

Radio Retailing

The Business Magazine of the Radio Industry

A McGraw-Hill Publication

JULY, 1930

WHAT MODERN RADIOS NEED
IS WHAT EVEREADY RAYTHEONS HAVE
. . . 4-PILLAR STRENGTH AND RIGIDITY!



Front view of the tube-vending cabinet given free with purchase of 45 tubes in the K-11 assortment.

MODERN RADIOS need tubes with the better structural design of Eveready Raytheons. Tubes protected against the bumps of shipment . . . able to bring out every shade of tone, every final note of realism the radio-set can deliver. And immune to the vibration of dynamic speakers.

With Eveready Raytheons only, can you sell your customers such matchless tube-performance. For the Eveready Raytheon 4-Pillar construction is patented . . . no other tube can use it!

Here's another point: With Eveready Raytheons, you get all kinds of sales helps. There is a special introductory sales plan. With the K-11 assortment you get this beautiful, all-metal, tube-vending cabinet (as illustrated on this page) free. \$5 value, without cost! There are also counter and window displays, a wall-chart, and advertising, by National Carbon Company, Inc., with all of its resources and experience behind Eveready Raytheons! Ask your jobber, or write our nearest branch for details.

★ ★ ★
The Eveready Hour, radio's oldest commercial feature, is broadcast every Tuesday evening at nine (New York time) from WEAJ over a nation-wide N. B. C. network of 20 stations.

NATIONAL CARBON COMPANY, INC.

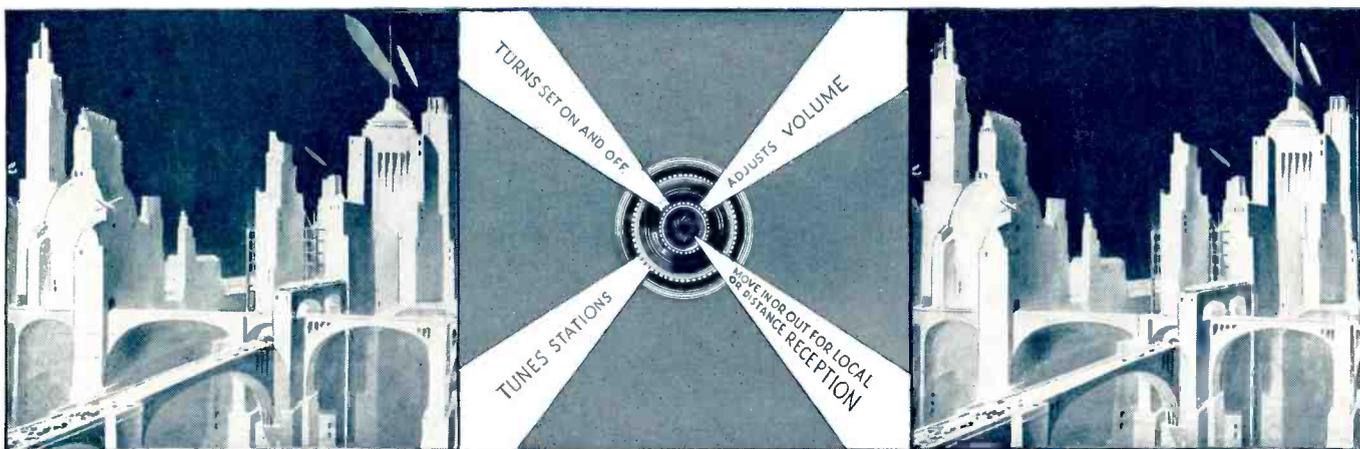
General Offices: New York, N. Y.

Branches: Chicago Kansas City New York San Francisco

Unit of Union Carbide  and Carbon Corporation



Trade-marks



THE RADIO OF THE FUTURE



BRUNSWICK DE LUXE HIGH-BOY MODEL 22: Armored chassis. 4 screen-grid tubes. Two '45 tubes in parallel. Uni-Selector. Illuminated Horizontal Tuning Scale. Tone Control. 10-inch Full Dynamic Speaker. Cabinet of seasoned and selected butt Walnut with French doors and curved corners ornamented with carved linen-fold design. Price: less tubes **\$170.**

Keeping ahead of the game—to foresee what's coming and be there with it before anyone else—has been the secret that has built some of the greatest successes in American business. The Warner Brothers did it with the Vitaphone. Now they are doing it with Brunswick's new radio line for 1931! The Radio of the Future—here now! Ready to give your customers the best in radio reception for years to come!

A new, completely armored chassis, simple and effective; a masterpiece of engineering design and scientific manufacture, with every production unit cadmium plated and brought to a high finish like a show model . . . A new feature; the Uni-Selector, which places every operation of the set under the fingers of one hand . . . Illuminated Horizontal Tuning Scale . . . Tone Control, permitting the listener to emphasize bass or treble notes without sacrificing or obscuring any other part of the entire musical range . . . 4 screen-grid tubes, two '45's resistance-coupled in parallel. . . . Provision made for attaching a remote control unit . . . A combina-

tion model, giving Panatropé record reproduction plus radio reception, and an automatic combination that plays 20 records by a simplified mechanism that needs no attention.

And cabinets by Brunswick, designed and made in their own factory, with 87 years of fine cabinet-making experience behind them.

These world-beating new models will be backed up by the biggest advertising campaign in the history of Brunswick. Double spreads in color in the Post. Single pages in color in Collier's, and a newspaper campaign in big space units reaching 28 million families every week. And with all this, the exploitation and publicity that the tie-up with this great moving picture company can give . . . Brunswick on the screen . . . Brunswick in the theatres from coast-to-coast . . . Brunswick everywhere, every day before the buying public!

Act now for a franchise! There's going to be active bidding for the chance to handle this line. **GET YOUR BID IN NOW!**



BRUNSWICK LOWBOY MODEL 15: Armored chassis with 4 screen-grid tubes and two '45's in parallel. Uni-Selector and illuminated Horizontal Tuning Scale. Tone Control. 10-inch full Dynamic Speaker. Cabinet of seasoned and selected butt Walnut with carved front panel and curved corners. Price: less tubes

\$139.50

Brunswick

RADIO . . . RADIO-WITH-PANATROPE . . . RECORDS

Beginning
Next Month



Compton Pakenham

celebrated musical critic, will do a series of articles whose purpose will be to improve the sales technique of those who sell phonograph records and radio-phonograph instruments. In addition to a presentation of some unusually effective, and generally overlooked, talking points about these profit-building products, Mr. Pakenham will review a group of the most outstanding records about to be released to the consumer.

OUR new contributor was born in Tokio, Japan, of English parents. He completed his musical education in Italy and then spent some time in England as musical critic of the *Manchester Guardian* and as special program advisor of the London Gramophone Company. Since coming to America Mr. Pakenham has served as consultant on record releases with the more active American phonograph companies. His criticisms of record releases, which appear weekly in the *New York Sunday Times*, are widely read by music lovers and sales persons in music stores.

Also in August

Radio Retailing's annual tabulation of the new receivers and phonograph combinations.

Radio Retailing

The Business Magazine of the Radio Industry

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PUBLISHER'S STATEMENT

"Radio Retailing" was established in January, 1925, by the McGraw-Hill Publishing Company.

O. H. Caldwell was its first editor, remaining until his appointment to the Federal Radio Commission in March, 1927. He was succeeded by Earl Whitehorn as editorial director. Upon the completion of his duties as Radio Commissioner, March, 1929, Mr. Caldwell again assumed the editorship of the paper.

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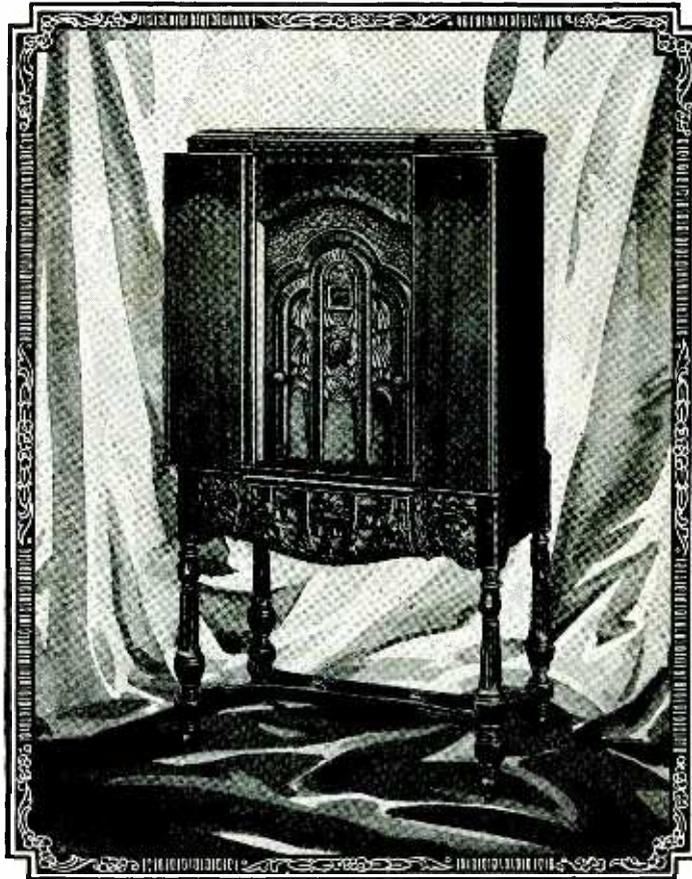
Member A.B.P. Member A.B.C. Printed in U.S.A.

Sales of QUALITY Radio-GAIN



No. 14 Multiple-Record
Radio-Phonograph.
Price, less tubes, East
of Rockies . . \$645

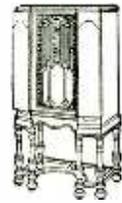
Listen to the Stromberg-Carlson Hour Monday Evenings in a Coast-to-Coast Broadcast over the N. B. C. Blue Network and Associated Stations.



NO. 11
STROMBERG-CARLSON
"CONVERTIBLE"
CONSOLE

A radio receiver which can be converted into a Radio-Phonograph by installing the No. 1 Phonograph Panel Assembly. Price, less tubes, East of Rockies . . \$285

No. 1 Phonograph Panel Assembly. Price, East of Rockies . . . \$75

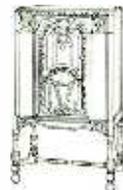


No. 12 Grand Console.
Price, less tubes, East
of Rockies . . \$355

"There Is Nothing Finer Than a Stromberg-Carlson"

IN times of business quiet it is the QUALITY article which makes the best sales showing. People seem to want to play safe—to buy SUBSTANTIAL things—goods with UNDOUBTED MERIT. Furthermore, those to whom QUALITY articles appeal, are the ones whose buying power is least affected in quiet times. They can still purchase what they want.

Stromberg-Carlson radio is an excellent illustration of these points. SALES OF STROMBERG-CARLSON RADIO RECEIVERS FOR THE FIRST 6 MONTHS OF 1930 ARE 33½ PER CENT AHEAD OF THE SAME PERIOD IN 1929—yet 1929 broke all the company's sales records.



No. 10 De-luxe
Low Console.
Price, less tubes,
East of
Rockies \$259

The new Stromberg-Carlsons with their Full Dial Efficiency lead in QUALITY to an even greater degree than ever before—they are telephone built. Any dealer facing this fall's terrific battle in the cheap receiver field will do well to seek a Stromberg-Carlson franchise, where sales are mounting and where profits on every unit are worth while.

Stromberg-Carlson standard model receivers range from \$155 to \$369 (including the new No. 645 Direct Current model.) The new multiple-record radio-phonograph \$645. Custom-built period cabinet models from \$695 to \$795. Prices, less tubes, East of Rockies.

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

Stromberg-Carlson

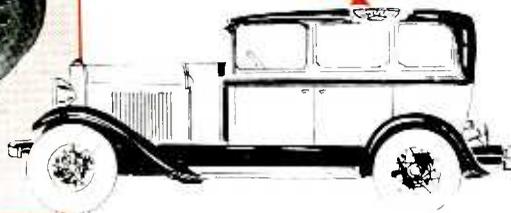
MAKERS OF VOICE TRANSMISSION AND VOICE RECEPTION APPARATUS FOR MORE THAN THIRTY-FIVE YEARS

