portable Phonographs makes the Carryola Line complete. It will pay you to handle it.

Let us tell you about it. Write—Wire—Today—We will see that you get a demonstration.

The
Carryola Company of America
647 Clinton Street
Milwaukee, Wisconsin

CARRYOLA MODEL 61 ELECTRICALLY
DRIVEN PORTO PICK-UP
Equipped with Prime Electric Motor and famous
Carryola Electric Pick-up
List Price \$57.50



*Electrically
Driven*

Carryola

*57⁵⁰
List*

There Are Some 15,000,000 Radio Equipped Homes—Everyone Is a Prospect

For the man
who believes
his own ears

The History of a Radio Fan!

By KARL P. SPENCER, Stout & Spencer, Attorneys, St. Louis, Mo.

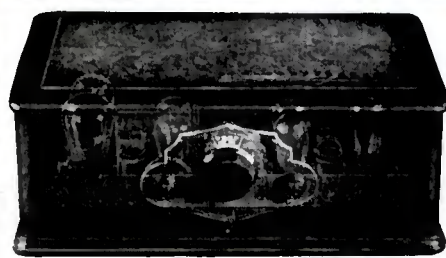


"FOR five years I have been vitally interested in radio from a legal, mechanical and listener's point of view. In the early days I owned several makes of receiving sets, changing from time to time, to get what I thought was best.

"At a radio show three years ago I first heard an A-C DAYTON in action and was interested. When I had one set up in my home it exceeded all expectations.

"Friends were curious about the battery set I owned that in an evening's broadcasting would bring in clear and distinct programs from Havana, Mexico City, Los Angeles, Winnipeg and practically any station in the United States. I believe my set sold a half dozen others for the dealer I bought from.

"Since then I've owned nothing but A-C DAYTONS, the latest one a new AC-65 all-electric



Phantom of AC-66 using Shielded Grid Tube



Karl P. Spencer

—the finest radio I think it is possible to build. It has volume control that can be regulated to a whispering voice or loud enough to compete with a brass band. Notes of music and tone shades of the human voice, high and low, are just as natural as if I held the performance in my own home. Distant stations are reached easily and regularly. The cabinet housing represents the 'modern' furniture idea in a style no one else seems to have discovered.

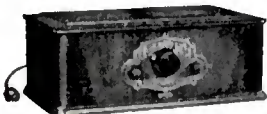
"In return for all the pleasure you have given me, permit me to compliment the whole A-C DAYTON organization on this model. It most adequately demonstrates your desire and ability to lead Radio to higher standards."

KARL P. SPENCER.

A-C DAYTON RADIO

NOTE: If you are interested in selling a line of radio that sells like A-C DAYTON, we will gladly furnish details where territory is still open. Write or clip the coupon to your letterhead.

Mail It TODAY!



This amazing device instantly adapts any radio set to receive broadcasting on short wave lengths. Gets international programs. The biggest radio development in recent years.

AC-65, SELF CONTAINED ALL-ELECTRIC: a 6-tube receiver complete for light socket operation except for tubes and speaker. It is equipped for 210 power amplifier, utilizing 400 volts. A fine quality set with unusual volume, listing \$123 except Canada and West. Model AC-63, at \$98, is of same type without power amplifier.



FLEWELLING
SHORT WAVE
ADAPTER
NOW \$15.00

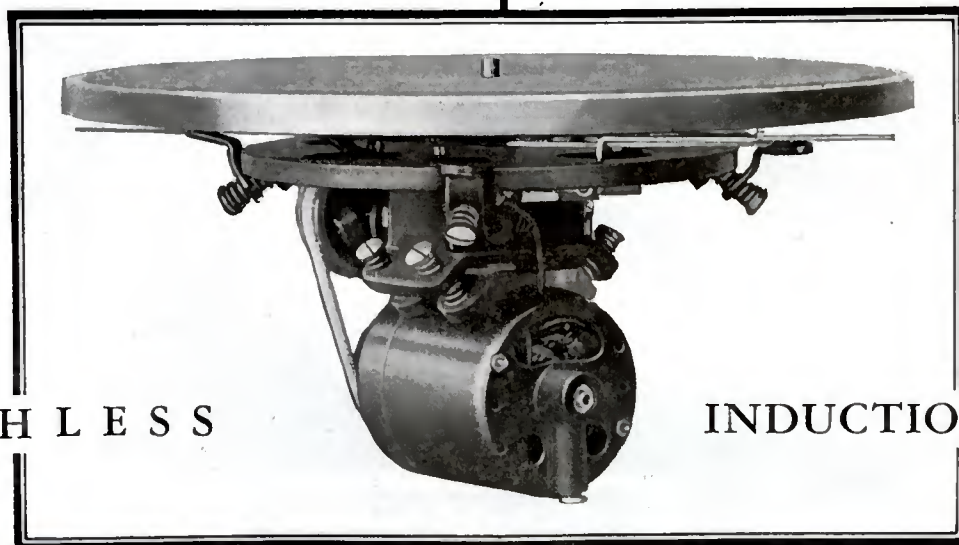
THE A-C DAYTON COMPANY, Dayton, Ohio

Gentlemen: Please send complete details about your dealer's franchise.

Name.....

Address.....

The MOTOR of TOMORROW will improve... your sales today



B R U S H L E S S

I N D U C T I O N T Y P E

H U M M - L E S S

Every demonstration of your phonographs both to dealers and by dealers will be vastly improved by the new *Gordon Induction Electric Phonograph Motor*.

No annoying hum-m will mar reproduction. No need to start the turntable with an apologetic spin. No distorted music while it gains full speed or changes that speed due to line voltage fluctuations. No raucous interference with radio reproduction.

Brushless, it is noiseless. It starts itself, attains full speed in one revolution of the turntable, and maintains that speed evenly. Induction type, in accordance with the recommendations of the A. I. E. E., any pick-up in radio or power amplifier is utterly impossible.

Superbly made in every particular, the standard operates on 110 volt 60 A. C.—110 volt 25 or 30 cycle or 220 volts—60 cycle can be furnished at slight increase in price.

This motor of tomorrow means better phonographs, and better sales today. Write for prices.

The Gordon Pick-Up Type "A"
(Adjustable) \$13.50

Gives radio amplification to any old type phonograph, through the loud speaker of any radio. Matches the tone quality of the new expensive talking machines at a cost of only \$13.50. Easily attached by a novice. Sells itself. Sells phonographs. Sells radios. Helps overcome the trade-in nuisance on old phonographs. Write for complete information.



The Gordon Pick-Up, Type "B" (Non-Adjustable) \$12.50

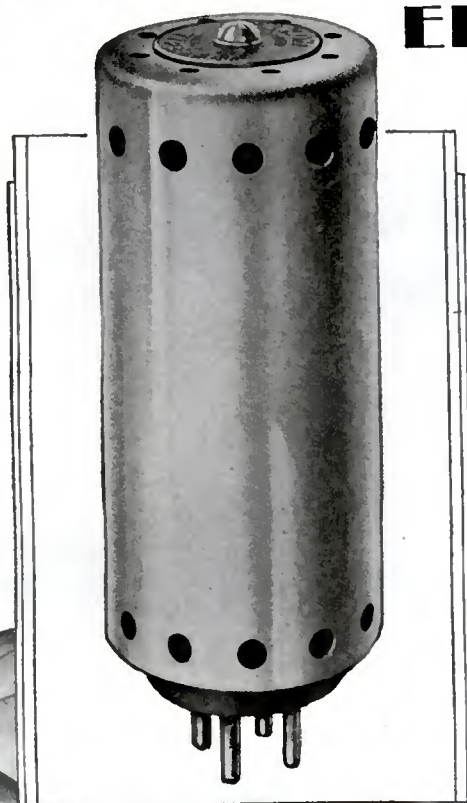
L . S . G O R D O N C O M P A N Y

Successor to H. C. Saal Co.

1 8 0 0 M O N T R O S E A V E N U E , C H I C A G O , I L L .

STUDNER BROS., Inc., National Sales Representatives, 67 W. 44th Street, New York City, and 28 W. Jackson Blvd., Chicago, Illinois
Export Agents, Ad. Auriema, Inc., 116 Broad St., New York City. Cable Address, Auriema, New York

THE AMAZING NEW 5000 HOUR ELKON RECTIFIER FOR "B" ELIMINATORS



OVER 1,000,000 PROSPECTS
Only 200,000 Available This Season

HERE is a tremendous market which is ready made for every dealer and jobber who sold "B" Eliminators using BH type Tubes.

The Elkton engineers have accomplished the seemingly impossible . . . dry rectifiers have long been the standards for low voltages—but until now there has never been a high voltage dry rectifier.

The Elkton dry high voltage Rectifiers are just as permanent, just as efficient, as the Elkton dry low voltage rectifiers.

The interest which the publicity items will arouse plus the magazine and newspaper advertising will bring the customers into your store—and once they are in there, the attractive display box on your counter will make the sales for you.

Send the coupon today and get complete information on the Elkton line of Quality Radio Products.

ELKON, INC.