Announcing
2 to Manufacturers
Outstanding SPEAKERS
 by **UTAH**

The NEW UTAH Duplex

Dome-Light Automobile Speaker in both

ELECTRO DYNAMIC
and MAGNETIC



Dome-Light and
Speaker Installed
as One Unit

Patents Pending

The NEW UTAH CUB
Electro Dynamic for the
Midget or Small Console Sets

Send Specifications —
Samples and Prices Sent on Request



SALT LAKE CITY

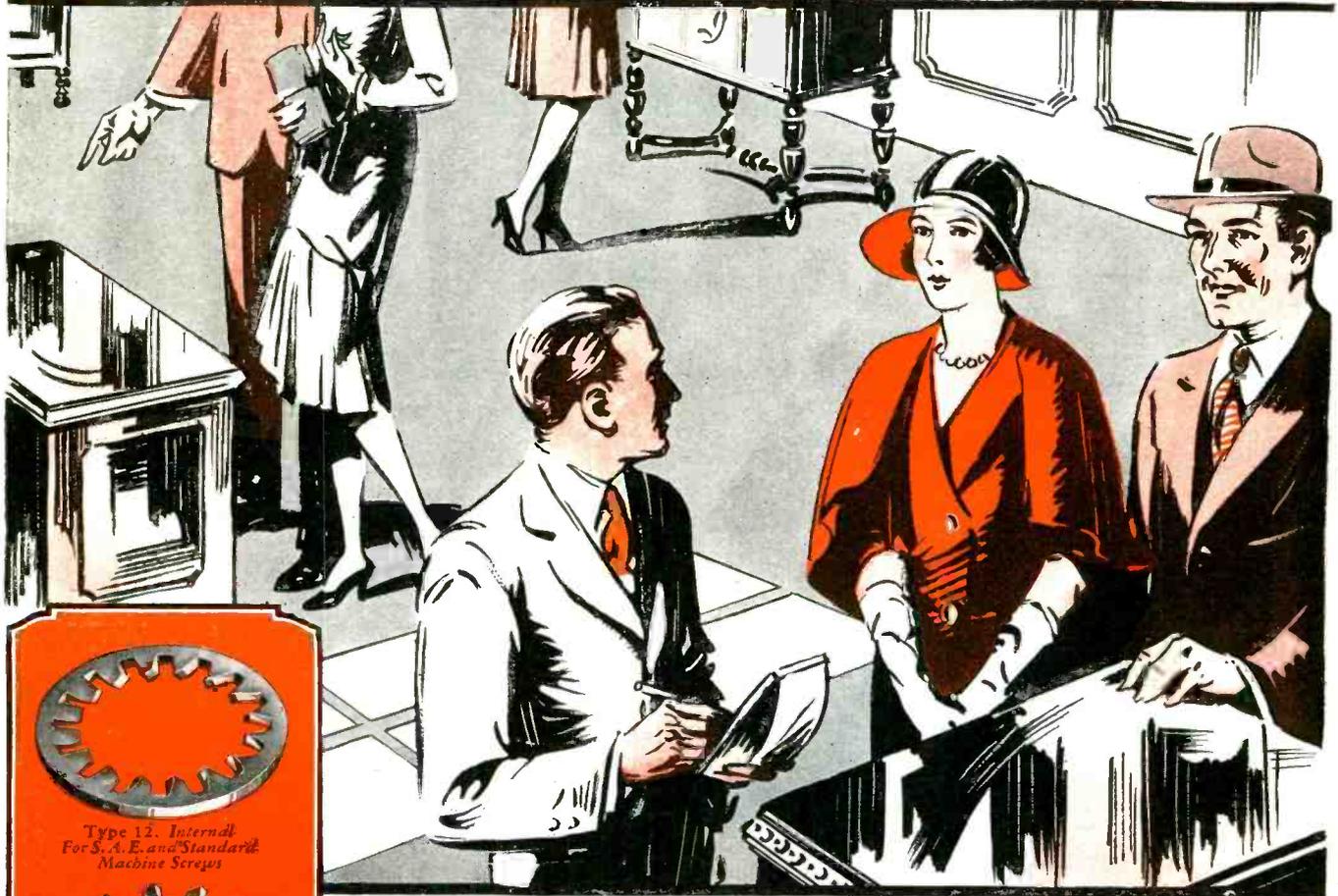
NEW YORK

TORONTO, CANADA

UTAH RADIO PRODUCTS CO., 1737 S. Michigan Ave., Chicago

SHAKEPROOF

IS BOOSTING YOUR RADIO PROFITS



Type 12. Internal
For S. A. E. and Standard
Machine Screws



Type 11. External
For Standard Belts
and Nuts

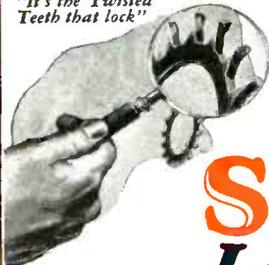


Type 15. Countersunk
For all Countersunk
Screws



Type 20. Locking Terminals
For Radio and Electrical Work

"It's the Twisted
Teeth that lock"



U. S. Patents 1,419,564
1,604,122—1,697,954
Other patents pending.
Foreign patents.

EVERYWHERE you hear about the marvelous performance that is offered in the new models. "Service"—the old bugaboo of the industry is becoming less and less a menace.

Shakeproof Locking Terminals and Shakeproof Lock Washers are playing a big part in this welcomed change of conditions. Leading manufacturers know that Shakeproof will hold any nut or screw tightly in place and prevent loose connections—poor contacts and many other serious troubles.

Concentrate on those lines which are Shakeproof equipped—you will find they are designed to give superior reception and built to stand the hardest kind of treatment. Use Shakeproof Lock Washers on your service jobs and watch your customers send their friends to your store. If you have never tested Shakeproof Lock Washers, be sure to send for free samples today!

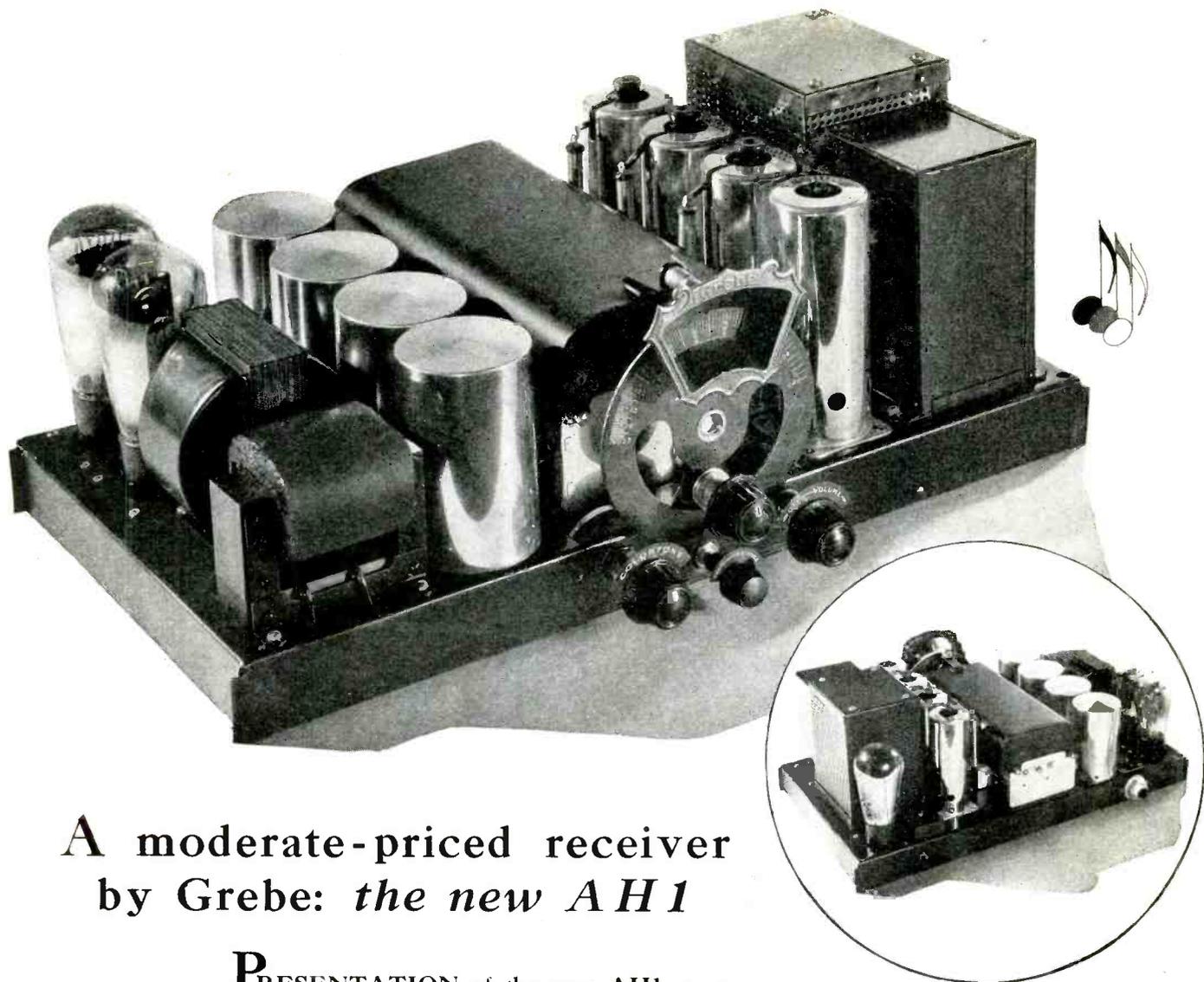
SHAKEPROOF

Lock Washer Company

{Division of Illinois Tool Works}

2531 NORTH KEELER AVE.

CHICAGO, ILLINOIS



A moderate-priced receiver by Grebe: *the new AH1*

PRESENTATION of the new AH1, as a companion line to the improved and refined SK4, brings Grebe standards of radio reception into the moderate-priced field. Both the AH1 and SK4 feature *Colortone*,* an exclusive development which enables the listener to give each program his own interpretation by controlling the high and low frequencies. Comparable only with the SK4, the new AH1 makes it possible for you to offer the type of radio enjoyment known in America's finest homes to your entire clientele.

Grebe radio

SUPER-SYNCHROPHASE 

A. H. GREBE & COMPANY, Inc., Richmond Hill, New York
Western Branch, 443 So. San Pedro Street, Los Angeles, California

*Colortone, Reg. U. S. Patent Office.

Front and rear views of the chassis of the new AH1 indicate the precise Grebe construction which has curtailed servicing until it has become negligible. The number of service calls on the SK4 has totaled less than one-half of one per cent—a practically infinitesimal figure. And, as the new AH1 brings Grebe standards of radio reception into the moderate-priced field, so also does it maintain Grebe standards of scientific exactness in manufacture. You stock these sets with the assurance that the service problem has been solved at the source—with the assurance that your Grebe profits will remain virtually intact.

NOW!



RIBBON LABELS FOR DATING

On Every Champion Tube

Turn Your Replacement Losses Into Sales Profits

Give the SET USER Value, too



Champion

Licensed under patents of R.C.A. and associated companies



DEALERS and RETAILERS—everywhere can have "Ribbon Labels for Dating" to apply on any Tubes, without cost, by writing us at Danvers, Mass.

Arguments

fail to exist when Retailers and Set Users will use the "Ribbon Label for Dating."

Questions

of length of life and dependable service are measured by the date on the Tube certifying when it was installed in any Radio Receiving Set.

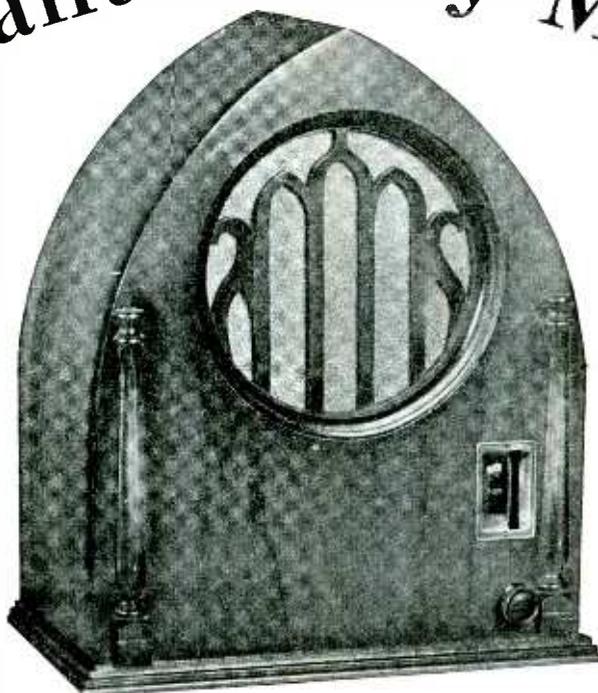
CHAMPION RADIO WORKS, INC., DANVERS, MASS.

Master Mighty Midget

A MIDGET IN SIZE

A Giant Money Maker

The Master Midget contains FOUR Tuned Circuits for Extreme SELECTIVITY. THREE Stages of R. F. amplifiers for SENSITIVITY. SIX A. C. Tubes, (ONE SCREEN GRID, three-26. One 45 and one 80.) Housed in a beautiful Walnut Cabinet, 13 in. x 16 in. in size, and weighs but 28 pounds.



MODEL 70

"To See It Is To Want It . . .

To Hear It Is To Buy It."

\$59.50

Complete with Tubes

The SENSATION and OUTSTANDING VALUE of the Radio Industry and the "NATURAL" in Radio!

Magnavox Dynamic Speaker
Four Gang Condenser

Screen Grid

Single Dial Control

Fully Licensed Under R.C.A. Patents

A CHALLENGE!

We invite you to compare the MASTER MIDGET with other radios of its kind. You will agree that in eye and ear appeal the MASTER MIDGET is far superior—SO WILL YOUR PROSPECTIVE CUSTOMERS!

APART FROM THE VOLUME OF BUSINESS THE MASTER MIDGET WILL BRING YOU—YOU WILL BE PROUD TO HANDLE IT FOR IT IS IN KEEPING WITH YOUR OTHER HIGH CLASS MERCHANDISE.



MODEL 50

The Master Table Model

Chassis and Speaker the same as the Midget.
Beautiful Walnut Cabinet. Size 22 in. x 10½ in. x 10½ in.

To Retail At **\$66.50** Complete with tubes

THE MASTER RADIO MANUFACTURING CO., INC.

1682 West 35th Place

Cable: Mastred, Los Angeles

Los Angeles California

Announcing Westinghouse Radio

Believing that retail dealers of the country are most deeply interested at this time in what they will have to sell during the coming season, Westinghouse presents, on this and the three following pages, pictures of its new sets and unvarnished technical facts about the sets. Demonstrations of these sets are now in progress throughout the country and complete information on the advertising and merchandising campaigns to launch them will be furnished any radio dealer by the Westinghouse distributor in his locality.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
Radio Department 150 Broadway, New York City

Westinghouse Radio . . . the product of the finest radio engineering and manufacturing talent ever assembled . . . made in modern factories on a mass-production basis.

Westinghouse Radio sets have the following features:

1. SUPER-HETERODYNE CIRCUIT . . . The selectivity and sensitivity are constant for the entire broadcast frequency range. This is made possible by virtue of the super-heterodyne principle which changes the received frequencies of all reception into the intermediate frequency at which it is amplified through fixed tuning and amplifier circuits. The Westinghouse super-heterodyne receiver has a pre-selector of two tuned circuits, a stage of screen-grid R.F. amplification, a screen-grid detector, two stages of screen-grid intermediate amplification, a power detector, a push-pull power amplifier and a dynamic speaker.

2. SCREEN-GRID TUBES FOR AMPLIFIERS AND DETECTORS . . . The 4 screen-grid tubes used in Westinghouse Super-Heterodyne Radios enable high amplification to be obtained without any need for stabilization or neutralization.

3. BAND PASS TUNING . . . With the usual tuned circuits, high selectivity unavoidably produces poor quality of reproduction by cutting out the high frequencies required for brilliance and articulation. The band pass tuning pre-selectors and intermediate frequency circuit give increased selectivity and at the same time pass the frequencies required for good

articulation and brilliance in reproduction.

4. TONE CONTROL . . . Westinghouse Radio gives faithful reproduction with the tone control at maximum. The tone control enables the listener to adjust the *Quality of Reproduction* to suit his or her ear responsiveness—known as musical taste.

In reception of distant stations when noise is great Tone Control is invaluable in reducing disturbances.

5. CORRECT ELECTRIC AND ACOUSTIC DESIGN . . . All parts of the receiver are designed to work with each other to produce the superior performance of the Westinghouse Radio. This not only applies to the electrical portion of the receiver but also the acoustical and mechanical. The cabinet is designed to give the best over all acoustic results.

6. PUSH-PULL POWER AMPLIFIER . . . The push-pull amplifier is used in order that the *Quality of Reproduction* shall be good at *high volume*. The use of the push-pull amplifier makes possible high volume reproduction without distortion or hum.