Division of
P. R. Mallory & Co., Inc.
350 Madison Ave.,
NEW YORK CITY



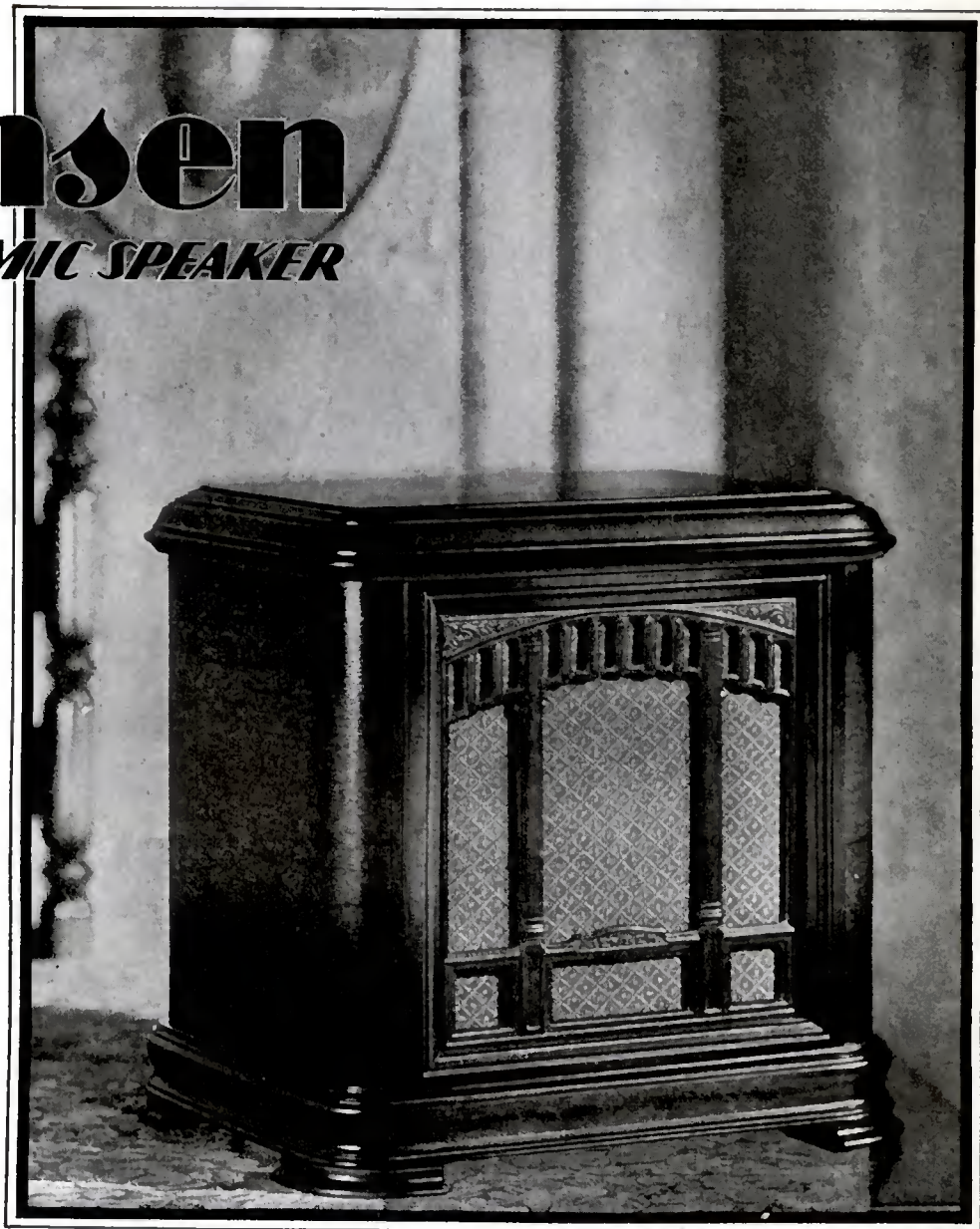
ELKON, Inc., Dept. E-45
350 Madison Ave., New York City

Send us complete information on the Elkton Radio Products.
If you are a dealer please indicate your favorite jobber

Name
Address

Jensen

DYNAMIC SPEAKER



SINCE Peter L. Jensen first announced the Jensen Dynamic Speaker a year ago, reams have been printed and superlatives exhausted in the announcement of dynamic speakers. But they have all served a good purpose, for by their claims they have established, more than ever, trade and public appreciation of Jensen "reproduction true as the original." It is one thing to make extravagant claims but quite another matter to establish them so firmly that they become a trade asset for the dealer.

It is fitting that the cabinets housing Jensen reproducing units should be correct from an acoustical standpoint and so distinctively beautiful in style and design. (The new Jensen Model 6 Cabinet is illustrated above).

Those dealers handling radio receivers not yet equipped with a dynamic speaker can meet competition by equipping their own consoles with the Jensen Dynamic Speaker—and at a price allowing an attractive return.

JENSEN RADIO MANUFACTURING COMPANY

338 N. Kedzie Avenue, CHICAGO, ILL.

212 Ninth Street, OAKLAND, CAL.

Jensen Patents Allowed and Pending—Licensed under Lektophone and Magnavox Patents

**Zenith had All Electric
[not "socket-power"] radio in
1926—the rest had it in 1927.
Zenith had Dynamic Speakers
in 1927—the rest followed suit
in 1928. Zenith has Automatic
Tuning in 1928—well, Zenith
dealers *always* lead the parade.**

30 Models—3 different circuits—6, 8 and 10 Tubes including De Luxe Automatic and Phonograph Models—with or without loop or antenna—battery or fully electric—\$100 to \$2500

Licensed only for Radio amateur, experimental and broadcast reception. Western United States prices slightly higher



"Automatic Radio" Owned and Controlled by The Zenith Radio Corp., Chicago, U. S. A., under the following patents—Vasselli 1581145, Re-issue 17002, Heath 1638734, Canada 264391, Gt. Britain 257138, France 607436, Belgium 331166. Also under Marvin and other U. S. and foreign patents pending.

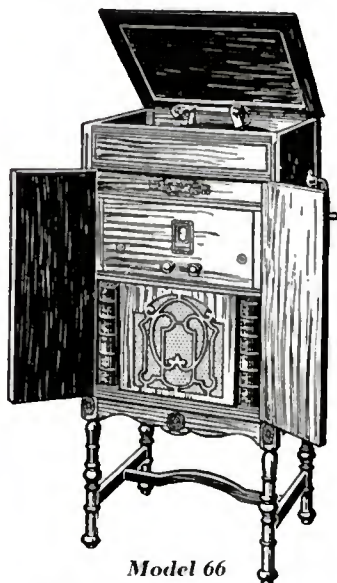
WORLD'S LARGEST MANUFACTURERS OF HIGH GRADE RADIO

All-American Mohawk Corporation

LYRIC RADIO

MERIT

And, of course,
Super
Dynamics!



Model 66

Radio Phonograph Combination. One dial, six tube, non-oscillating electric receiver. Electric pick-up. Built-in speaker. Less tubes, \$245.

It doesn't require a "seventh son of a seventh son," or a palm reader to discover "It" in an individual. "It"—sincerity—character—individuality—call it what you wish—that indescribable, invincible force that carries a favorite few to the pinnacles of fame and fortune is self-expressive, self-evident. It speaks in all languages to all ages.

The magnetic power of "It" is not restricted to the human race. Its irresistible influence is seen, heard, and felt in All-American Mohawk Corporation LYRIC Radios. It doesn't necessitate technical knowledge of radio to determine the super-quality of the LYRIC. It is convincingly evident. "It" is embodied in genuine merit—in superb beauty of design and finish—in greater selectivity—in finer sensitivity—in exact tone duplication—in volume—in precision of operation, "Radio's Realistic Close-up"—LYRIC Radio is richly endowed with "It". LYRIC Radio assures the utmost in demand and profit for dealers.

Accredited Dealers are invited to write or wire immediately for complete details regarding desirable dealer franchise available in open territories.

ALL-AMERICAN MOHAWK CORPORATION

Dept. 4B — 4201 Belmont Avenue, CHICAGO

In a Critical Year

IN 1928, a year that has seen at least four radio magazines suspend publication, one magazine has continued, with unfaltering pace, its achievement of new high records.

In circulation, for example, its paid subscriptions have increased in a fashion that indicates unmistakably that intangible but very vital quality of "reader interest"—

January 1925—magazine started, no subscribers

October 1925—10,745 paid subscribers

October 1926—16,381 paid subscribers

October 1927—17,747 paid subscribers

October, 1928—24,494 paid subscribers.

This one magazine numbers among its subscribers:

- the largest number of identified primary radio dealers,
- the largest number of identified music store radio dealers,
- the largest number of identified piano store radio dealers,
- the largest number of identified phonograph radio dealers,
- the largest number of identified electrical store radio dealers,
- the largest number of identified hardware store radio dealers,
- the largest number of identified furniture store radio dealers,
- the largest number of identified department store radio dealers,
- the largest number of identified sporting goods store radio dealers,
- the largest number of identified automotive supply store radio dealers

as well as

- the largest number of identified radio distributors and wholesalers

and

- the largest number of identified radio manufacturers.

Add up these circulation records and you find that this magazine has the largest number of paid subscriptions of any trade publication reaching the radio trade.

Its name, of course, is

Radio Retailing

a McGraw-Hill publication.

Tenth Avenue at 36th Street, New York, N. Y.

Member of both the ABC and ABP—only radio or music trade publication so honored.



TWO NEW MODELS

*Emphasizing the Attractive VALUES offered in the **KELLOGG** Lines!*

New Kellogg models appear from time to time—models that meet all price competition—but KELLOGG quality remains the same; fixed and unchangeable—the finest quality that can be built into a radio receiver.

Kellogg Switchboard & Supply Co.,
Dept. 54-78 Chicago, Ill.



KELLOGG

The RADIO *with the* Cathedral Tone



Kaufmann's of Pittsburgh, one of the country's biggest department stores, have boosted tube sales with Arcturus. They have, "sold hundreds of Arcturus A-C Detector Tubes and to date have not had occasion to replace one of them."

ARCTURUS
TUBES ARE
HEATER TYPE
THAT'S WHY—

Walthal, New York's biggest tube retailer, boosted tube sales with Arcturus—"personal demonstrations were held where the most skeptical customer was instantly won over."



You too, can increase tube sales with ARCTURUS

NO OTHER tubes in the world are made like Arcturus. *Heater Type* construction gives them *demonstrable* features of superiority unequalled by any other line of tubes. The country's leading merchants have increased sales, profits and customer satisfaction by demonstrating and proving Arcturus superiority.

They *demonstrate* that the Arcturus Detector will *act in 7 seconds*—against 30 to 60 seconds for other tubes—that Arcturus Tubes will stand 5 to 6 volts without effecting emission—that they give *humless* reception. They show proof (which we will gladly furnish you)

that Arcturus Tubes have an average life of well over 2,000 hours. This line of *Heater Type* Arcturus A-C Tubes includes the 071 H Power Amplifier of *proven* long life and dependability—the *first and only* satisfactory power amplifier on the market.

It is because Arcturus Tubes are unequalled by any other tubes—and because their superiority can be readily demonstrated—that they are boosting sales for the leading merchants in the country—and will for you. Write for complete information. Arcturus Radio Co., 220 Elizabeth Ave., Newark, N. J.

ARCTURUS

A-C LONG LIFE TUBES



Never in the history of the Musical Business has a complete line met with the instant success of the new SONORAS.

THE success of Sonora has been complete and instantaneous. Its spectacular new standard of performance... its beautiful cabinets... its powerful advertising campaign... have led the true Music Merchant to see in Sonora the way to increase his profits!

The reasons are not far to seek

First of all Sonora is a business-like set-up for the Music Merchant. In one line, under one trade-mark and with a low inventory requirement, Sonora covers the entire field of reproduced music—the Sonora Melodon, the Melodon with Radio, Sonora Radios, Melodonic Speaker, Sonora Phonographs, and forthcoming Sonora Records.

For the Music Merchant

knows when he deals with Sonora that he deals with men of established success in the industry—a management who have developed not only startling new instruments, but new finance plans, sales helps and greater margins of profit.

He knows that he is backed by a powerful advertising campaign in newspapers and magazines. That Sonora is endorsed by such famous people as Michael I. Pupin, famous scientist and inventor, Mrs. Dorothy (Enrico) Caruso, Anthony J. Drexel Biddle, Jr., Emily Davies Vanderbilt and a

host of others who appreciate the best in music. He sees this compelling campaign unfolding in The Saturday Evening Post, Collier's, Liberty, Literary Digest and Time. And in great Newspapers.

He knows that Sonora (a division of Acoustic Products Company) is also active in the field of synchronization of sound with pictures, in broadcasting, and in the manufacture of new records.

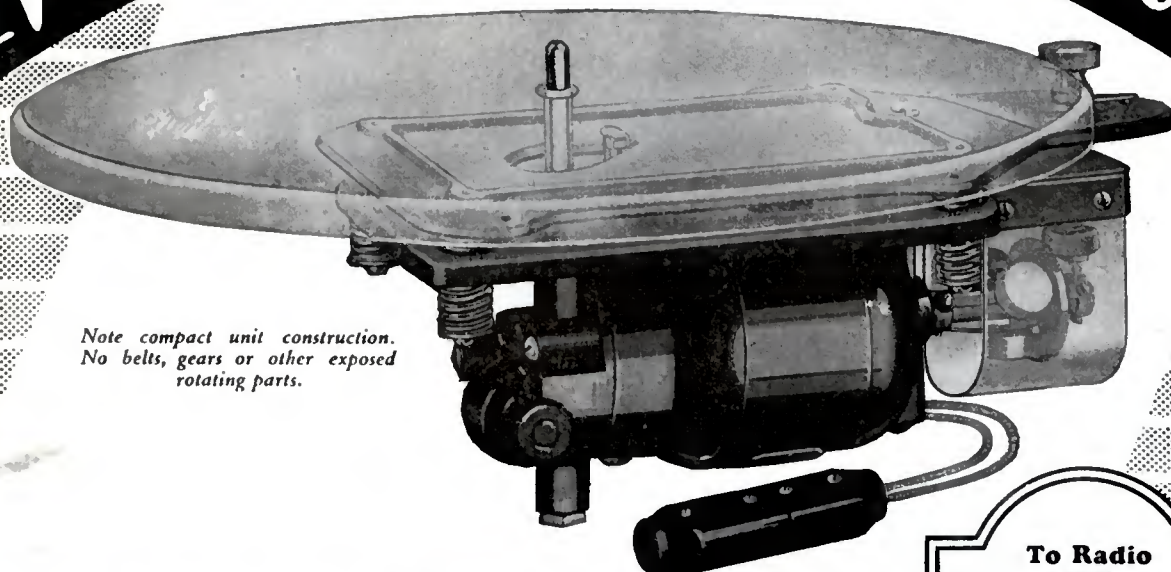
This is a Sonora Christmas

Present orders indicate tremendous volume. We are working day and night to meet demand. Better get your quota ordered now. Write or wire Sonora Phonograph Co., Inc., Sonora Building, 50 West 57th Street, New York City.

Sonora
CLEAR AS A BELL
(Acoustic Products Company)



No Brushes - No Commutator No Sparking - No Interference



*Note compact unit construction.
No belts, gears or other exposed
rotating parts.*

That's Why the Bodine Type RC-10 Is the Ideal Electric Turntable

For Phonographs and Radio-Phonograph Combinations

HERE is an electric turntable that solves the problem of thousands of radio users, set builders and experimenters who are adding phonograph attachments to their radio sets.

The Bodine Type RC-10 Electric Turntable is driven by a high-torque induction motor which has no commutator or brushes to cause sparking or interference. It cannot cause crackling noises in speakers or interfere with reproduction. An easily adjusted governor accurately maintains any desired record speed regardless of voltage fluctuation.

Compact construction and spring supports that absorb any vibration assure quiet and thoroughly satisfactory operation. Furnished completely assembled, and wired ready for use.

Order a stock of Bodine RC-10's from your jobber today and capitalize the popularity of this quiet operating turntable.

To Radio and Phonograph Manufacturers

These units utilize a standard industrial motor representing a substantial design that will appeal to the best trade. Sample units will be furnished for your inspection and test.

Supplied with or without turntables.

Write today!



BODINE

SMALL MOTOR SPECIALISTS FOR 23 YEARS

Mail the Coupon

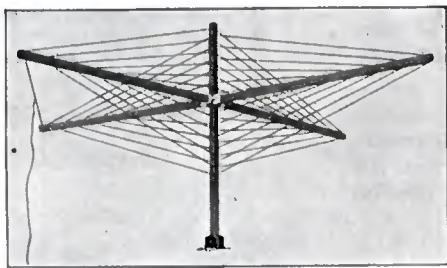
BODINE ELECTRIC COMPANY
2242 W. Ohio St., Chicago, Ill.

Please send complete information and prices on the Bodine Type RC-10 Electric Turntable.

Name.....

Address.....

City.....



FREE—a Trico Cameron Antenna

MAIL THIS TODAY!

Trico Products Corporation,
817 Washington Street, Buffalo, N. Y.

I am ordering four Trico Cameron Antennas from

.....
(name of jobber)

As soon as the jobber notifies you that my order has been received you are to send me FREE one Trico Cameron Antenna for my own use. (Offer not good if one free antenna has been received.)

Name

Address

City

Don't wait for *this* to happen

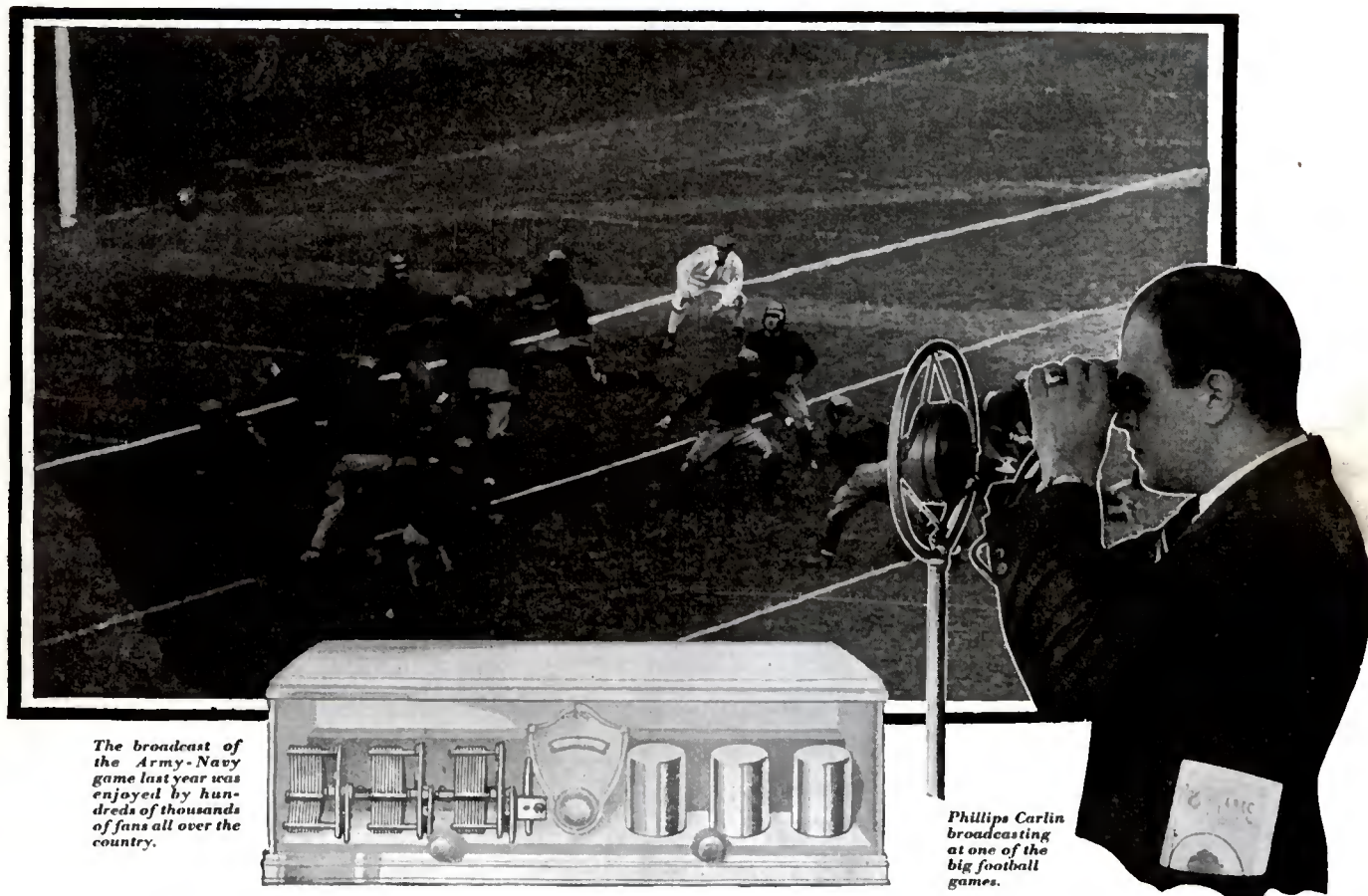
STOP risking your neck . . . stop risking your profits. Stop gambling on old fashioned long-wire aerial installations. Throw away the pipe cutters and all the trick tools that used to be needed to shin up telegraph poles and trees. For now you can get the Trico Cameron Antenna—this wonderful non-directional aerial which sells for \$5.

It can be put up by one man in 15 minutes and never needs any more service. It improves the tone of every set—brings in more stations and more volume and gets more distance with less interference and static than anything else manufactured.

Mail the coupon today and make some of this easy money.

TRICO
PRODUCTS CORPORATION
817 Washington Street, Buffalo, N. Y.

TRICO
CAMERON ANTENNA



The broadcast of the Army-Navy game last year was enjoyed by hundreds of thousands of fans all over the country.

Phillips Carlin broadcasting at one of the big football games.

The Big Game Comes Over~ BETTER~CLEARER

MILLIONS of enthusiastic football fans are listening this fall to the play by play broadcasts of America's greatest games. They are experiencing almost as keen enjoyment as if they were sitting in the stands. The voice of the announcer comes to them clearly and distinctly because their receiving sets are Aluminum equipped.

Leading radio manufacturers are using Aluminum extensively for shielding, for condenser blades and frames, for chasses, sub-panels, front panels and for many other parts—because Aluminum so ideally meets the varied conditions that radio design presents.

It combines remarkable shielding properties, high electrical conductivity, great strength and extreme lightness.

Examine the set you contemplate buying. If it is Aluminum equipped you may rest assured that the manufacturer has done everything in his power to give you the finest possible reception.

And if you are building a receiving set use Aluminum for finest results.

We will gladly send you the booklet, "Aluminum For Radio," which explains the varied radio uses to which Aluminum is adapted.