7. IMPROVED POWER FILTER SYSTEM . . . In order to reduce hum to the vanishing point, a special power system is used.

8. NEW ELECTRO-DYNAMIC POWER SPEAKER . . . The new electro-dynamic power speaker gives excellent quality of reproduction. It uses a special diaphragm with internal spider and a special U-shaped field magnet.

All Westinghouse Radio sets have three tuning controls—a station selector, a volume control, and a local-distant switch. WR-6 and WR-7 have "tone control." WR-7 is a combination phonograph and radio set. The tone arm is new in design with added inertia to eliminate chattering and to prevent the needle from damaging or leaving the record track. This model has a radio-to-phonograph switch and automatic motor switch which is operated by the tone arm of the phonograph. Fifteen records can be kept in the storage compartment of the machine. An induction disc type motor gives uniform speed and quiet operation.

The dial is marked in kilocycles. The dial readings are visible accurately from any position. All models cover the entire broadcasting range of frequencies.

These sets all operate from 110-120 volt, 50-60 cycle A. C. Each set uses:

4—UY-224 tubes 2—UX-245 tubes
2—UY-227 tubes 1—UX-280 tube

The tubes, coils and parts are completely shielded from each other and the other apparatus.

The receiver chassis is completely cushion-mounted to prevent vibration. Tubes may be inserted from the rear without removing or tampering with any parts.

Announcing Westinghouse Radio



MODEL WR-5 is a lowboy, open-faced cabinet of Early English Elizabethan design in walnut, satin finish. Screen-grid super-heterodyne. For detailed description see page 8.

The Pioneer of  Radio in the Home

Announcing Westinghouse Radio

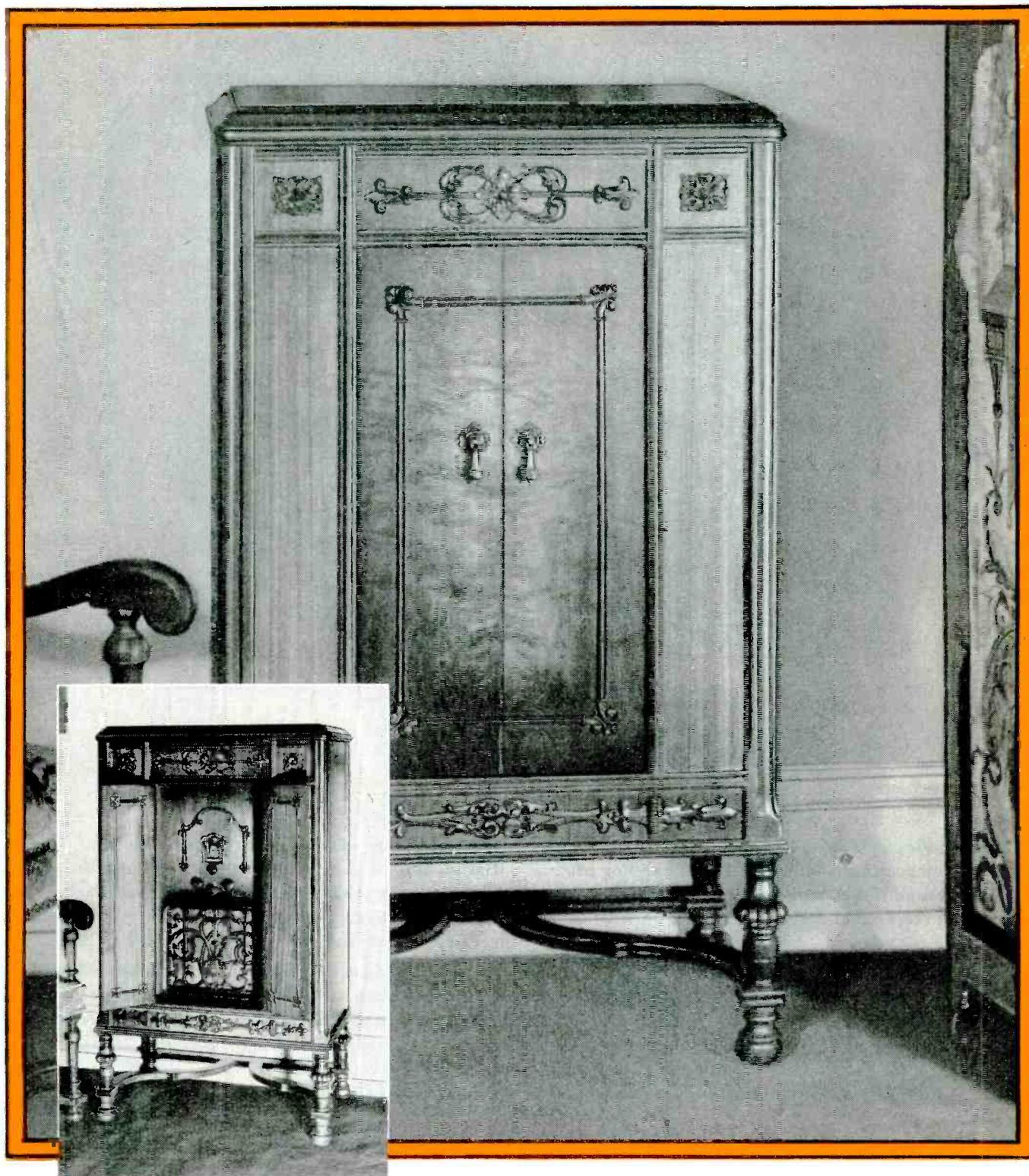


MODEL WR-6 is a screen-grid super-heterodyne with special tone control. The cabinet is Early American design in butt walnut and heartwood; walnut, satin finish. Will also be available with remote control.

For detailed description see page 8.

The Pioneer of  Radio in the Home

Announcing Westinghouse Radio

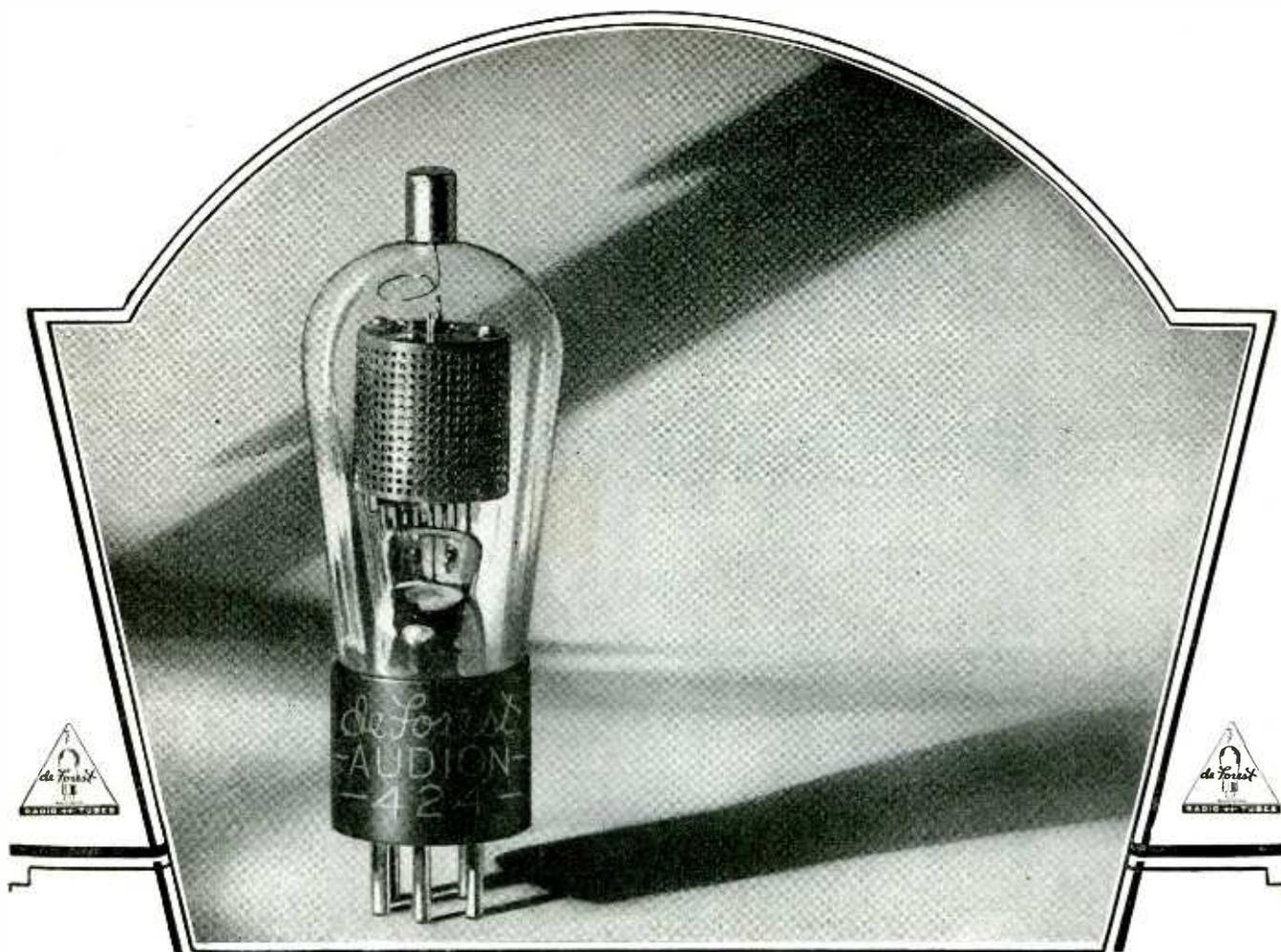


MODEL WR-7 is a combination phonograph-radio, with a special tone-control. Screen-grid super-heterodyne circuit. Cabinet . . . Early American design in butt walnut and heartwood, with walnut finish overlays; walnut, satin finish. Will also be available with remote control. *For detailed description see page 8.*

Ad Q-118

The Pioneer of Radio in the Home





The prestige of selling the original radio tube

THE retailer is known by what he sells—particularly merchandise like radio tubes. For after all, the average listener does not understand or appreciate the technical differences between tubes.

There are two factors which largely influence his choice of tubes—your recommendation and his faith in the name of the maker.

The radio owner knows the name De Forest. He recognizes it as evidence of standard, uniform quality and dependability.

It is to your advantage to recommend De Forest Radio Tubes. These high-vacuum, long-life tubes improve reception and increase the satisfaction of your customer. And the recent De Forest price reduction cuts the cost to him from 20 to 25%.

Push De Forest Radio Tubes—produced under the supervision of the man who invented the first radio tube in 1906, Dr. Lee De Forest. It will bring you more business, added good will and greater prestige—which means that De Forest Radio Tubes are the most profitable tubes you can handle.

• DE FOREST RADIO COMPANY • PASSAIC, N. J. •

Branch Offices Located in

Boston • New York • Philadelphia • Atlanta • Chicago
Pittsburgh • Minneapolis • St. Louis • Kansas City • Los
Angeles • Denver • Seattle • Detroit • Dallas • Cleveland
Export Department : 304 East 45th Street, New York City

de Forest
AUDIONS

RADIO TUBES

FACE THIS FACT



NO SALES talk that was ever delivered by a radio salesman can take the place of a clean-cut, convincing demonstration of tone distance and clarity of reception. Our dealers are telling us that the new JUBILEE SPARTONS are far and away the finest sets to demonstrate that they have ever handled. This, with the broad new price range, has placed Sparton dealers in what is apparently the strongest position in radio today. There is still room in the Sparton organization for a limited number of additional dealers who know how to sell QUALITY.



THE SPARKS-WITHINGTON COMPANY
(Established 1900)
JACKSON, MICHIGAN, U. S. A.
Pioneers of Electric Radio without batteries of any kind



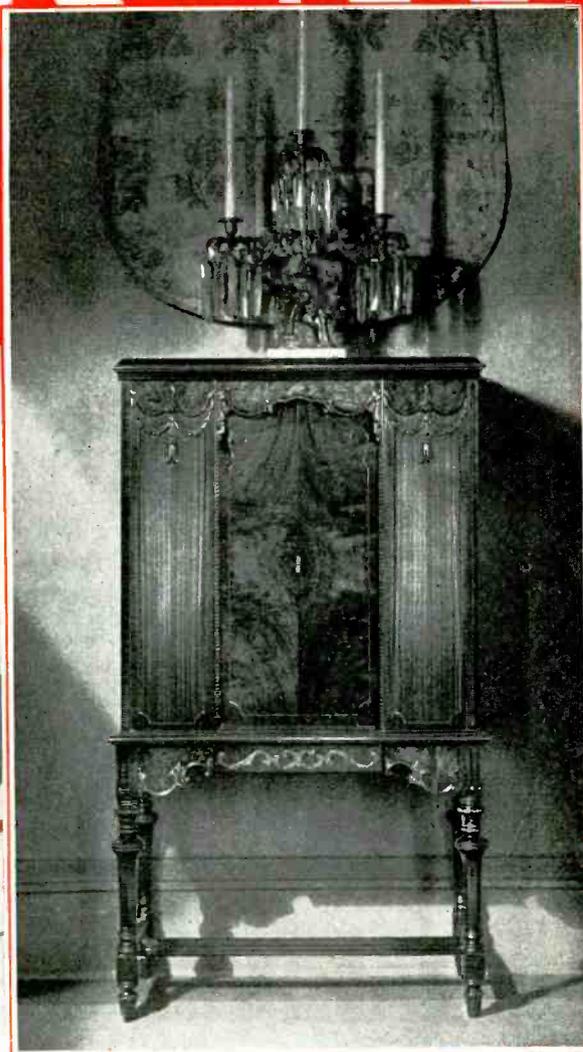
SPARTON RADIO

"Radio's Richest Voice"



BOSCH

Model D (On right)—A console so decidedly away from the usual that it expresses rare elegance and charm. It is 47½" high, 28" wide and 14½" deep. It is a 9 tube receiver, has full automatic volume control, electrical tuning meter, tone selector, speaker mute, phonograph speaker pick-up connection and illuminated kilocycle tuning scale. Designed for AC-25 or 60 cycle operation or DC operation. Price, less tubes, . . . \$195.00



Model A (Above)—A delightfully pleasing open console most beautifully proportioned with highly patterned woods. It stands 39½" high, is 26" wide, and 12½" deep. Built into the cabinet is the Bosch Radio 3 tube receiver and electrodynamic speaker. Designed for 25 or 60 cycle operation. Price, less tubes, \$144.50.