ALUMINUM COMPANY OF AMERICA

ALUMINUM IN EVERY COMMERCIAL FORM

2462 Oliver Building
Pittsburgh, Pa.



Offices in 19 Principal
American Cities

ALUMINUM

The mark of Quality in Radio

KEN-RAD SALES ARE GOING UP



**REAL
MERCHANDISING
SUPPORT KEEPS THESE
STANDARD QUALITY TUBES
MOVING ACROSS THE COUNTER**

WITH the radio season just hitting its stride, Ken-Rad Archatrons have jumped to new sales peaks. Behind these increases is the Ken-Rad merchandising policy which builds customer confidence and satisfaction—and insures the dealer a legitimate, business-building profit.

Look what the dealer gets when he sells Ken-Rad Archatrons:

1. Tubes made by one of the three oldest manufacturers in business today
2. Strictly standard quality tubes.
3. A guarantee to the customer for complete satisfaction—he being the sole judge.
4. Profitable discounts.
5. Protection against price decline and stock obsolescence.
6. Live, sales-producing dealer helps.

This is the kind of a proposition Ken-Rad offers you. You need such help to stay out in front of the field. The coupon below will bring you all the details of our progressive sales plan. Mail it today.

THE KEN-RAD CORPORATION, Incorporated
Owensboro, Kentucky

KEN-RAD ARCHATRON



THE KEN-RAD CORPORATION, Incorporated.
Owensboro, Kentucky.

I want to do a bigger tube business. Show me the way to do it.

Firm Name..... City.....

Street Address..... State.....

the Shortest Path to the Radio Sale

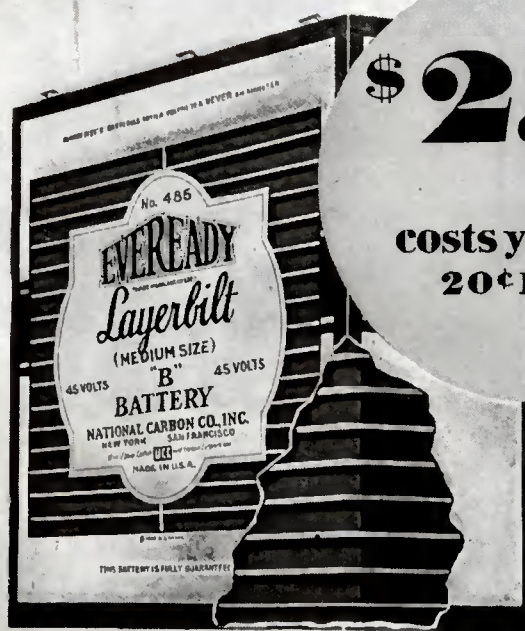


A message from YOU to the family circle
... interest won ... that interest directed
to the point of purchase: your store.

The makers of Day-Fan Radio extend local
advertising cooperation that doubles your
dollar ... that cultivates your own market
intensively. If you don't know *all* about the
profit opportunity that Day-Fan offers this
year, write us immediately.

**DAY-FAN
ELECTRIC COMPANY**
Dayton, Ohio





\$2.95
costs you only
20¢ more

This is the medium size Eveready Layerbilt "B" Battery No. 485. 3 1/4 inches thick. 45 volts \$2.95

If you use the medium size, you can buy the Eveready Medium Size "B" Battery No. 772, for \$2.75. It's a fine battery of its type—cylindrical cell. BUT, just add 20 cents to your price, and get the Eveready Layerbilt Medium Size "B" Battery No. 485. Same outside size as the older battery, but more active materials inside, and so you buy 25% longer life with your 20 extra cents.

Another great battery bargain!

Both these Eveready Layerbilts are made of flat cells that fill all available space inside the battery case. This construction avoids the useless waste spaces between the cells of the older, cylindrical cell type of battery, and eliminates soldered connections between cells. The truly modern "B" battery is the Eveready Layerbilt. These two batteries, exclusive with Eveready, are longer-lasting and more economical. Look for the name Layerbilt on the label.

NATIONAL CARBON COMPANY, Inc., New York—San Francisco,
Unit of Union Carbide and Carbon Corporation

**Never was so much
extra service
bought for so
few extra cents**

EVEREADY
Radio Batteries

Layerbilt construction is a patented Eveready feature. Only Eveready makes Layerbilt batteries.

TUESDAY NIGHT IS EVEREADY HOUR NIGHT

East of the Rockies
9 P. M. Eastern Standard Time
Through WEA and associated N. B. C. stations

On the Pacific Coast
8 P. M. Pacific Standard Time
Through N. B. C. Pacific Coast network

You are a "B" battery user. You are most probably interested in one of two popular sizes. You use, in the majority of cases, either the heavy duty size, or the medium size. If you use the heavy duty "B" batteries, which is the most economical thing to do, you can get the Heavy Duty Eveready No. 770, which contains cylindrical cells, for \$4.00. BUT for only 25 cents more you can have the famous Eveready Layerbilt No. 486, which is the same size, outside, but which contains more active materials, and lasts 30% longer. For your extra quarter you get from a quarter to nearly a third more service.

Never before did 25 cents buy so much battery service!

This is the famous original Eveready Layerbilt "B" Battery No. 486. The longest lasting of all Evereadys. 4 7/16 inches thick. 45 volts. \$4.25.

\$4.25
costs you only
25¢ more



SEE AND

RADIO SETS

This is the Eveready Layerbilt story being told to your customers during November in national magazines and newspapers



"And ev'ry voice is heard repeating
The merry burthen of glad song."—CARMEN

MAGNAVOX "Dynamic" SPEAKERS

A startling illusion... studio realism in the home. Only a dynamic speaker can so faithfully reproduce the full, rich beauty of the original... in volume... undistorted. Magnavox created the dynamic, makes only dynamics, supplies leading set makers.

LICENSED APPARATUS
DYNAMIC
THE MARK OF THE GENUINE



"FIRST
SPEAKER
FIRST
DYNAMIC"

The Aristocrat

Beautiful butt burl walnut cabinet
finished in two tones.

For A-Battery Operation \$60
For AC Operation \$70

Units only; DC \$30; AC \$40

THE MAGNAVOX COMPANY

Oakland, California Chicago, Illinois



Console Model. A beautiful walnut finished cabinet, equipped with dynamic or magnetic speaker. Size 51 in. x 28 in. x 18 1/2 in. deep.

Furnished in 6-tube standard Code No. PC-47-RAC-6, and 7-tube "Push-Pull" Code No. PC-47-RAC-7.

Private Label Radio Brings You Most Profit Now!

The entire radio merchandising world knows the remedy for the disadvantages of a national fixed-price policy, for top-heavy inventories, burdensome contracts and insufficient mark-up. Private label radio!

Remember also that material and manufacture—not advertising—determine the quality, performance and salability of a receiver.

Premier Radio for Private Label gives you longer profits, absolute control of price in regard to local markets; you order out only what you need; you preserve your *most valuable possession*—your trade identity.

Premier Radio is the equal of any in performance, looks, quality and salability. Table and Console Models furnished standard in 6-tube and 7-tube Push-Pull. Also combination radio and phonograph with electric pick-up.

Chassis Specifications

All-metal chassis; rigid, strong, stays put. Unconditionally guaranteed. Apparatus 100% shielded. Licensed under U. S. Navy Patents and Hogan Patent No. 1,041,002.

*Write for price and full details
No obligation*

PREMIER ELECTRIC CO.

Established 1905—Manufacturers Ever Since

3818 Ravenswood Ave.
Chicago, Ill.

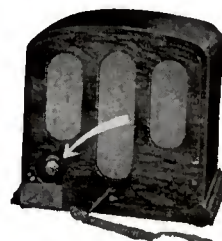
New Fast Selling Models

JUST ADDED TO THE NEWCOMBE-HAWLEY LINE



The popular Model 83 Newcombe-Hawley Portable Reproducer with Magnetic Cone Unit is now offered in the New Model 83-B which has the additional feature of the Condition Equalizer.

Dealers everywhere are reporting tremendous interest in the Model 83-B because the Condition Equalizer affords control over the quality of the reproduction. The simple adjusting knob on the back panel does the trick. Be sure to investigate the sales features of the Model 83-B.



A NEW TABLE REPRODUCER

Model 81-D—with Dynamic Cone Unit

Here is a new table reproducer by Newcombe-Hawley for the larger all-electric sets. It is designed especially for table model sets not over 30 inches in width.

The Newcombe-Hawley Dynamic Cone Reproducer is concealed by a cloth-covered grill and perfect baffling is provided. The table is walnut, beautifully finished, and designed to harmonize with all interior appointments. Be sure to investigate the Model 81-D with the beautiful Newcombe-Hawley Dynamic Cone Reproducer.



THE COMPLETE NEWCOMBE-HAWLEY LINE

The Newcombe-Hawley line includes dynamic, magnetic, and air column speakers. They are offered in chassis form and also in a series of beautiful

portable table and console models. There is a Newcombe-Hawley reproducer for every purse and purpose. Send for complete catalog today.

Manufactured by
NEWCOMBE-HAWLEY

Division of
United Reproducers Corporation
St. Charles, Illinois
Export Department
130 W. 42nd St., New York, N. Y.

NEWCOMBE-HAWLEY

RADIO REPRODUCERS





Braidite

HOOK-UP WIRE

"THE BRAID SLIDES BACK"



Antenna Wires
Stranded, Braided, Solid
Plain, Tinned, Enameled
Hook-Up Wires
Braidite, Flexibus, Colored Rubber
Cables, Complete Aerial Kits
A.C. Adapter Harnesses

Acclaimed by radio engineers, repair men, amateur and professional set builders, and bench men in the shops of all the leading set manufacturers as the best and most practical hook-up wire ever made, it is no wonder that Braidite is radio's biggest selling hook-up wire.

The insulation can be easily shoved back far enough for both solder and post connections, sliding back into place after the connection is made, providing a neat, clean and effective insulation for all exposed areas.

SPECIAL INTRODUCTORY OFFER

Send us the name and address of your jobber and we will send you two packages of Braidite free. One Solid and one Stranded. We do this because we want you to get acquainted with Braidite and prove to yourself its many exclusive features.

Cornish Wire Co. 28 Church St.
New York, N. Y.



25 feet Stranded.....35c.
25 feet Solid.....30c.
Red, Green, Yellow,
Blue and Black.

New Excello Cabinets of Rare Beauty Highest Quality and Wide Popularity



Style R47

Designed especially for Atwater Kent, Crosley and other standard A.C. receivers. Accommodates set and speaker in a beautiful cabinet of highest quality of Excello craftsmanship. Doors five ply matched butt walnut veneer fold back flat against sides. Receiver compartment in sliding drawer, walnut hand-rubbed finish.

Style R48 same as Style R47 except overlay on doors.

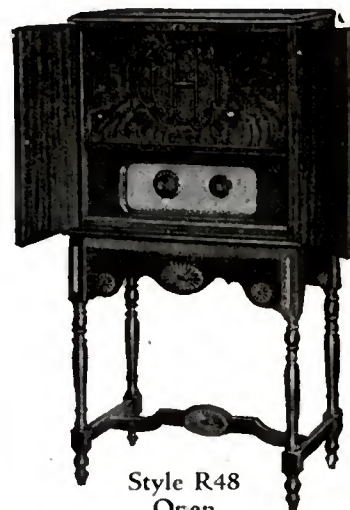
Write for complete catalogue showing many styles.

EXCELLO Radio Consoles

Nationally Advertised—SELL THE EXCELLO—Nationally Preferred

EXCELLO PRODUCTS CORPORATION

4834 W. 16th St., CICERO, ILL. (Suburb of Chicago)



Style R48
Open

Dealers and Distributors
write for franchise details.

Down to Earth . . .

UNLESS advertising appropriations come "down to earth" in your vicinity they don't do you any good. National advertising must shape *local* buying habits or it won't move merchandise from your store.

It is true that manufacturers must have national advertising—but it is equally true that *you* must have advertising that directly influences *your* territory and *your* customers. *The American Weekly* is the one publication that blankets nationally and dominates locally.

What is The American Weekly?

The American Weekly is the magazine distributed through the sixteen great Hearst Sunday newspapers in sixteen principal American cities*. It reaches every fourth English-speaking home in the United States. It is read by 5,646,898 prosperous American families every week—the greatest circulation of any publication in the world!

The American Weekly is a national giant with tremendous local strength. It concentrates and dominates in 485 of America's 784 towns and cities of 10,000 population and over.

In each of 153 cities it reaches one out of every two families
In 119 more cities it reaches from 40 to 50%
In additional 108 cities it reaches from 30 to 40%
In another 105 cities it reaches from 20 to 30%

And it is bought every week by almost two million *additional* families in thousands of other populous communities. It virtually blankets the buying power of America!

That is why America's largest national manufacturers—from automobiles to beauty preparations—advertise in The American Weekly.

When a manufacturer tells you he uses The American Weekly, he is not only talking national circulation, but *local* influence as well!

*Atlanta
Baltimore
Boston
Chicago
Detroit
Los Angeles
Milwaukee
New York
Omaha
Pittsburgh
Rochester
Syracuse
San Antonio
San Francisco
Seattle
Washington

**THE AMERICAN
Greatest
Circulation
in the World** **WEEKLY**

Main Office: 9 East 40th Street, New York City

Branch Offices:

Wrigley Bldg.
Chicago
5 Winthrop Square
Boston
753 Bonnie Brae
Los Angeles
222 Monadnock Bldg.
San Francisco
1138 Hanna Bldg.
Cleveland
101 Marietta Street
Atlanta
11-250 General Motors Bldg.
Detroit

The Most Modern of all Aerials

Radio Lite-Tenna



Old Gold
Finish—
Amber
Shade
Height 10 in.

PRICE
\$7.50
List

Increases radio enjoyment

The clearer signals, greater selectivity and range made possible with the Radio Lite-Tenna serves to make reception on any radio more enjoyable. Besides improving reception the Radio Lite-Tenna affords a safe and unusually attractive substitute for the messy wiring used on most other aerials.

Dealers find that using the Lite-Tenna when demonstrating a set helps sell both the set and the Lite-Tenna. Furthermore, it simplifies your job of installation.

There is a ready profit for the dealer who stocks Lite-Tenna now. It's something new, distinctive and reliable. Send the coupon for full information. Distributed by Two Hundred Jobbers.

Aerial Insulator Co., Inc.
Green Bay, Wisconsin

Please send me full information on your new Radio Lite-Tenna.

Name.....

Address.....

City.....

Just tell 'em about it
and they want it—

Paragon Radio Ground Master



There is an established and growing demand for a good radio ground. The PARAGON RADIO GROUND embodying important patented features is the original and only scientifically constructed radio ground on the market.

With the advent of electric sets many dealers' accessories have been wiped out. The PARAGON RADIO GROUND MASTER is particularly adapted for use with electric sets either as a ground or as an aerial, effecting marked improvement in clearness of tone and reduction of static.

IT WILL PAY YOU TO PUSH
THIS PROFITABLE DEPEND-
ABLE RADIO ACCESSORY

Low in price with a real incentive in discount, carried in stock by leading radio jobbers or write us direct

Paragon Electric Company
OLD COLONY BLDG. CHICAGO



REPUTATION that builds up your sales

The dealer who features the UDELL line not only displays a series of cabinets of rare and striking beauty, but enjoys the influence of a prestige earned by 55 years of leadership in cabinet craftsmanship. This no doubt explains why UDELL Cabinets are sold so readily, and the consequent enthusiasm of UDELL dealers everywhere.

Write today for your copy of our
handsome new catalog of dis-
tinguished Period and Art Moderne
Cabinets.

THE UDELL WORKS
28th St. at Barnes Ave., Indianapolis, U. S. A.

Increased Amplification Improved Quality with this



new
valve!

Harold P.
Donle's
latest
achievement

Full size DA2 Valve
Retails for \$3.00

The inventor of the famous Sodian Detector valve now brings out this DA2 6-volt amplifying valve for any type of D.C. set.

After exhaustive tests in order to perfect it for the market, this company is now in a position to fill orders from dealers for this wonderful valve.

Here is what some enthusiasts say of this new valve:

"Really it is the most marvelous valve I have ever come in contact with."

"Received the four tubes ordered, today. Must say that they even exceed all my expectations."

"It is a pleasure to report that the three tubes I received from you Saturday, have increased the sensitivity of my Hammarlund-Roberts Hi Q to a considerable degree. I also tried one in the R.F. stage of a Browning-Drake and there, too, the gain was considerable."

Dealers, here is a chance to improve both volume and quality of your customers' D.C. sets. We guarantee every valve.

Send today for two samples for test. They will be billed at full discount. We can make prompt shipments.

**DONLE ELECTRICAL PRODUCTS
CORPORATION**
MERIDEN, CONN.



Test Tubes Without Batteries



Pattern No. 150
tube tester—
Operates from A.C.

Obviously, the elimination of A, B, and C batteries in tube testing would save a lot of time and trouble in making connections, getting the right voltage combinations, besides saving cost of batteries.

But that is what the Jewell Pattern No. 150 A. C.-D. C. tube checker does. No batteries whatsoever are needed. All that is required to prepare it for testing tubes is to plug the attached cord into a 110 volt, 60 cycle outlet, thus making use of alternating current.

Filament voltage is read on a 0-4-8 A. C. voltmeter and plate current is read on a 0-15 milliammeter, which also gives a second reading when the grid shift is used.

All tubes from the WD-11 up to the 210 can be tested.

This new tube tester is fully described in our descriptive circular No. 2004. Write for a copy.

"28 Years Making Good Instruments"

JEWELL

Electrical Instrument Co.

1650 Walnut St., Chicago

Not "just another speaker"
but the

New 1929 ULTRATONE

Mineral Moulded—Exponential
Air Column Amplifier
and
Super Magnetic Cone

Model 10
\$18.00
LIST



THESE Speakers are designed for the home where *quality of tone* as well as volume is most essential. Besides being deep and resonant in tone a perfect fidelity of reproduction is assured throughout the whole musical range.

That is what is meant by—

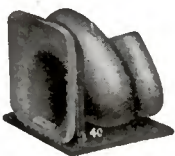
ULTRATONE
*Balanced
Reproduction*



Model 12
\$22.50
LIST



Both the cone and built-in types of air columns may be had in seven different designs to meet all conditions in cabinet construction.



To get delivery you must place
your order now.

ULTRATONE MFG. CO., INC.
1046 W. Van Buren St., Chicago, Illinois

Every Set Must Have A Radio Control Box for Safety



Centralab Radio Control
Box. List Price... \$3.00

This is one accessory that is in demand by the owners of all socket operated radio sets. Widespread comment by the radio press has acquainted the individual with the necessity of a line voltage control or regulator to compensate for high line voltages found in every locality.

You can supply this demand with a unit that is exceptionally efficient, neat in appearance, and at a price that your customers are willing to pay.

Centralab fully guarantees the Radio Control Box and advises it as a real money making item for any retail store.

Send for booklet describing Centralab Resistances and Volume Controls. Many live items that will stimulate business are described therein.

CENTRAL RADIO LABORATORIES
30 Keefe Avenue, MILWAUKEE, WIS.

Centralab
CENTRAL RADIO LABORATORIES



CONDENSERS

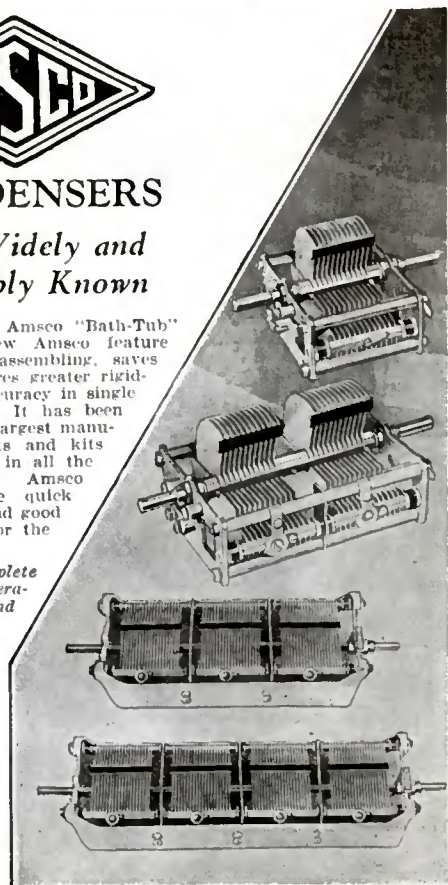
*Most Widely and
Favorably Known*

Now comes the Amisco "Bath-Tub" type. This new Amisco feature saves time in assembling, saves space, and assures greater rigidity and finer accuracy in single control tuning. It has been adopted by the largest manufacturers of sets and kits and is specified in all the leading circuits. Amisco Condensers are quick turning items and good profit makers for the trade.

Write for complete
descriptive literature,
prices and discounts.

AMSCO
PRODUCTS

Broome &
Lafayette Sts.
New York,
N. Y.



CASE

ELECTRIC RADIO

The CASE line of 7- and 8-tube super-powered AC Neutrodynes is building amazing profits for its dealers.

These new sets by an established, reputable manufacturer not only outperform competition, but offer greater value as well. And every set is a musical and artistic masterpiece!

A Profit-Building Dealer Franchise

If you're interested in making more money from radio you're interested in the CASE line and the CASE franchise that meets you half way—and then some. Write us today.

CASE ELECTRIC CORP.

Division United States Electric Corp.