Bosch not only presents you with better merchandise and a broader sales horizon, Bosch Radio, on the word of distributors and dealers alike, has sounded the big business keynote of the year. In the judgment of those who know the buying pulse, Bosch Radio creates sales action in cabinets, is far advanced in construction, is greatly superior in performance and has a distinct price advantage.

Bosch Radio meets the whole buying range from volume business to de luxe models. It is the finest line of Bosch Radio ever

Bosch Radio is licensed under patents and applications of R.C.A., R.F.L., and Lektrophone.

A M E R I C A N B O S C H
 S P R I N G F I E L D , M A S S A C H U S E T T S

RADIO



Model E (On left)—A graceful console, gorgeously designed in beautiful matched walnut woods. It is 50½" high, 28" wide and 15½" deep. It is a 9 tube receiver, has full automatic volume control, electrical tuning meter, tone selector, speaker mute, phonograph-speaker pick-up connection and illuminated kilocycle tuning scale. Designed for AC-25 or 60 cycle operation or DC operation. Price, less tubes, \$250.00



presented. Here are some of the outstanding features: complete selectivity on both high and low wave lengths; efficient performance on antenna from 5 to 100 feet; 8 tubes, four screen-grid type; 9 tube de luxe models; push-pull; five tuning condensers; single tuning control; full automatic volume control; electric tuning meter; speaker mute. Motor Car Models, Motor Boat Models. Prices range from \$144.50, \$159.50, \$195 to \$250.

Write for details of the Bosch Radio program in your territory.

Prices slightly higher west of Rockies and in Canada.

MAGNETO CORPORATION

Branches: New York Chicago Detroit San Francisco

Model B (Above)—The richly grained walnut woods so beautifully matched give this console a pleasing individuality. It is 44½" high, 26" wide, and 14½" deep. Has sliding doors, built-in electrodynamic speaker and 8 tube receiver. Designed for 25 or 60 cycle operation. Price less tubes, \$139.50

SPEED RADIO TUBES

RCA LICENSED

NEW! "armored bridge"

exclusively featured in

SPEED TUBES



PAT. APPLIED FOR

Armored bridge advantages are manifold. Improved spacing of tube elements insures greater uniformity and strict maintenance of operating characteristics. Shock-proof, ultra-rigid mounting eliminates damage in transit and from rough usage. Perfect balance is assured by the elimination of the top-heavy bead construction, which contributed greatly to misplacement of elements.

NEW ADDITIONS TO AN ALREADY
COMPLETE **SPEED** LINE

Types S-84 and S-82B for Sparton Receivers and the
new 2 volt types 230—231—232 for portables,
automobile and aeroplane receivers.

Write for complete information.

SPEED

CABLE RADIO TUBE CORPORATION

84-90 North 9th Street

Brooklyn, N. Y.

FOR THE
FIRST TIME
THOUSANDS OF RADIO
DEALERS WILL PROFIT
BY THE PRESTIGE AND
ACCEPTANCE OF THE
NAME GENERAL ELECTRIC



GENERAL ELECTRIC

R A D I O

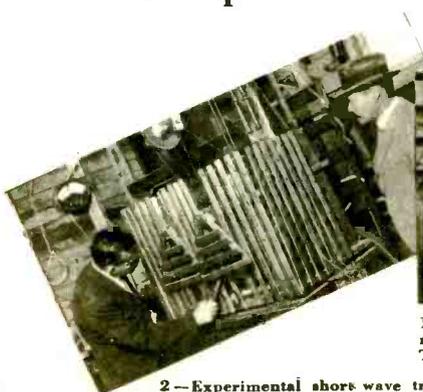
SINCE 1914
 GENERAL ELECTRIC
 HAS SPENT
 \$20,000,000
 On Radio Research
 and Development.

Radio as we know it today derives many of its fundamentals from the discoveries and developments of General Electric Laboratories at Schenectady.

The Alexanderson high frequency alternator, the high power vacuum tube used in modern transmitting stations, the drawing of tungsten, the dynamic speaker, are but a few of the many General Electric contributions to radio.

The General Electric owned WGY transmitting station at Schenectady with its attendant short wave transmitting stations through which Admiral Byrd kept in touch with his home land are, in effect, vast proving grounds for the work of General Electric Radio scientists.

Thus the production of a General Electric Radio receiving set is but a logical step backed by a vast store of experience to point the way to still further developments.



2—Experimental short wave transmitter built by Chester W. Rice under direction of Dr. Alexanderson.



1—Chester W. Rice and E. W. Kellogg with earliest model of the first so-called hornless loud speaker. They are shown in their laboratory.



3—Sir Joseph J. Thomson, English scientist, Dr. Irving Langmuir, Dr. W. D. Coolidge.

ONLY

ONE

RADIO SET

CARRIES THE
GENERAL
ELECTRIC



MONOGRAM

This is going to be a Super-Heterodyne screen-grid year. No dealer's line will be complete without such a set. There will be more dollars spent in advertising, more merchandising effort and more sales promotion focussed upon this type of receiver than ever before in the history of radio.

Only a Super-Heterodyne screen-grid receiver can give the essential selectivity and the high degree of sensitivity demanded by the radio public today.

General Electric Radio has many sales arguments. Its one outstanding argument is that it carries the name General Electric and the G-E monogram.

In 1930 there will be over two billion advertisements carrying the G-E monogram.

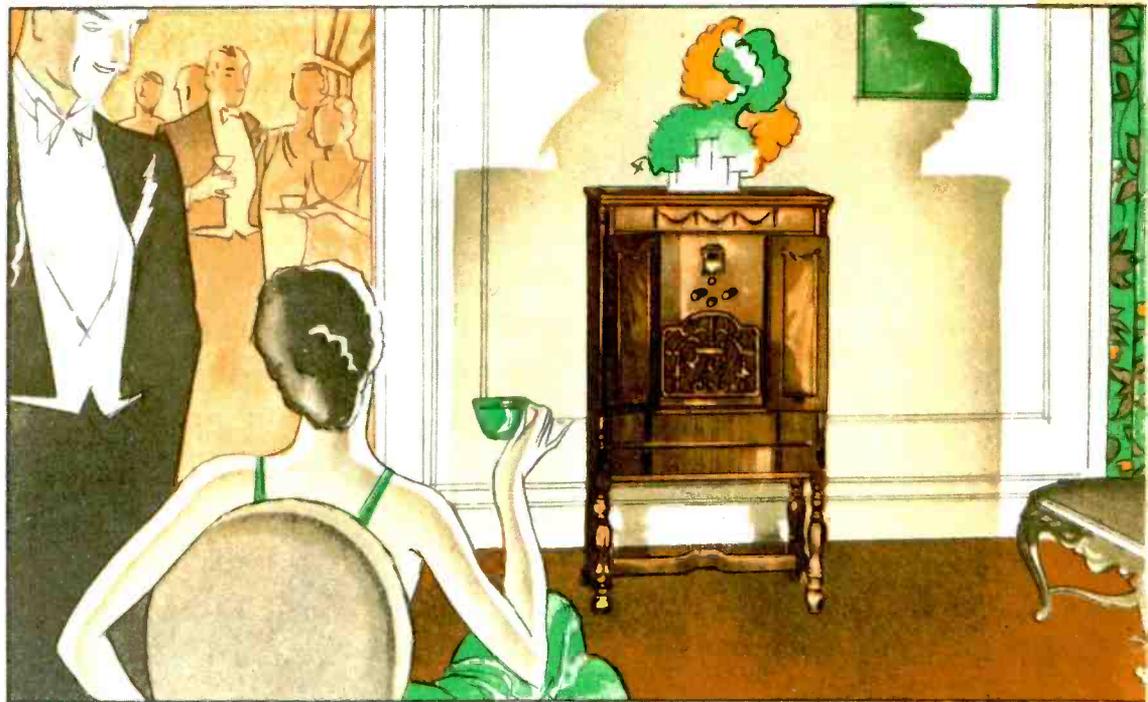
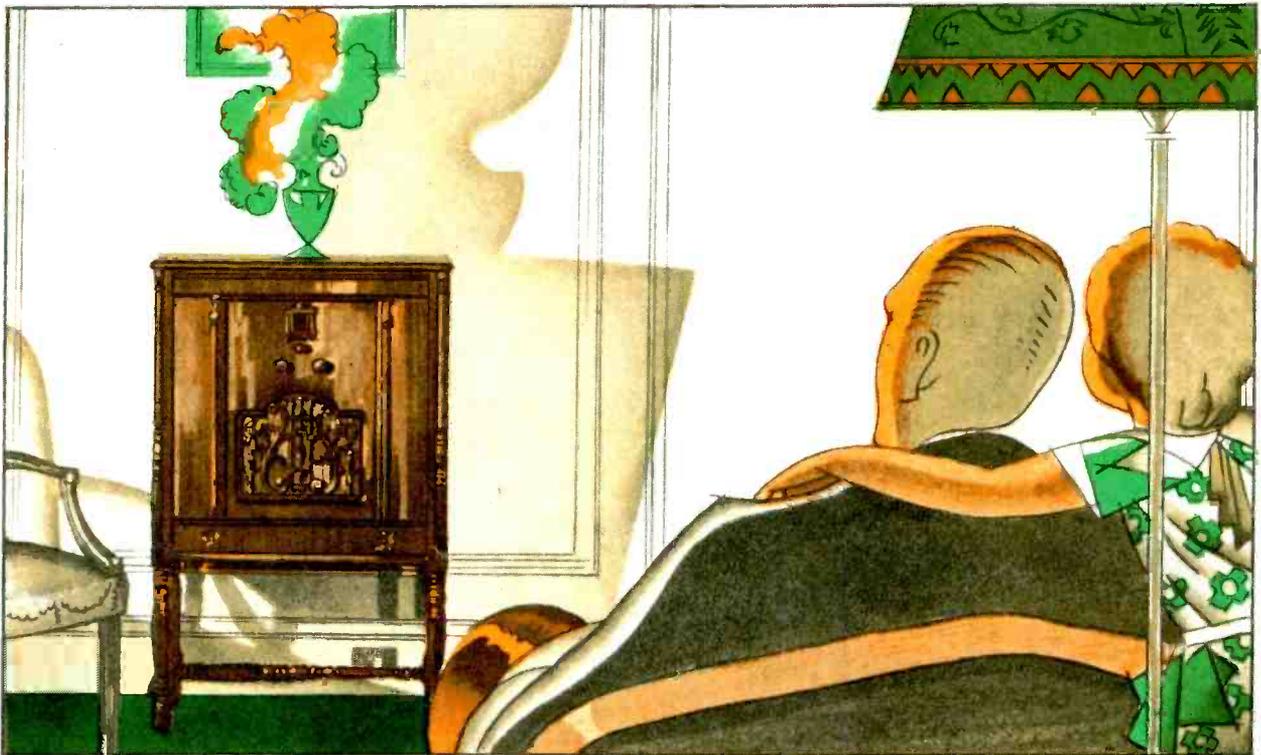
The national magazines will carry double and single color page ads on G-E Radio. Key newspapers will carry large G-E Radio ads.

The G-E Radio dealer has at his command a wealth of fine sales promotion material and ideas.

There is no name in radio today that carries the same certainty of satisfactory performance, the same assurance of after-sale service as the name General Electric.

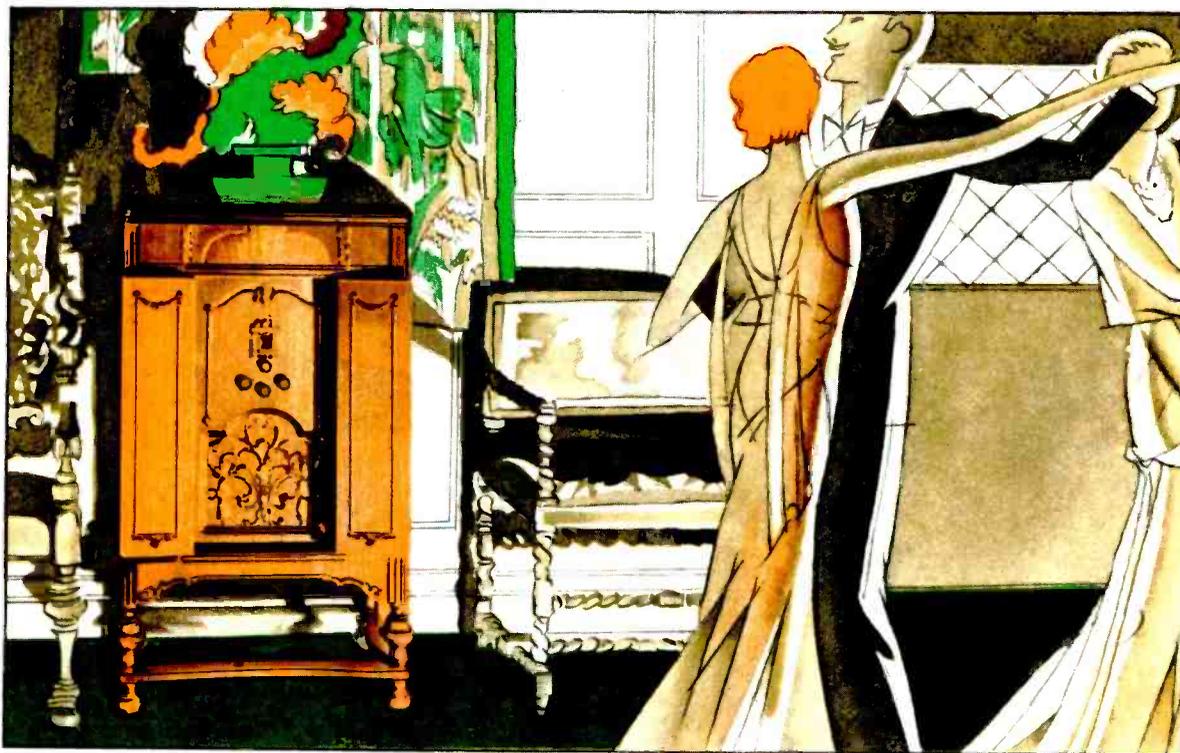
Because of experience with G-E products in the home there is no substitute, so far as most families are concerned—for the General Electric monogram.

Low Boy



High Boy

Radio-Phonograph Combination



Consists of a Super-Heterodyne chassis using screen-grid tubes. There are three console models. An open face low-boy, a two-door high-boy and a combination radio and phonograph.

The high-boy and combination models are fitted with a tone emphasize. The General Electric Radio combines extreme ease of operation with remarkable tuning accuracy. It is the most sensitive and selective circuit yet produced.