MARION, INDIANA

Majestic
ELECTRIC RADIO
{Grigsby-Grunow Company, Exclusive Mfrs.}

Everybody wonders:

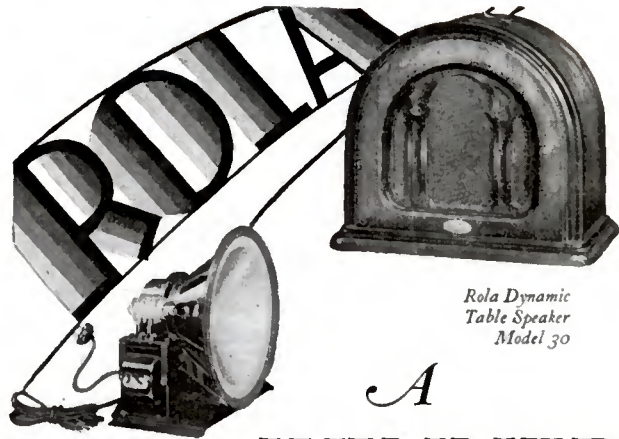
“How can it
be done?”

Majestic
is doing it!

GRIGSBY-GRUNOW COMPANY

5801 Dickens Ave.

Chicago



Rola Dynamic
Power Unit, Model D-110

Rola Dynamic
Table Speaker
Model 30

A
WINNER

at every demonstration

INSTANTLY, unanimously—at every demonstration—radio users have selected the new Rola above all others. At the radio shows in Chicago, San Francisco, Los Angeles, New York, St. Louis and other cities, Rola easily “won the house.” Never before had such marvelous realism been heard in radio.

The new Rola Dynamic Power Speakers, equipped with the new Rola D-110 Dynamic Power Unit, give a response approximately twice that of any other dynamic on a given input. From the deepest bass to the highest treble, operating with type 171, 210, or 250 tubes, these new speakers reproduce with marvelous accuracy . . . attaining a degree of realism never before equaled.

Dealers who have already stocked Rola report the greatest enthusiasm and quick turn-over. In the complete Rola line of Dynamic and Magnetic speakers, dealers find just the loudspeaker for every radio installation, regardless of kind or cost.

Model 35. A console dynamic speaker. Top dimensions sufficient to accommodate any standard radio set. Operates directly from 110-volt AC socket. . . . List Price, \$110
Model 30. A dynamic table speaker equipped for light socket operation. . . . List Price, \$75
Model 25-D. A radio speaker table with built-in dynamic power unit. . . . List Price, \$90

Model D-110. A complete, self-contained, dynamic speaker unit, with built-in transformer-rectifier for exciting from 105/125 volt, 60-cycle current, and with base bracket, 20-1 input transformer, equalizer filter, tinsel cord and ten-foot power cord with through-switch. . . . List Price, \$50

MANUFACTURERS: The following units are ready for installation in cabinet and console sets.

Write for prices.

Model D-180. A dynamic unit with field coil wound to 7,000 ohms for excitation by 20 to 30 milliamperes at 150 to 225 volts.

Model D-90. A dynamic unit with field coil wound to 1,950 ohms for excitation by 40 to 80 milliamperes of direct current at 75 to 150 volts.

Model M. A magnetic-armature unit combining surpassing performance with ruggedness and dependability, at moderate cost.

Ask your jobber for full details on the 1929 line of Rola loudspeakers, or write factory for name of Rola jobber nearest you

THE ROLA COMPANY

OAKLAND, CALIFORNIA: 45th & Hollis Streets

CLEVELAND
2570 East Superior Avenue





BUCK RADIO TUBES

"Not a kick
in a Million"

All A.C. & D.C. Types
at popular list prices
Six Months' Guarantee

Buck
Distributors
from Coast to Coast
Big Profit
Dealers get busy
Don't Pass the Buck
Write for name
of your
nearest Distributor

UNIVERSAL
Elec. Lamp Co.
Newark, N. J.

"The tube that stands the Test!"

Readrite

UNIVERSAL TEST SET

Tests A.C. and D.C. Circuits
Quickly Locates Set Troubles

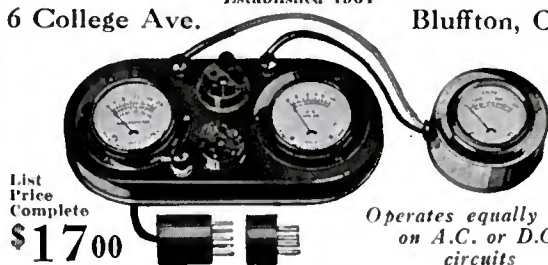
Standard with No. 215 Tube Tester, list price \$12.00, and No. 346 Voltmeter, range 0-300 volts, list price \$5.00. Optional with No. 347 Voltmeter, 0-500 volts, for \$1.00 additional. Tube Tester plugs into socket from which tube to be tested has been removed. A practical outfit for service man or set owner.

Readrite Meter Works

Established 1904

6 College Ave.

Bluffton, Ohio



List
Price
Complete
\$17.00

Operates equally well
on A.C. or D.C.
circuits

CONTINUOUS PROFITS

When You Keep Customers Satisfied!



VOGUE NONPAREIL

Will Quickly Prove Profitable

You Can Confidently Expect

More Tube Sales

More Satisfied Customers

More Profit

ALLAN MANUFACTURING CO., Harrison, N. J.
Los Angeles: 487 Chamber of Commerce Bldg.

MASTER VOLTAGE CONTROL

Eliminates Free Service Calls

Announced in July, now the season's fastest selling radio accessory. A necessity on all A-C sets! Distributed by over 250 leading jobbers. Selling on its merits because of its fine performance and excellent workmanship. The various line voltages which are in daily use throughout the country have been compensated for in MASTER VOLTAGE CONTROL. Works equally well in A-C and D-C districts, 25-60 cycles.

Sales Features:

1. No Moving Parts.
2. No Guesswork in Setting for Correct Voltage.
3. Nothing to Get Out of Adjustment.
4. Once Installed Requires no Further Attention.
5. Air Cooled — Does Not Heat Excessively.
6. No Tools Required for Installation.
7. Anyone Can Install It.
8. Saves Tubes.
9. Saves Sales.
10. Turns Complaints into Actual Sales and Keeps Customers Satisfied.

ORDER AT ONCE FROM

YOUR JOBBER—

If he can't supply you send your order to—

**MASTER
Engineering Co.**
128 So. Michigan Ave.
Chicago



LIST PRICE

\$2.50



Why They Sell Better!

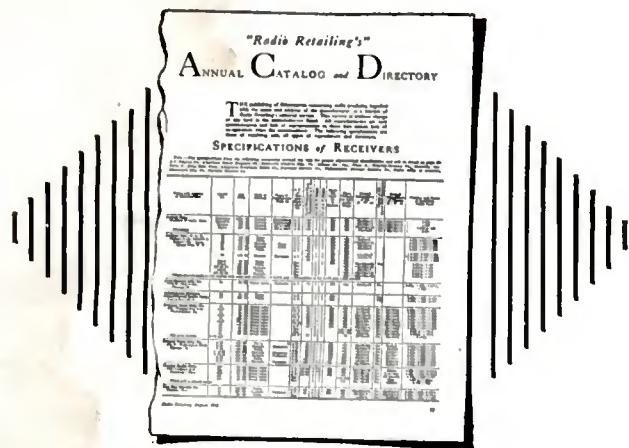
Velvet-like tone; no microphonic noises; nationally advertised; made in all standard types, A.C. and D.C.

Write for full description
and prices.

Televocal Corporation
Televocal Building

Dept. E-6, 588 — 12th Street
West New York, N. J.

Televocal Quality Tubes



In This Issue

See page 61 of this issue for the Catalog and Directory of Tubes. Specifications of A. C., D. C., Rectifying Television and special tube manufactured.

Over the Year

... Radio Retailing brings you complete specifications of Radio Equipment:

August Issue—Sets, Speakers, Cabinets

October Issue—Phono-graph combinations

November Issue—Tubes

Many others to follow



If you look on page 61 of this issue, you will see the Radio Retailing Catalog and Directory of Tubes. It is complete in every respect. It answers your specification questions on every tube on the market.

There are more than a dozen such sections. Sets, speakers, cabinets, power units, audio transformers, variable and fixed condensers and other radio items all have their own section of Radio Retailing's Catalog and Directory.

This is but a small arm of the extensive Radio Retailing service which will help you in every phase of your business.

Costs You Only 9c a Month

Help for your buying—your selling—your management—all the news of the industry—a picture and description of every new item ready for the market—all for \$1 a year—9 cents a month. Use this coupon today.

The same \$1 that brings you 12 issues of Radio Retailing

\$1

—assures you of the specifications of Sets, Speakers, Tubes Cabinets and other radio equipment.

.....Clip Here and Mail Today.....

Pin \$1 Here

This coupon saves you \$1.

Use this coupon and get a regular \$2 yearly subscription for half price by pinning a \$1 bill to it.

Radio Retailing
10th Ave. and 36th St.
New York, N. Y.

Enter my subscription for 1 year to
Radio Retailing.

Name.....

Street.....

City.....State.....

Name of Company.....

Besides Radio we sell.....

SEARCHLIGHT SECTION

REPRESENTATIVES WANTED

Representatives Wanted
For a B power unit based upon an entirely different principle; patented and absolutely guaranteed; ideal for screen grid and short wave sets; greatly improve the tone of any radio set. RW-83, Radio Retailing, Tenth Ave. at 36th St., New York.

REPRESENTATIVE AVAILABLE

Manufacturers Sales Representatives
Calling on radio and electrical jobbers and large retail outlets in Philadelphia, Baltimore, Washington territory are open for few additional substantial lines with volume possibilities. Best references. RA-84, Radio Retailing, Tenth Ave. at 36th St., New York.

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STATEMENT OF THE OWNERSHIP,
MANAGEMENT, CIRCULATION,
ETC., REQUIRED BY THE
ACT OF CONGRESS OF

AUGUST 24, 1912
Of Radio Retailing, published monthly at New York, N. Y., for Oct. 1, 1928.
State of New York } ss.
County of New York }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared C. H. Thompson, who, having been duly sworn according to law, deposes and says that he is the Secretary of McGraw-Hill Publishing Co., Inc., publishers of Radio Retailing and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

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2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) McGraw-Hill Publishing Company, Inc., 10th Ave. at 36th St., New York, N. Y. Stockholders of which are: James H. McGraw, 10th Ave. at 36th St., New York, N. Y. James H. McGraw, Jr., 10th Ave. at 36th St., New York, N. Y. Harold W. McGraw, 10th Ave. at 36th St., New York, N. Y. Donald C. McGraw, 10th Ave. at 36th St., New York, N. Y. Curtis W. McGraw, 10th Ave. at 36th St., New York, N. Y. James H. McGraw, James H. McGraw, Jr., and Malcolm Muir, 10th Ave. at 36th St., New York, N. Y. Trustees for: Harold W. McGraw, James H. McGraw, Jr., Donald C. McGraw, Curtis W. McGraw, Fred R. Low, 10th Ave. at 36th St., New York, N. Y. Mason Britton, 10th Ave. at 36th St., New York, N. Y. Anne Hugus Britton, McGraw-Hill Bldg., New York, N. Y. Grace W. Mehren, 30 West 88th St., New York, N. Y. Malcolm Muir, 10th Ave. at 36th St., New York, N. Y. Trustee for: Lida Kelly Muir, Fred S. Weatherby, 271 Clinton Road, Brookline, Mass. Edgar Kobak, 10th Ave. at 36th St., New York, N. Y. Leonard D. & Arthur J. Baldwin, 27 Pine Street, New York, N. Y. Trustees for: Franklin Baldwin, Grace Riker, Cynthia Hazelton, Arthur J. & Leonard D. Baldwin, 27 Pine Street, New York, N. Y. Trustees for Donald Baldwin, John R. Dunlap, c/o J. R. Dunlap, Jr., Chandler & Co., 120 Broadway, N. Y. C. Jera Corporation, 660 Cass Street, Chicago, Ill. Stockholders of which are: A. W. Shaw, Chicago, Ill. Eulah P. Shaw, Chicago, Ill. Dorothy W. Sammons, Chicago, Ill. L. C. Walker, Muskegon, Michigan. J. J. Zimmerman, London, England.

LEGAL NOTICE

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5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only.)

McGRAW-HILL PUBLISHING COMPANY, INC.

C. H. THOMPSON, Secretary.
Sworn to and subscribed before me this 28th day of September, 1928.

[Seal.] MARTIN J. WIEMER,
Notary Public, Queens County, Certificate No. 2109. Certificate filed in New York County No. 486.
(My Commission expires March 30, 1930.)

Store for rent in wonderful location for radio and phonograph retailer.

Busy section of New York, where trade is both resident and transient.

123 Avenue A, New York

WE PAY CASH

for your

SURPLUS RADIO STOCKS

What have you for sale?

AMERICAN SALES CO.
21 Warren Street, New York City
Established 1919

ONE DEALER

sold 200 Lambert Pocket Radios from 9:00 A. M. to 3:00 P. M. May 21st. How many can you sell between now and Christmas?

Write today for special dealers' offer.

LEON LAMBERT MFG. COMPANY
133 N. Market St., Wichita, Kansas

Vacuum Cleaner Bags at 85c. each

Made of the highest grade black dust proof material to fit all makes.

Less hardware.

Hoover brushes rebristled in exchange for old one—95c. each.

Belts—Hoover 15c. ea.
Premier Dup. 7c. ea.
Western Elec. 15c. ea.
Hamilton Beach 7c. ea.
Ohio (Flat) 7c. ea.

Write for jobbers bulletins f.o.b. Indianapolis

Vacuum Cleaner Supply Co.

1314 W. Washington St., Indianapolis, Ind.

Get Ready For Nov. 11th

**Ten Million Log Books
Must Be Scrapped**

**All Wave Lengths will be
Changed**

Stations will come in at new places on the dials.

Every customer will want a new

RADEX

Will you take his money or send him to your competitor?

RADEX sells everywhere at 25 cents, your price \$2.00 a dozen or \$10.80 for six dozen.

RADEX contains both lists, the present and the Nov. 11th as well.

RADEX is far more than a log-book. It calibrates the set—shows what frequency set is tuned to for any setting of the dials.

Order Today

The Radex Press

P. O. Box 143-W

CLEVELAND, OHIO

Baldwin

UNITS, TYPE H

LIST \$6.00

OUR PRICE \$1.50 ea.

Westinghouse

STORAGE BATTERIES

6 Volt, 7 Plates, 65 Ampere

LIST \$18.00

OUR PRICE \$5.25

Send for our Bulletin of Nationally
Advertised Merchandise at Bargain Prices

Baltimore Radio Co.

138 Liberty St., New York City, N. Y.

Large Quantity of

Dubilier 30 Henry Chokes

at 75c. ea. No less than six sold.
Write for Quantity Prices.

FULTON RADIO CO.

16 Hudson St., New York City, N. Y.

DEALERS—

here are real bargains
(NATIONALLY ADVERTISED ITEMS)
everyone a money maker!



UNI-RECTRON POWER AMPLIFIER

[Ideal for use with Dynamic Speakers.]

Model AP-935)

As the Uni-Rectron stands it is a super power amplifier, which can be used in connection with any radio set and loud speaker. Binding posts are provided for input to the Uni-Rectron and output to a loud speaker. Requires no batteries for its operation. It obtains its power from the 110 volt, 60 cycle alternating current house lighting circuit.

Radiotron UX-210 and Rectron UX-210-B or 281 Tube are used with this Amplifier. All that is necessary is to insert the plug into a wall or lamp socket and the R.C.A. Uni-Rectron, by means of the UX-210-B or UX-281 changes or rectifies the current so that the correct



List Price \$88.50 each [without tubes]

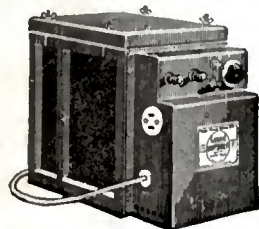
Special at \$14.50 Ea.

voltage will be delivered to the super-power amplifier tube, UX-210. The whole unit is enclosed in a metal cabinet which is small and compact and presents a good appearance.

This super power amplifier cannot overload. From the faintest whisper to the loudest crash of sound — R.C.A. Uni-Rectron amplifies each note at its true value. High and low notes are all treated alike.

Not only is its volume and quality a revelation but it lowers the cost of set operation, for when Uni-Rectron is used the drain on the batteries which operate the receiver is greatly reduced.

List Price \$39.50 ea.



Extra Special \$9.75
Lots of Three 8.50

The New Gould Kathanode

Unipower

A GOULD PRODUCT

[WITH BUILT-IN RELAY]

Automatic Radio "A" Power From Light Socket

Model AC-6K (6-volt) Kathanode Unipower is the highest quality "A" Power Unit built. Furnishes rich, smooth, unflaring "A" current, without any trace of hum, which is automatically replenished from the light socket. Installed in less than three minutes, makes any set as simple and convenient to operate as an expensive AC outfit at only a fraction of the cost. No rewiring necessary in your set.

The Kathanode construction uses the glass mat retainer, which insures extra long life of the battery elements and when sold it will require no servicing. It is very economical and will outlast several storage batteries. This exclusive patented feature (Kathanode) is used and approved by the United States Government for its submarine batteries, which are furnished by Gould.

Equipped with a new noiseless Balkite Charging Unit which has four graduated charging rates, and in addition one booster rate (1½ amperes) for an emergency charge, which enables it to properly take care of all sizes of sets and conditions of operation. Operates on 110 - 120 V., 50 - 60 cycle A.C. current. Complete with extra fuse.

New *Algonquin* CONE SPEAKER

Will stand powerful or weak volume equally well and reproduce with wonderful tone quality and volume.

Has a full-floating large 18-inch Cone, brought to the highest point of perfection. Made of a special impregnated fabric (not paper) which is absolutely unaffected by moisture or atmospheric conditions.

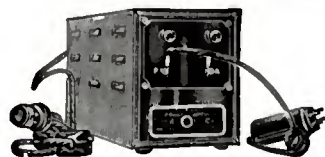
Equipped with an extremely sensitive electro-magnetic Cone unit with direct drive to Cone and is exact to highest degree.

A beautifully designed Speaker with art metal scroll. Ship model. Finished in polychrome gold stipple.



Special \$3.95 Ea.

List Price \$30.00
Reduced to \$15.00



List Price \$45.00 ea.
(without tubes)

Special \$3.95 Ea.

TIMMONS POWER AMPLIFIER

This high quality compact power amplifier uses a UX216B or 281 tube for rectifying and a UX210 super power audio tube as an amplifier, which gives distortionless and true natural



reception with wonderful tone quality and volume when used with any radio set and Cone or Dynamic Speaker. For use with alternating current—110-120 v., 50-60 cycle.

These units have been approved by Popular Radio and Popular Science Laboratories.

All units offered in this advertisement are BRAND NEW, packed in original factory sealed carton and fully guaranteed!
TERMS: 20% cash with order, balance C. O. D. f.o.b., New York (2% Discount for Full Remittance with Order)

AMERICAN SALES CO., 19-21 Warren St., NEW YORK CITY

These items represent only a few of our real buys. Send for our latest complete Catalog.

A **As
easy
as** B
C

ONE reason why so many men in the Radio industry use the "Searchlight" the "Searchlight" Classified Advertising Service many times a year is that it is *no trouble at all*. They don't even have to write their own advertisements.

"Searchlight" service is complete from expert advertising writers to correspondents who can read letters in any language and in any hand writing. It's

as easy as A B C for you to use "Searchlight" advertising in your business.

If there is something you need now—buyers for surplus or discontinued stocks, agents, representatives, salesmen, or other experienced employees or anything else associated with radio merchandising—just write a letter today to the Searchlight Department. Inquiries are answered promptly, rates quoted gladly, instructions carried out faithfully.

Address

SEARCHLIGHT DEPT.

10th Avenue at 36th Street
New York City

The Set That Went Over With A BANG

And is Still Leading All Others in its Class!



SPECIAL OFFER FOR THIS ISSUE ONLY

\$49.50

COMPLETE WITH TUBES AND
18" LEADER CONE SPEAKER
also Complete Antenna Kit

The PHILHARMONIC 8 Tube Electric

Operates from A. C. Light Socket, 110 Volts, 50-60 Cycles

Philharmonic is the greatest all-electric set ever designed in its class. Uses five 226-AC tubes; one 227-AC detector; one 171 power tube and one 280 rectifier—8 tubes in all.

Has built-in PHONOGRAPH PICK-UP. Works with any speaker, dynamic or magnetic. One dial, beautifully illuminated. Four condensers—a sure sign of fine selectivity.

**DEALERS
PRICE**

**\$37.50
Net**

(SET ONLY)

EACH SET CARRIES FACTORY GUARANTEE
1 DIAL—4 CONDENSERS—ALL SHIELDED
Order One Today and Be Convinced

SPEAKERS

Pacnet Cone	List \$35	Net \$ 7.50
Amplion Cone	List 35	Net 9.00
Kennedy Dynamic Chassis		22.50
Kennedy 18 in. Leader Cone		3.50
UNITS		
Baldwin Type H	List	Net
Utah Big Chief	\$5.00	\$1.50
Holliday Utah (nickel plated)	5.50	1.85
		1.95

RECEIVERS

7B Kolster { Table Model }	7 Tube	List \$150	Net \$35
8C Kolster { Console }	8 Tube	List 350	Net 85
Freed Eisemann (new 6 Tube Shielded) ea.			18

Westinghouse Meters

Type	PT	1—0-5	List	Net
		0-150	\$6.50	\$1.80
		0-50	6.50	1.80
		0-50	6.00	1.60

DUBILIER CONDENSERS

No. 908 By-Pass—(will carry 400 working volts) latest model, never before offered, all new in original boxes.