THE GENERAL ELECTRIC SALES POLICIES

*are planned
to bring Permanent Profitable
Business to the Dealer . . .*

. . . they will be right

General Electric presents to the radio dealer, for the first time, the opportunity to build up a profitable, permanent business based on the prestige of the General Electric monogram.

What has been done with refrigeration and other General Electric appliances can be done with General Electric Radio. Since the earliest days of the radio industry General Electric has watched each development. They have studied and compared practices. They recognize the difficulties and problems.

Their sales policies have been drawn up with all these facts in mind supplemented by a nation-wide survey, and predicated upon the experiences of more than one thousand retailers.

With an eye on the future General Electric has drawn up a unique service plan calculated to enable dealers to maintain regular contact with their customers and retain their good-will for future business.

The General Electric finance plan is of particular interest to the progressive dealer.

General Electric believes that the sales policies which have been adopted mean better business for the dealer not alone in 1930 but in the years to come.

GENERAL ELECTRIC RADIO DEALERS MUST HAVE *Definite Qualifications*

The name General Electric is a pass-word into the home.

For the protection of all General Electric merchandise dealers and so that the sales-value of the name General Electric may continue its present rapid growth, General Electric Radio dealers will be selected on the basis of their ability to do a good merchandising job in keeping with the best traditions of the General Electric Company.

Selected dealers will receive the full support of the General Electric Radio organization.

THESE DISTRIBUTORS WILL HANDLE GENERAL ELECTRIC RADIO

ALABAMA		MONTANA	
Birmingham	Mathews Electric Supply	Butte	General Electric Supply Corp.
Mobile	Mathews Electric Supply	NEBRASKA	
ARIZONA		Omaha	General Electric Supply Corp.
Phoenix	General Electric Supply Corp.	NEW JERSEY	
ARKANSAS		Atlantic City	General Electric Supply Corp.
Little Rock	General Electric Supply Corp.	Jersey City	General Electric Supply Corp.
CALIFORNIA		Newark	General Electric Supply Corp.
Long Beach	General Electric Supply Corp.	Paterson	General Electric Supply Corp.
Los Angeles	General Electric Supply Corp.	NEW YORK	
Oakland	General Electric Supply Corp.	Albany	Havens Elec. Company, Inc.
San Diego	General Electric Supply Corp.	Buffalo	Falls Equipment Company, Inc.
San Francisco	General Electric Supply Corp.	Brooklyn	General Electric Supply Corp.
Sacramento	General Electric Supply Corp.	Bronx	Royal Eastern Elec. Supply Co.
COLORADO		Binghamton	General Electric Supply Corp.
Denver	General Electric Supply Corp.	Long Island City	Southern Tier Elec. Supply Co.
CONNECTICUT		New Rochelle	Royal Eastern Elec. Supply Co.
Bridgeport	Southern New England Elec. Co.	New York City	General Electric Supply Corp.
Hartford	Southern New England Elec. Co.	Rochester	Royal Eastern Elec. Supply Co.
New Haven	Southern New England Elec. Co.	Niagara Falls	General Electric Supply Corp.
Waterbury	Southern New England Elec. Co.	Syracuse	Falls Equipment Company, Inc.
DISTRICT OF COLUMBIA		Utica	Syracuse Supply Company
Washington	National Electric Supply	Langdon and Hughes Elec. Co.	
FLORIDA		NORTH CAROLINA	
Jacksonville	General Electric Supply Corp.	Charlotte	General Electric Supply Corp.
Miami	General Electric Supply Corp.	Raleigh	General Electric Supply Corp.
Tampa	General Electric Supply Corp.	Greensboro	National Electric Supply Co.
GEORGIA		NORTH DAKOTA	
Atlanta	General Electric Supply Corp.	Fargo	General Electric Supply Corp.
Savannah	General Electric Supply Corp.	OHIO	
ILLINOIS		Akron	General Electric Supply Corp.
Chicago	General Electric Supply Corp.	Cleveland	General Electric Supply Corp.
Rockford	Metropolitan Elec. Supply Co.	Dayton	General Electric Supply Corp.
Springfield	Swords Electric Co.	Columbus	General Electric Supply Corp.
INDIANA		Toledo	General Electric Supply Corp.
Evansville	General Electric Supply Corp.	Cincinnati	General Electric Supply Corp.
Ft. Wayne	Protective Electrical Supply	OKLAHOMA	
Indianapolis	General Electric Supply Corp.	Oklahoma City	General Electric Supply Corp.
South Bend	South Bend Electric Co.	Tulsa	General Electric Supply Corp.
IOWA		OREGON	
Burlington	Crescent Electric Supply Co.	Portland	General Electric Supply Corp.
Davenport	Crescent Electric Supply Co.	PENNSYLVANIA	
Dubuque	Crescent Electric Supply Co.	Erie	General Electric Supply Corp.
Des Moines	General Electric Supply Corp.	Philadelphia	General Electric Supply Corp.
Stouxs City	General Electric Supply Corp.	Pittsburgh	General Electric Supply Corp.
KANSAS		Seranton	General Electric Supply Corp.
Salina	General Electric Supply Corp.	RHODE ISLAND	
Wichita	Sutton Electric Supply Co.	Providence	Union Electric Supply Co.
KENTUCKY		SOUTH CAROLINA	
Louisville	General Electric Supply Corp.	Columbia	Perry-Mann Electric Co.
LOUISIANA		TENNESSEE	
New Orleans	General Electric Supply Corp.	Chattanooga	General Electric Supply Corp.
Shreveport	General Electric Supply Corp.	Knoxville	General Electric Supply Corp.
MAINE		Nashville	General Electric Supply Corp.
Bangor	General Electric Supply Corp.	Memphis	General Electric Supply Corp.
Portland	General Electric Supply Corp.	TEXAS	
MARYLAND		Abilene	General Electric Supply Corp.
Baltimore	General Electric Supply Corp.	Amarillo	General Electric Supply Corp.
MASSACHUSETTS		Dallas	General Electric Supply Corp.
Boston	General Electric Supply Corp.	San Antonio	General Electric Supply Corp.
New Bedford	Union Electric Supply Co.	El Paso	General Electric Supply Corp.
Pittsfield	Mountain Electric Supply Co.	Houston	General Electric Supply Corp.
Springfield	General Electric Supply Corp.	UTAH	
MICHIGAN		Salt Lake City	General Electric Supply Corp.
Detroit	General Electric Supply Corp.	VIRGINIA	
Grand Rapids	C. J. Litscher Electric Co.	Norfolk	General Electric Supply Corp.
Kalamazoo	C. J. Litscher Electric Co.	Richmond	General Electric Supply Corp.
Jackson	C. J. Litscher Electric Co.	WASHINGTON	
MINNESOTA		Seattle	General Electric Supply Corp.
Duluth	General Electric Supply Corp.	Spokane	General Electric Supply Corp.
Minneapolis	General Electric Supply Corp.	Tacoma	Home Electric Company
St. Paul	General Electric Supply Corp.	WEST VIRGINIA	
MISSISSIPPI		Charleston	Virginian Electric Inc.
Jackson	General Electric Supply Corp.	WISCONSIN	
MISSOURI		Appleton	G-Q Electric Company
Joplin	General Electric Supply Corp.	Madison	Crescent Electric Supply Co.
Kansas City	General Electric Supply Corp.	Milwaukee	G-Q Electric Company
St. Joseph	General Electric Supply Corp.	Racine	G-Q Electric Company
St. Louis	General Electric Supply Corp.	La Crosse	General Electric Supply Corp.

A letter to the Trade!

LEKTOPHONE CORPORATION
15 EXCHANGE PLACE
JERSEY CITY, N. J.

TELEPHONE
MONTGOMERY 1290

COL. ROBERT DAVIS, PRES.
FRANK L. DYER, VICE PRES.
VERNON T. HOUGHTON, VICE PRES.
CHAS. H. WINSHIP, JR., SECY. AND TREAS.

Gentlemen: For the information of the trade, the following are the only manufacturers licensed under the LEKTOPHONE loudspeaker patents in the United States:

- American Bosch Magneto Corporation.
- Atwater Kent Manufacturing Company.
- Farrand Manufacturing Company, Inc.
- Grigsby-Grunow Company.
- Marcus C. Hopkins.
- Jensen Radio Manufacturing Company.
- Kolster Radio Corporation.
- Oxford Radio Corporation.
- O'Neil Radio Corporation.
- Radio Corporation of America.
- Stromberg-Carlson Telephone M'f'g. Co..
- J. S. Timmons, Inc..
- United Radio Corporation.
- Utah Radio Products Company.
- Valley Appliances, Inc.

Our attorneys have recently filed forty-two bills of complaint against manufacturers not listed above and against distributors and dealers.

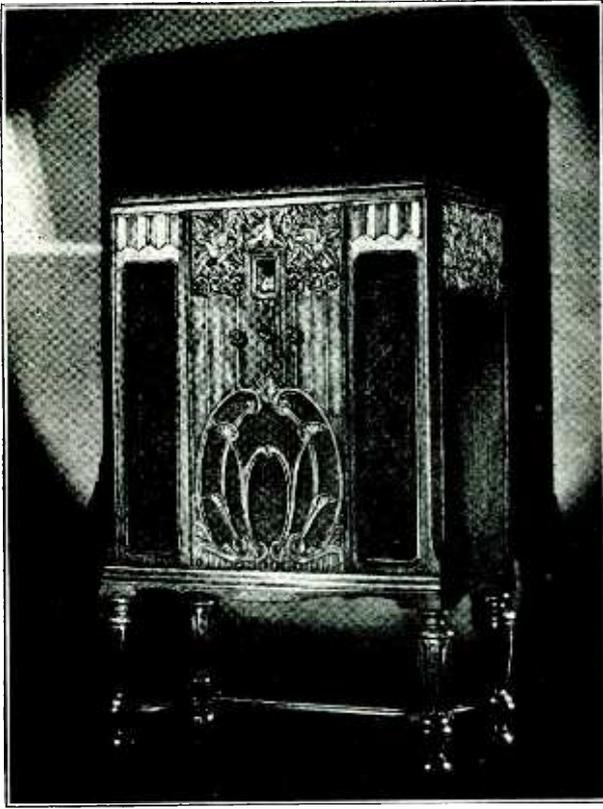
The Supreme Court of the United States has granted the petition filed by our attorneys to review the decision of the Court of Appeals at San Francisco in the suit against The Rola Company, and since then, on the petition of Miller Brothers of Wilmington, Delaware, it has taken up for review at the same time our suit against them (Fada speaker). Our attorneys have been instructed to actively prosecute any and all infringers.

Very truly yours,
LEKTOPHONE CORPORATION,
By *Robert Davis*
President.

from

LEKTOPHONE CORPORATION

15 Exchange Place, Jersey City, New Jersey



Model 36, less tubes \$208
Other Models to \$317

The highest
note
in radio
achievement

YOUR best customers look to you for an understanding of their keener musical appreciation, and of their instinctive taste concerning enduring beauty in furniture.

They are the people who will recognize faultless achievement in Radio by Story & Clark.

They are the people who *know* what to expect of a house that has built fine musical instruments since 1857.

An inquiry to us will make the contact. Details of the Story & Clark merchandising plan will be sent to those interested.

Built Complete in the Story & Clark Factories
THE STORY & CLARK RADIO CORPORATION
173 N. Michigan Avenue, Chicago

+ +

*Manufactured under STORY & CLARK owned Patents
and Patents Pending*

Licensed under R. C. A. and Affiliated Companies,
Charter Member R. M. A.

RADIO

by STORY & CLARK

SINCE



1857

Don't let your set sales go Sour!

YOU know what happens when you have sold a set on time, and your customer begins to kick a couple of months later—you're out of luck and you've lost his confidence, because the tubes got tired too soon; or to put it technically, they did not maintain their efficiency.

The set doesn't sound the way it did when you sold it, and you're in for adjustments.

Gold Seal Tubes protect your business because they are Anti-Depreciation Tubes. Their quality is proved by the fact that in thousand-hour tests there is very little drop in emission through their whole life.

There's the whole story of the tube business in a nutshell, and it's the thing you want to look out for when you buy radio tubes for original sale or set installation.

Gold Seal—one of the most successful of the independent tube manufacturing companies—proves the quality of its product by this characteristic.

Gold Seal Tubes won't let your sales go sour! Find out about territories and terms right now.

GOLD SEAL ANTI-DEPRECIATION TUBES

Some Exclusive Territories Still Open. Mail the Coupon



A Tube for Every Set and Every Socket

GOLD SEAL ELECTRICAL CO., Inc.
Dept. 6A, 250 Park Ave., New York

I'm ready to be shown, if you can help me make money in the tube business. Send me your

- dealer
- jobber

proposition.

Name

Address

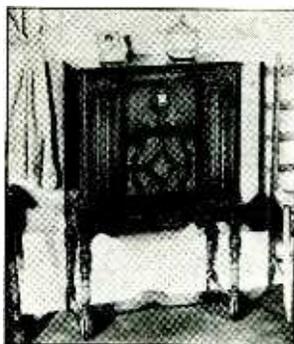
1930

GraybaR

SUPERHETERODYNE

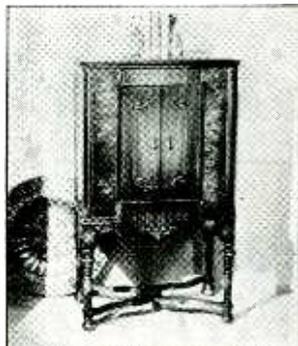
RADIO

Here is one answer to the growing public insistence on something distinctively better in radio. It's the new 1930 line of Graybar Superheterodynes—now available in a complete price range.



The Superheterodyne circuit is already famous for its marvellous sensitivity, its hairline selectivity, and its superlative tone-quality... The Graybar Superheterodyne Model 700 (pictured above) has all the new 1930 improve-

ments—four powerful screen grid tubes, push-pull amplification, local-distance switch, improved electro-dynamic speaker, fine cabinets. All these features and more, will be found



in the new Graybar Radio Model 770 (pictured above).

Tone Control, for one example. With it the listener varies the pitch of a program—brings out high notes or low notes—to his own taste.



And, of course, there's model 900—the new super-combination radio and phonograph with tone control. Complete details of special features and price on this unique combination available soon.

Finally, one may have a variety of beautifully designed cabinets to pick from.

You will be interested in these new models. Your customers will be interested, too. Get an early start. Learn about the Graybar Superheterodyne line *now*. Mail this coupon *today*.

..... C O U P O N

Graybar Electric Co.,
 Graybar Bldg., New York, N. Y.