	List	Net	Doz. Lots
.1 MFD	\$1.00	\$.25 ea.	\$2.64
.25 MFD	1.10	.28 ea.	3.00
.5 MFD	1.25	.30 ea.	3.30
1. MFD	2.00	.35 ea.	3.65

DUBILIER FILTER CONDENSERS

No. 901 all new in original boxes.			
B-Block	List	Net	Lots of 6
2 MFD	\$2.25	\$.70	\$3.30 net
4 MFD	3.50	1.25	6.90 net
6 MFD	5.00	1.90	10.50 net
Polymet 1 MFD Filter Condenser			
	\$3.35 ea.	lots of 12	\$3.60.



VALLEYTONE 7 TUBE

List \$95.00 Our Price \$25.50

Single Dial Control Receiver. Illuminated. Clear—Selective—easy to operate. Genuine walnut cabinet. Packed in original factory containers. Set may be used with the usual "A" and "B" Batteries or Power Units.

Important to Dealers! What is the Federated Purchaser?

A buying organization of tremendous purchasing power because it buys and acts as personal agent for 10,000 retailers. 10 to 50% is what a dealer saves on all purchases. His mail orders are concentrated to one agent. His funds are safely handled and his shipments expedited. In fact, merchandise, in most cases, is shipped within 24 hours. Closer contact is available.

What more does the dealer gain? As a result of the Federated Purchaser's tremendous purchasing power and lowest prices for you, you are thus enabled to compete with chain and department stores.

Send for the **FEDERATED PURCHASER** catalog and weekly bulletins at once. It keeps you posted on the lowest prices of standard merchandise.

Terms: 20% with order. Balance C. O. D.

ELIMINATORS

Bone dry. No liquids or bulbs. Latest type.

	Net	List
Kodol dry "A"	\$13.50	\$38.50
Kodol dry "B" 180 v. 60 mills.	11.90	30.50
Kodol dry "AB"	24.50	67.50

Westinghouse Rectox trickle charger, Net \$4.85 (without case) packed in original factory container.

Webster 2.5 amp. battery charger, bone dry, no tubes, uses Raytheon cartridge. Net \$4.19, complete with cartridge.

TRANSFORMERS

	List	Net	Doz. lots
Genuine Freed Eisemann	\$5.00	\$1.80	\$20.00
Genuine Grimes	4.50	.85	9.00
Genuine Stromberg			
Carlson	8.00	2.25	24.60
All American type unshielded	3.75	1.10	12.00

Excellent transformers. Can be used for replacement in standard sets.

SPECIAL A.C.—227 TUBE

—80c. each—in lots of 25—\$17.50. Made by a manufacturer on contract for some large tube distributor who has failed. One of our wholesalers has these tubes and is offering them to our dealers at the above low price—you can triple your money on this item. All tubes guaranteed.

SILVER SHIELD BRAND TUBES

Type	List	Dealers' Price
UX201A Detector and Amplifier	\$1.50	\$.40
All 199 Regular or Standard Base	2.25	.45
UX120 Dry Cell Power Tube	3.00	.55
UX171 Power Tube	3.00	.70
AC226 A. C. Amplifier	2.50	.80
AC227 A. C. Detector	5.00	1.75
UX210 Super Power Tube	8.00	3.10
AC280 Full Wave Rectifier	4.50	1.45
AC281 Half Wave Rectifier	7.50	2.70

Any Silver Shield Tube which does not come up to the highest standards will be replaced with a new one.

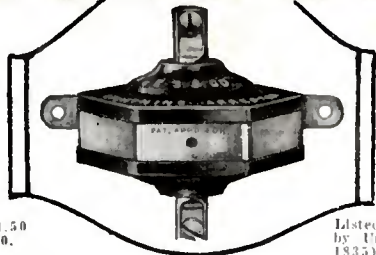
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Federated Purchaser

Order by air mail, wire, or telephone. . Whitehall 9052

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New York City

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Retail price \$1.50
in Canada \$2.00.

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Every time you sell a radio set or some antenna material, you can easily sell the purchaser a Keystone Radio Lightning Arrester.

This proven protective device is made of genuine Bakelite and heavy brass and provides maximum protection always. It is reliable, safe and stays sold.

Manufactured by a company having more than thirty years' experience in design and manufacture of lightning arresters.

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Lower list.

Dependability that

Entertains a new perfected feature.

Realism of tone.

*Write the factory for
illustrated booklet.*

Balder Radio Corp.

80 Fourth Ave.

New York, New York

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Every shade
of every
tone!

Steinite

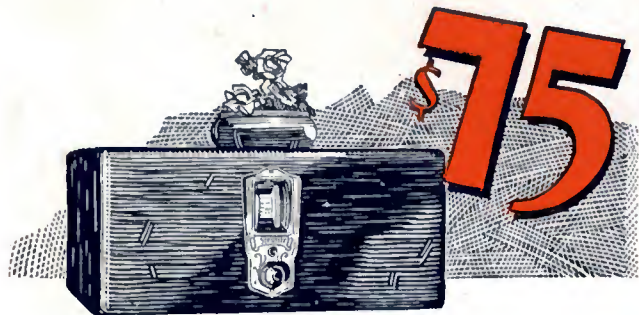
So natural . . .
it takes your
breath away

ELECTRIC **AC** RADIO

with a
great
dynamic
SPEAKER

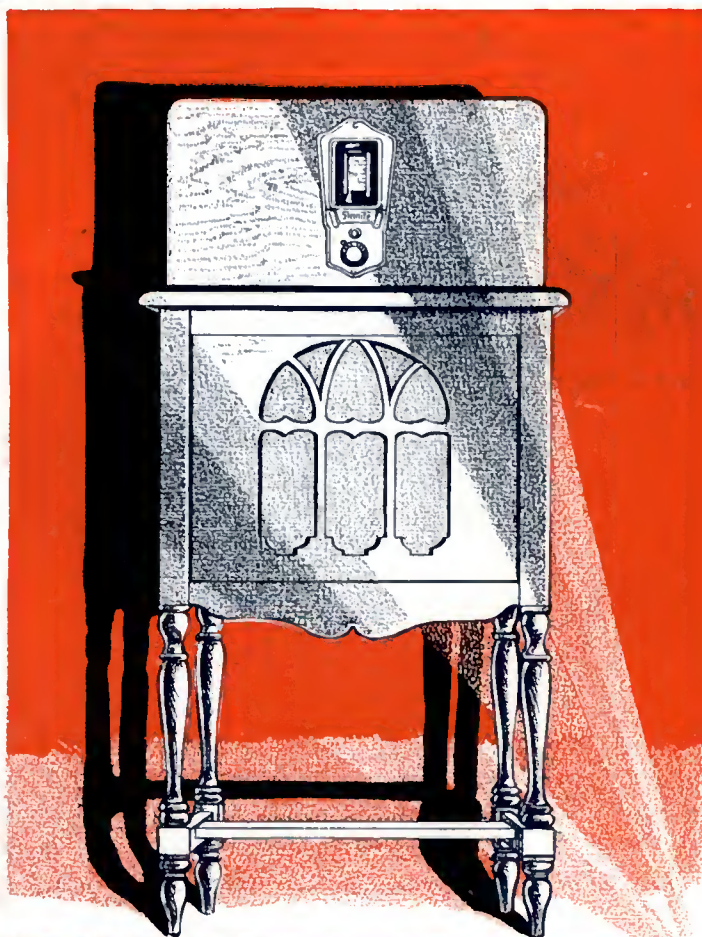
*America's Greatest Value—
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STEINITE—a great set, made greater with a great Dynamic speaker. To achieve a new perfection at only \$137.50 is evidence of a rare resourcefulness. Dynamic reproduction has at last been given its full value through the superlative design and magnificent construction of the Steinite Electric AC Radio. A new glory of tone is combined with thrilling performance. And the cabinet of this new Steinite is made of Tanguile—finest of Philippine woods—finished in Duco . . . Steinite's one profit methods have scored another triumph . . . write for full details.



The Steinite Electric AC radio uses 4-type 226 AC tubes, 1-type 227 AC tube, 1-type 171 power tube and 1-type X-280 rectifier tube . . . a total of 7 tubes. The table model at \$75 is America's Greatest Value. Console models are priced at \$115 . . . \$130 . . . \$150.

Three other models of the Steinite Electric AC Radio with Dynamic speaker are available . . . the Standish Console at \$152, the Rembrandt Console at \$167 and the Sevilla Console at \$187. Prices given are less tubes.



\$137⁵⁰

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**A Radiotron
for every purpose**

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Detector Amplifier

RADIOTRON UV-199
Detector Amplifier

RADIOTRON UX-199
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RADIOTRON WD-11
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Detector Amplifier

RADIOTRON UX-200-A
Detector Only

RADIOTRON UX-120
Power Amplifier Last
Audio Stage Only

RADIOTRON UX-222
Screen Grid Radio
Frequency Amplifier

RADIOTRON UX-112-A
Power Amplifier

RADIOTRON UX-171-A
Power Amplifier Last
Audio Stage Only

RADIOTRON UX-210
Power Amplifier Oscillator

RADIOTRON UX-240
Detector Amplifier for
Resistance-coupled
Amplification

RADIOTRON UX-250
Power Amplifier

RADIOTRON UX-226
A.C. Filament

RADIOTRON UV-227
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RADIOTRON UV-280
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RADIOTRON UX-874
Voltage Regulator Tube

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Ballast Tube

The standard by
which other vacuum
tubes are rated



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RADIOTRON UV-227
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RADIOTRON UX-874
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Ballast Tube

RADIOTRON UV-886
Ballast Tube

The standard by
which other vacuum
tubes are rated



"Made by the makers of the Radiola,"
RCA Radiotrons are the vacuum tubes
used by many leading manufacturers to
equip radio instruments of the finest per-
formance. The RCA mark on the tubes
of a receiving set or a dynamic speaker
is the first test of the dependability of
the product.

To maintain high quality performance in your radio set,
replace all the vacuum tubes with a new set of RCA
Radiotrons at least once a year. Do not put new tubes
with old ones that have been long in use.

RCA Radiotron
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for substitutes when you can make
more money selling the real article?
Remember that your customer is
the final judge of tube quality.
He registers his judgment by com-
ing back to you for more tubes—
or by going elsewhere. You can-
not afford to experiment with *him*.



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sumer in leading magazines
in 1928. It is part of a
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