Gentlemen: Tell me all about the new Graybar radio *without delay*.
 Send information to:

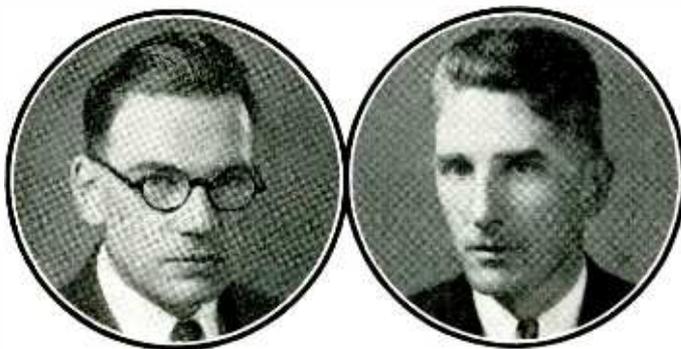
Name _____

Address _____ State _____

UNTIL MARCH FIRST THESE ENGINEERS

And now they National Union

At right: Our Chief Engineer—Dr. E. A. Lederer is famed for his radio research—a radio tube wizard! Has score of important patents . . . Brought from Vienna by Westinghouse in '23 because of his great talent. During the last two years he had been entrusted with full charge of Westinghouse's engineering department—supervising the development of screen grid and 227 tubes.

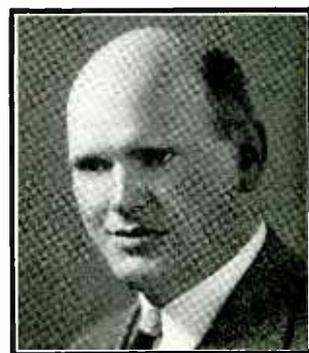


At left: Our General Superintendent of Manufacturing—G. J. Ernst started 22 years ago with Westinghouse; made that concern's first oxide-coated tubes . . . Responsible for the manufacture of every type of Westinghouse tube. As Superintendent of the Westinghouse Radio Tube division Ernst supervised 1,500 skilled workers making millions of Radiotron and Cunningham tubes.



At left: Our Chief Chemist—M. M. Fredenburgh, another star in National Union's firmament! . . . At Westinghouse Lamp Co., he was in charge of the Chemical Preparations Divisions, responsible for manufacture and development of chemicals, getters, filament coatings, etc. A scientist of renown, he personally sees that nothing but Quality goes into National Union Radio tubes!

At right: Superintendent of Our State Street Plant—Few men in the industry know radio tubes like F. F. Wallen . . . Six years with Westinghouse Lamp Co., where exceptional ability quickly carried him to Assistant Superintendent of special Radio Tube division . . . No wonder National Union tubes are now winning praise—they are made by experts who have made millions of quality tubes.



At right: He Knows Tubes!—W. M. Perkins, National Union's Radio Engineer in charge of the Measurement Laboratory, came to us from the Westinghouse plant, Bloomfield, N. J. His work was in the Radio Application Laboratory, studying the uses of vacuum tubes—their application and effect in various circuits. . . Perkins is another reason why National Union tubes triumph!



At left: Superintendent of Our Ogden Street Plant—Thomas Spina, another expert schooled at Westinghouse, who developed the nitrogen gas-filled incandescent lamp. . . It's a delicate job, making fine radio tubes! It's like watchmaking . . . Machines and Men! . . . National Union has the best of both! National Union's exclusive "double testing" system assures perfect radio tubes!

NATIONAL UNION RADIO CORPORATION

MADE RADIOTRONS AND CUNNINGHAMS

are producing Radio Tubes!!

For years Dr. Ralph E. Myers and his staff of engineers were in charge of production of all R. C. A. and Cunningham tubes made by Westinghouse.

Last March, Westinghouse's group of famous engineers joined National Union. Today they are producing the remarkable new National Union tube.

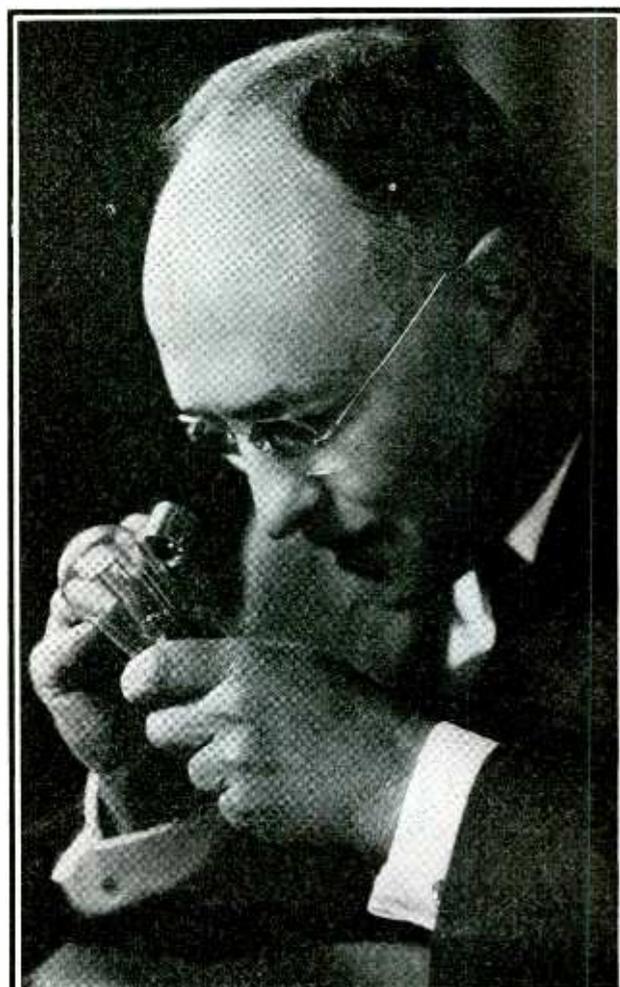
The result of this change is evident. In thousands upon thousands of homes the new National Union tube is even exceeding our great expectations.

Why we engaged this brilliant staff: When National Union was organized last fall we promised the radio trade the finest tubes that science could devise. We made this promise with the wholehearted belief that an independent tube manufacturer properly financed, could produce such a tube *if he would but make up his mind to do so.*

When we secured the services of Dr. R. E. Myers of Westinghouse we knew the battle was won. For 21 years, he had been with the Westinghouse Lamp Company. He had made nearly 1,000,000,000 tubes for the Radio Corporation. Few men in America know tubes as well as he. His accomplishments in the past few months have justified the confidence we have placed in him.

Investigate the new National Union tube at once. Test the tubes yourself. This is the truly great independent tube for which dealers have been waiting.

Investigate, too, the new National Union store display plan. This is the famous plan that puts Rudy Vallée and Olive Shea working side by side in your window for you. National Union jobbers will gladly explain.

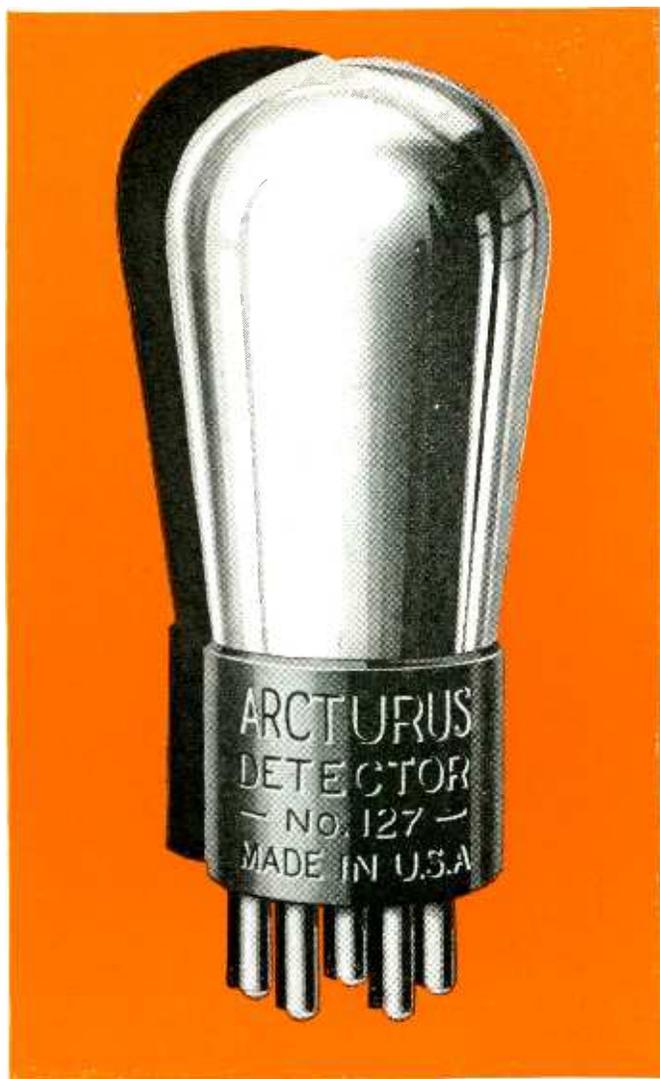


DR. R. E. MYERS "I joined National Union Radio because it offered modern laboratories, ample facilities for experimentation and the plant equipment and financial resources required to produce good tubes on a large scale."

400 MADISON AVENUE · NEW YORK CITY

THESE THREE FACTS

have sold



- 1
- 2
- 3

QUICK ACTION

There's no question about QUICK ACTION when you use Arcturus Tubes . . . the program is there in 7 seconds by your watch.

CLEAR TONE

There's no hum, no background noise, to mar the CLEAR TONE that is characteristic of Arcturus Tubes. Test it yourself on any program.

LONG LIFE

Your meter proves that Arcturus Tubes withstand exceptional overloads. This unusual stamina explains why Arcturus Tubes hold the world's record for LONG LIFE.

ARCTURU

ACT IN 7

MILLIONS

of ARCTURUS BLUE TUBES

THOUSANDS of Arcturus dealers know the cash value of these Arcturus performance features.

They know that Arcturus Tubes are superior tubes because they have *tested* their Quick Action, Clear Tone and Long Life.

They know that Arcturus performance can be forcefully *demonstrated* to any customer.

And they know that Arcturus superiority is lasting superiority—keeping any set operating at its best.

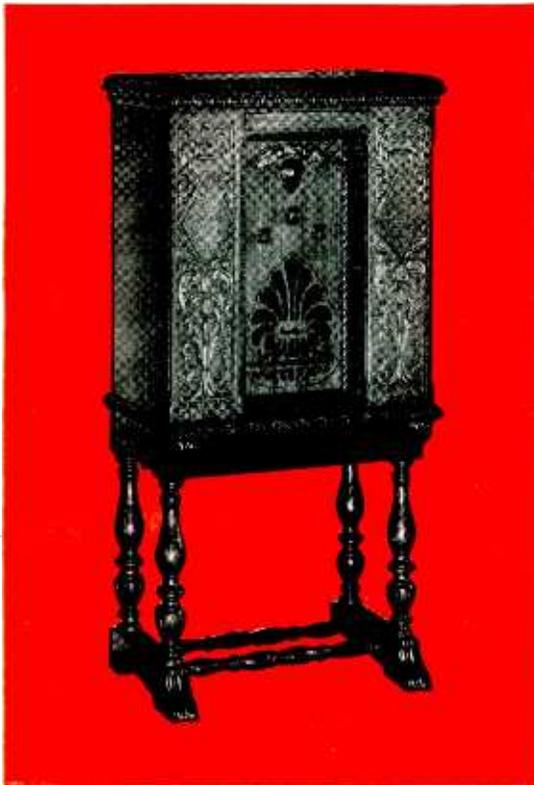
Isn't this the kind of tube you can safely back with your time, your selling ability, and your reputation?

ARCTURUS RADIO TUBE COMPANY
NEWARK, N. J.



R U S T U B E S
FOR EVERY
R A D I O
SECONDS

» » » *and still they come*
**TO THE FAIREST
 FRANCHISE IN THE
 RADIO INDUSTRY**



The St. James Console

A rich reproduction of Elizabethan period furniture design. Top and sides American ply-walnut. Solid walnut front, with artistic *genuine carving*. Silent sliding doors. Dull satin finish. Series 100 chassis and new improved electro-dynamic reproducer. \$197.50 (less tubes).



A franchise providing a full price range, clean, above-board sales policies, national and local newspaper advertising, and the public confidence already inspired in Stewart-Warner products—with over 27,000,000 users.

And with this franchise a line equally outstanding—the new Century Series—in beauty, price, and performance eclipsing all previous Stewart-Warner achievements. And with an unbeatable sales-leader at only \$99.75!

*Among the improvements offered in the new
 Stewart-Warner 100 Series are:*

A new and superlative Audio System possessing a uniform tonal range extending far beyond limits hitherto possible.

An improved, stable, non-oscillating screen-grid radio frequency circuit, with uniform maximum sensitivity and selectivity throughout the tuning range.

An automatic voltage control, and new electro-dynamic reproducer. All mounted on a splendid gold-finished chassis.

And housed in cabinets of new and exquisite beauty. In choicest matched hardwoods with genuine carved decorations!

Here is a line you can *build* on, not only today but tomorrow! A line in which you can throw your sales energies with complete assurance of the future. Territories are fast being closed. Write us for details of line and franchise NOW. Stewart-Warner Corporation, Chicago, Illinois.

Four Handsome Period Models—from \$99.75 to \$197.50 (less tubes)

Prices slightly higher west of the 100th meridian

STEWART-WARNER

« « « **RADIO** » » »

A GREAT RADIO BACKED BY A GREAT NAME

“CeCo Radio Tubes are the standards by which we make our radio tube comparisons.”

J. M. SCHOENBERG, Post Standard Stores, Philadelphia, Pa.

It was a new idea—not a new set that stirred the R. M. A. Trade Show. CeCo’s ‘Better or You Don’t Pay’ Campaign was proclaimed by dealers as the big opportunity for 1930. This plan opens up an untouched replacement market for 10,000,000 tubes . . . and will treble your tube business. Write today for campaign portfolio.”

**DO YOU
KNOW?**

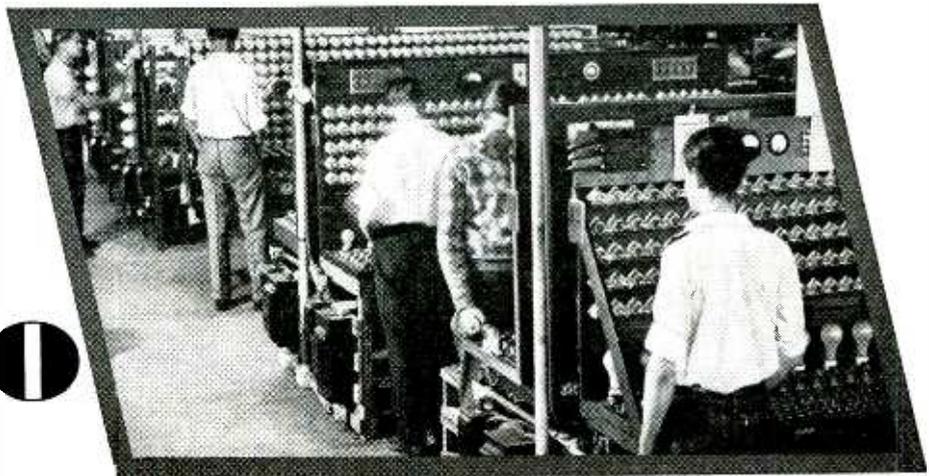
CeCo’s outstanding Engineering Department again pioneered in developing and producing the new CeCo AC Pentode.

The uniform filaments of CeCo Radio Tubes are obtained by an oxide-flour coating that gives longer life to every tube.

Ernest Bauer
**PRESIDENT,
CECO MANUFACTURING CO., INC.
PROVIDENCE, R. I.**

CeCo

**1930
Radio Tubes**

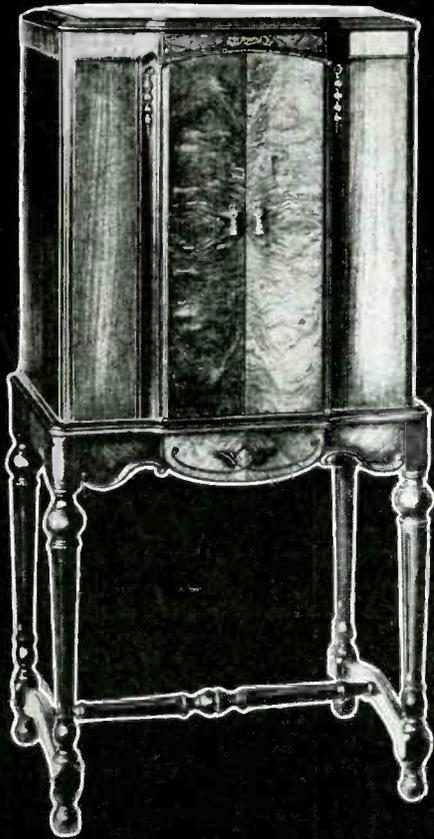


● Listen to the CeCo Couriers with Henry Burbig every Monday evening from 22 stations of the Columbia Broadcasting System.

● CeCo Radio Tubes are licensed under patents and applications of the Radio Corporation of America and affiliated companies.

Again... the Convention said

“YES”



The Finest Radio Colonial
has Ever Made at the Lowest
Prices Colonial Ever Offered

\$129⁵⁰

\$139.50

\$149.50

LESS TUBES

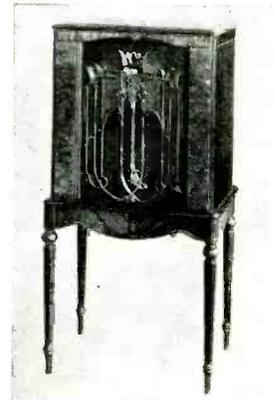
The WINDSOR — Sliced, Oriental striped and American striped walnut, with choice matched Butt walnut doors. Art frieze over doors and carved pendants along the sides. Height 51 in. Width 27 in. Depth 17½ in. Price less tubes, **\$149⁵⁰**

**Immediate Delivery
on All Models**

Shipments are now being made. Production in our large plant is on in full swing. Advertising and sales promotion material is ready. Colonial's program is under way.



The PRINCESS — A charming low cabinet of harmonizing sliced and Oriental striped walnut with a simulated floral design inlay on front and apron. Artistically carved floral grille. Height 38 inches. Width 24¼ inches. Depth 17 inches. Price, less **\$129⁵⁰** tubes



The MAYFLOWER — An exquisite highboy executed in sliced, Oriental striped and American striped walnut. Antique bronze grille on front. The legs are turned, tapered and reeded. Height 47 inches. Width 24¼ inches. Depth 17 inches. Price, **\$139⁵⁰** less tubes

COLONIAL RADIO CORPORATION

Sales Offices: 25 Wilbur Avenue, Long Island City, N. Y.

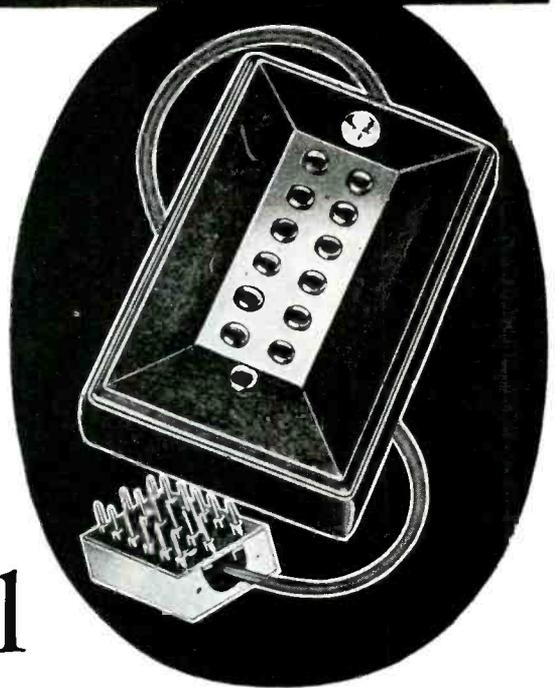
Plants: Rochester, N. Y.

to COLONIAL for QUALITY..PRICE..SENSATION!

ENTHUSIASTIC approval of the new Colonial and its new price range...a record-breaking advance sale...an impressive line-up of strong distributors from coast to coast...ask anyone that attended the convention about Colonial's position! And make your inquiries about

Dr. Fulton Cutting's
Engineering Triumph

Cutting *fully automatic* Remote Control



As finely engineered as a Rolls Royce. It tunes the set on and off. It has an on-and-off light. It operates ten pre-selected stations automatically...with an extra button for ANY other station. It controls

the volume perfectly. Here is a sensational feature to attract the crowds. Here is something NEW to talk about...to SELL...a business builder that grows more important every day. List price, installed, \$34.

Colonial's 1930-31 Campaign

Back of all of these features is the most aggressive advertising and sales promotion campaign in Colonial history.

Back of this are strong financial resources and sound

sales and service policies to protect and advance the interests of distributors and dealers. The Colonial proposition and a list of distributors will be sent upon request.

COLONIAL Radio

Licensed under patents of Radio Corporation of America, Westinghouse, General Electric and American Telephone and Telegraph Companies.



"RADIO'S CLEAREST VOICE"

Ken·Rad

Fine Radio Tubes



THIS is a fact. The sales and profit opportunity that Ken-Rad offers is attractive—especially so, judging from the reaction of distributors and dealers who have had all the details of the Ken-Rad program... Full pages appearing in *The Saturday Evening Post* every month now—and newspaper advertising in distributing centers... Ken-Rad policies will put your tube business on a profitable basis.

THE KEN-RAD CORPORATION, *Incorporated, Owensboro, Kentucky*
A Division of Ken-Rad Tube & Lamp Corporation

JULY, 1930

Radio Retailing

The Business Magazine of the Radio Industry

O. H. CALDWELL,
Editor

A MCGRAW-HILL PUBLICATION. ESTABLISHED 1925

Play Show or Trade Show

FROM the welter of praise and criticism about the Trade Show which permeated the salt-laden breezes of Atlantic City, this fact stands clearly apparent: our next convention and showing of new lines calls for a new set-up. A fresh concept of the why and how of a radio get-together is very much in order.

The East was entitled to a trade show. Its demands were granted and Atlantic City, a logical spot, was chosen by the 1929 show committee for last month's affair.

In all justice to this committee, and to a large majority of the manufacturers who exhibited, it should be stated that it was not their fault if the concentrated conveniences of the Stevens Hotel were not duplicative at "The Nation's Playground"; if "liaison" required the services of a detective; if the meetings were but moderately attended; if King of the Whoopee ruled the Boardwalk or if the display of bona fide 1930-31 models left the impression that something was missing in the picture.

The recent show and convention, frankly, was an experiment—and a necessary one. The RMA directors, and all others responsible for its success, are keenly aware of its weaknesses—and, we are directly informed, will employ every facility at their command to place next year's gathering on a new and more business-like basis.

In passing judgment on the 1930 affair do not overlook these facts: It attracted as large an outpouring of tradesmen as Chicago ever mustered; over 80 per cent of our representative set manufacturers were at the show and exhibited authentic 1931 lines (this on June 2, 1930); and, as a demonstration of the fighting spirit, the resiliency, of this grand young business of ours, it was a marked success.

So much for the past. What of the future?

THE time has arrived to view our trade show and convention from the broader aspect of a necessary annual spring tonic, from the angle of its many merits rather than as an opportunity to view all the forthcoming

ing models and to negotiate new connections. We've passed this embryo stage of our development, and for the following reasons:

1. From now on, models will be changed as improvements are developed—not "en bloc" at any one given signal. Witness the parallel case in the automobile industry and the higher character of its present conventions.

2. The keener manufacturers, distributors and dealers contact one another and negotiate their contracts not in the catch-as-catch-can atmosphere of a trade show but in the field.

These conditions, however, are the very reasons why we should foregather once a year. To dwell forever within our limited family circle is to stagnate. To count numbers and to exchange ideas is to progress.

To dwell forever within our own limited family circle is to stagnate. To count numbers and to exchange ideas is to progress.

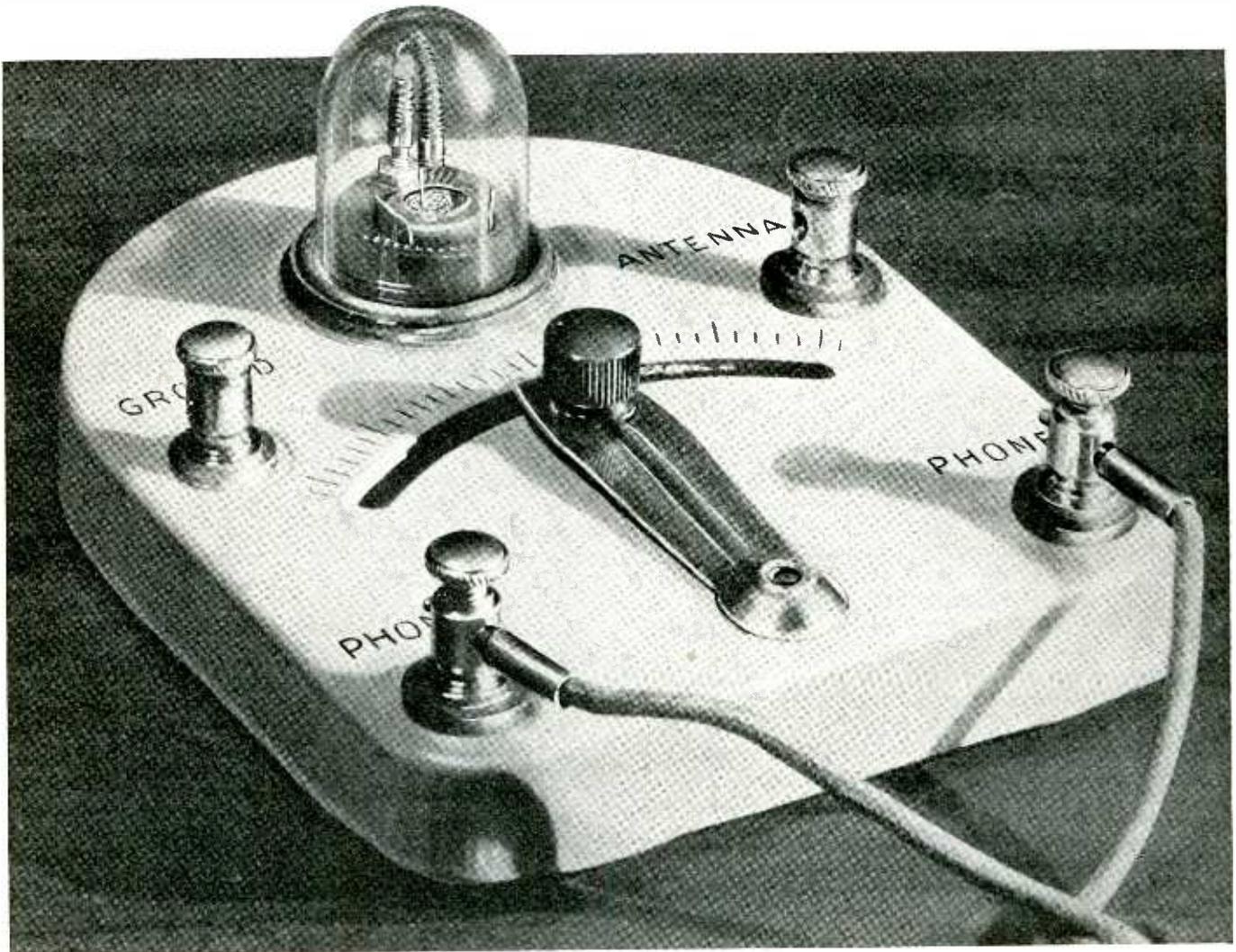
Radio Retailing, therefore, emphatically favors the stimulating effect of an annual show and convention. But it advocates that it be conducted along sounder lines. Less meaningless hurrah, less wasteful competition for name and "good fellow" recognition by "grand stand" gestures and more building along constructive paths is Radio Retailing's message to the membership of the Radio Manufacturers Association.

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Another illustration: Never in our history have dealers and distributors been faced with greater problems, calling for united action for their solution. Yet, of the thousands of tradesmen who must have been present at Atlantic City while the open meetings of the national dealer and wholesaler organizations were in progress, less than 100 put in an appearance at any one session. Dealers who criticize the manufacturers in private and yet take no active part, collectively, in suggesting remedial measures certainly forego all claims to sympathy.

Next year we'll have another trade show and business session—in some mid-western city. And your editors have every reason confidently to assure their readers that it will be, by far, more satisfying than any of its remarkable predecessors.

Its List Price



SOMEWHERE between the 95c. crystal set and the \$600 console lies a minimum list price below which it is difficult for a dealer to make a living wage.



It is generally acknowledged that the average list price of sets is lower today than for 1928. While the momentum of this downward trend has been checked, and while Mr. Ryan's assumptions are made purely for the purpose of illustrating his points, nevertheless the truth regarding the *merchandising economics* of reducing list prices below a certain level should be brought out into the limelight right at this time.



Manufacturers should realize, for example, that when the list is reduced 33 per cent unit sales must be increased 50 per cent if the dealer would break even—assuming also that operating expenses remain constant, which hardly seems possible with a commodity such as radio, which has to be *sold*.

was LOW—

But

Could You Put
Your Son Through
College On Its
Profits?

By S. J. Ryan

WILL a lowering of radio set prices mean more or less *total net profit* for the retailer?

Obviously there is but little the dealer can do about the lowered price itself. The unfortunate thing is that in all probability his operation is not "geared" to meet such a changed condition. If it should come about he would face a new and serious menace.

We all know that lowered prices mean broader markets, more unit sales and all that sort of thing, *but nearly half of your expense attaches itself to the unit of sale and not to the amount of the sale.*

To illustrate: *Radio Retailing's* survey last fall established an average net profit of eight per cent on retail radio sales in 1928. Now let us assume a dealer sold 1,000 sets at \$150 each. He would net \$12,000. But if the price of that set drops to \$100, he must sell 1,500 of them to net his \$12,000—provided also he can still maintain a net profit of eight per cent.

It is absurd to assume that because the price drops a third his sales automatically will increase 50 per cent. They will increase, mind you, but never in that ratio in the average store. Competition is the great leveler of values and no dealer and no factory can hold a monopoly on a lower price. The fellow that gets it first does have a temporary advantage, but not for long.

On the other hand, why should the dealer who made \$12,000 last year be satisfied with \$8,000 this—as would be the case if he maintained his eight per cent and only sold the same number of units. Therefore, the problem of every retailer of radio during 1930-31 resolves itself into these alternatives: (a) increasing his volume of sales by selling more units—in *the same ratio that the new price bears to the old* or (b) increasing his net profit per unit so as to net the same amount of profit on a *lesser volume of sales.*

Either of these solutions is a man-sized job. The dealer will have to tackle it and do it *himself.* No high-powered sales manager of some factory or distributor—no pen artist in some editorial chair—can do this job for the retailer, nor should he. Nor is this problem confined to radio. The problem of the lowered unit sale price is

present in all lines of retailing and is causing everyone concern.

Retailers must gear their businesses to changed conditions—*there is no other solution.* Well managed factories, through simplified methods and automatic machinery, can cut production costs and then cut the price of their product and still preserve their normal profit. They gear their business to meet a changed price condition or to create one of their own accord. We must do the same. How?

LET'S review *Radio Retailing's* survey. We find 109 dealers selling \$7,214,000 of radio at a gross margin of 37.7 per cent. It cost them 29.5 per cent to do this. So they had 8.2 cents left to play with out of every dollar of sales. Now, this was the net profit on the year's business but not the net worth of the year's operation. There is quite a difference.

It is possible to show an operating profit and yet have all that profit tied up in obsolete inventory that will not bring 25 cents on the dollar. That is why, in department stores, we make such continuous efforts to keep our stocks "clean."

This year, it seems to me, the dealer will have to adopt a most conservative trade-in policy. This will have a tendency to decrease volume but to increase net worth. Those dealers (and a certain type of department store, with the collusion of certain manufacturers and distribu-

tors, has been the greatest offender) who have offered an exaggerated trade-in allowance based on a no longer competitive list price, will probably not have that deceptive spur to volume available this fall. As *always* happens, values will be established by competition and the merchant who imagines he can fool the public is himself a fool.

If yours is one of the typical businesses as revealed in our survey and you are selling a \$100 set for example, all the margin you can possibly have for trade-in purposes is your net profit, namely \$8. If you allow as much as \$5 more than you can positively resell that trade-in for, you are sacrificing two-thirds of your net profit. That is one

"Half of the dealer's overhead remains the same regardless of the list price of the set sold."

place where you will have to gear your business to the new conditions.

It costs you just as much *per unit* to demonstrate a low priced set, to deliver it, to service it, to keep the necessary books in connection with it; it even affects your rent because it occupies just about as much space. These are other places where you will have to meet conditions.

The two factors not affected are selling and advertising, and in our survey we found they amounted to 15.3 per cent, or slightly more than half of the total expense of 29.5 per cent. In the department store business—in fact, in retail stores generally—we are confronted with this same problem, a decline in our average sale which has been aggravated by the demoralization of the past several months. We have found no solution as yet but we are gearing our business to present-day conditions by a survey of employes functions, which is resulting in some economies, and by a strenuous effort to sell *more* units of merchandise and higher-priced units especially. Of course we know that any increase in the number of units sold cannot but help increase our expense.

OPERATING expenses of department and specialty stores have slowly but steadily climbed year by year and the lowered average sale plays no small part in this. The Harvard Bureau report for 1929, which will be published in July, will show that the operating expenses of some 600 such stores increased about one per cent over 1928. (It is interesting to note the close relationship between the expenses of the 109 radio stores in our Survey [29.5 per cent] and of 180 department stores doing a half-million or less [29 per cent].) For 1929 the expenses of 226 reporting stores with volumes of less than half a million is given as 30.3 per cent. Still lower prices will aggravate this condition.

“To make an equivalent profit on lower lists the dealer must increase production per person.”

Lowered retail prices *will* bring you an increased volume—they *do* open up new markets. The distributive structure can be likened to a pyramid with the lowest possible price as the base and the highest price as the cap. The lower the price the broader the market. I am not arguing against lower retail prices on radio. That had to come, should have come and did come. I am only using a \$150 set and a \$100 set for purposes of easy illustration. What I am trying to emphasize is that the dealer must appreciate what this means to his profits unless he changes his methods.

More unit sales *must* bring increased expense unless—and this is the only solution I know of—you can handle many more units with your *present* organization. The answer to the problem then is *controlled* business. The *application* of the answer is squarely up to you, Mr. Radio Retailer. No one can do it for you because only you know your individual set-up and only you can change and control it.

This I *do* know—because I am a practical merchant working at the job every day—that neither you nor anyone else can sell more units of merchandise and not have it cost you more money to do so. How much more is purely a matter of individual ability as a merchant, but don't let anyone hand you that line of bunk about not increasing your “overhead.” We know that *half* of your total expense is bound to go right along with your unit sales. Obviously the dealer can do very little to control the average value of lists.

My solution to this problem, therefore, is *more production per person* all down the line, including the boss—more units with the same or even less help. Now what is your answer? Write and tell *Radio Retailing* and your fellow radio merchants. All of us have the same problem; each of us must find some kind of a solution.



28 Pounds of Bass and Publicity for Outboards

THE difference between bathing beauty (see June issue) and fishing contests is that the fish know how to swim.

Otis Stubbs, president of the Stubbs Hardwars Company, Savannah, Ga., staged one of the latter kind of contest this spring and doubled his average business in outboard motors and fishing tackle.

One requirement was that all fish entered in this affair be brought to Stubbs' store, or to one of his accredited dealers, for checking and registration purposes.

The whopper here shown was caught by Mrs. J. L. Budreau. She weighed 28 pounds—the fish, not Mrs. Budreau.

For those who have the price of the journey, we would add that this prize winner was pulled from the Ogeechee River with artificial bait on a casting rod. As to the exact spot deponent sayeth not.

Our Thinking Must Keep in Tune With

Radio's Progress

By Morris Metcalf

New President

RADIO MANUFACTURERS ASSOCIATION

TO the readers of RADIO RETAILING: Your job and my job is indissolubly bound up in an industry which has changed its complexion every six months. It follows, therefore, that the radio man who desires success, or who may feel inclined to pass judgment on the behavior of his trade organizations, his fellow merchants or a manufacturer, first must appreciate the "fluid nature" of this intricate and fascinating business of ours. He should cultivate an open mind; he should tune his mental processes to harmonize with the present facts.

This fundamental is the substance of my message to the "firing line" divisions of the radio industry, which the editor of this magazine has asked me to deliver.

FOR example: In the first flush of the development of any new art, markedly so with radio, radical improvements follow one another in rapid succession. This means that the first few annual "showings" contain many innovations to intrigue the dealer. Then there follows a longer period of a more gradual, but healthier, progress. Radio receivers have now entered this second phase of their development—less spectacular but holding greater promise of stabilization for the merchant who is building his business on the basis of permanent returns.

ANOTHER illustration: Due to the same situation radio manufacturers, during 1926, 1927 and 1928, were able to schedule their change of models at about the same time. Recently, however, it has been demonstrated that a greater degree of independence, especially as regards production release dates, is developing.

These new conditions were reflected at Atlantic City. From the angle, therefore, of bringing to light the changing status of an industry, trade shows are of inestimable worth. Further comment with respect to our trade shows and conventions will be placed fairly and frankly before the entire industry at an early date.

During the next twelve months every individual connected with the radio industry will work harder and will indulge in a greater degree of co-operative effort for the common good than ever before. And most of us, despite a wide divergence of interests, will do so because we, personally, are keeping abreast of our industry.



MORRIS METCALF, of Springfield, Mass., vice-president and treasurer of the American Bosch Magneto Corporation, will guide the destinies of the Radio Manufacturers Association during the coming twelve months. The election of this well-known radio executive to the presidency of RMA occurred June 5, during the convention at Atlantic City.

Mr. Metcalf is a native New Englander. He is a graduate of the Massachusetts Institute of Technology and first came into prominence for his work in the development of the manufacture of Portland cement from blast furnace slag. His organizational experience dates from the time he was an important factor in the Portland Cement Association.

Seven years ago Mr. Metcalf went to the American Bosch Magneto Corporation as vice-president and treasurer. During the past three years the radio division of that company has been under his direction.

“Dr. Press” Administers A Summer

Its Simplicity Commends It

The simplicity of this plan for maintaining sales volume during July and August commends it.

FIRST

The local radio dealers call a meeting and agree to support the newspaper, or newspapers, whose co-operation is to be enlisted.

SECOND

The committee talks it over with the business manager and the managing editor of the paper.

THIRD

The co-operating radio dealers and the press launch preliminary publicity to sell the public on the idea that radio is a year 'round proposition and to announce the forthcoming summer supplement on radio.

FOURTH

The radio trade supports the idea with store and window displays and other special advertising.

FIFTH

The special section of the newspaper makes its appearance, carrying feature articles on summer programs and other interesting developments. The newspaper is encouraged to get behind this movement because of the possibilities for increasing its advertising lineage.

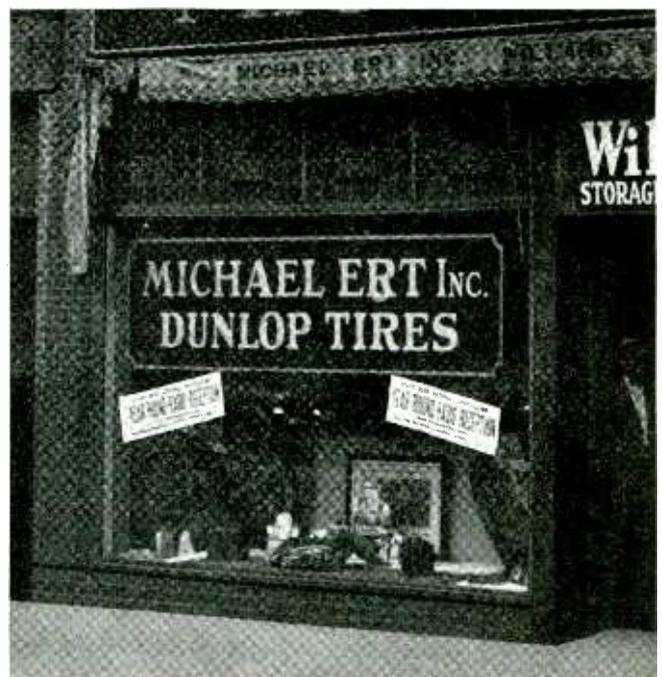
*Milwaukee radio dealers
local newspapers to
summer reception*

NOW that the family radio is no longer packed away in moth balls during the summer months and improved programs and reception devices are the warm weather rule rather than the exception, year 'round radio reception has become an accepted thing.

As a means of co-operation with its radio advertisers, and with local radio trade associations, the Milwaukee *Journal* last year published an eighteen-page year 'round radio reception number. This special supplement was distributed free with every copy of the *Journal* on Sunday, July 14. Thirty-three thousand lines of paid advertising were carried in this section—over and above the thousands of lines of regular radio copy in the recreation section and elsewhere in the paper.

Advance interest was promoted through the use of radio, display ads, reader copy, window posters and *Journal* truck signs. Display advertisements in this newspaper preceded publication of the section and publicity was carried on the business pages also.

“Thumbnail Sketches,” a popular weekly program over WTMJ, the Milwaukee *Journal* station, presented



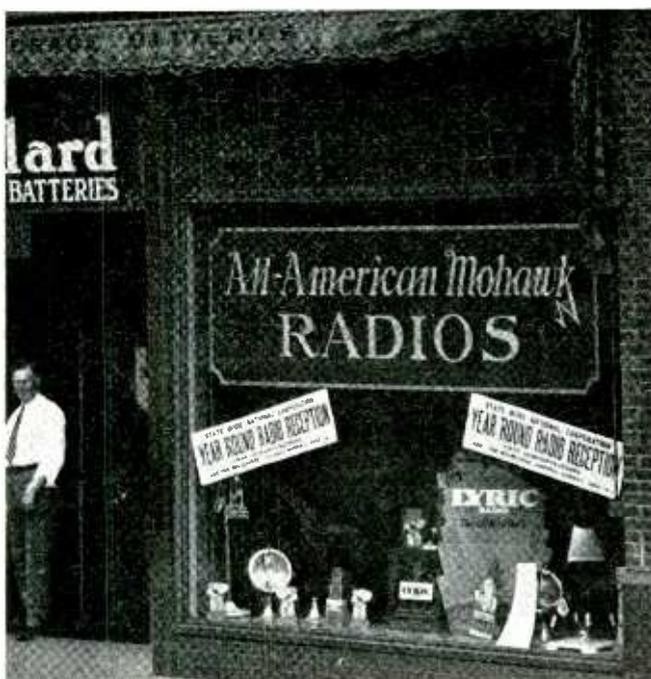
Another newspaper in Milwaukee tied in with this movement.

Stimulant

*enlist co-operation of
maintain interest in
and set buying.*

throughout the year to create interest in the forthcoming Sunday edition, was used a week before the special summer radio section was to appear to stir up interest in it. In addition, window posters and cards were sent to all radio dealers in Greater Milwaukee and Wisconsin.

THE summer "radio section" boasted an attractive eye-catching front page. "Enjoy Year 'Round Radio Reception" was the only copy on the cover—the rest of the story was told by adroit use of art work. A calendar spread out across the page showed all the months of 1929. Sketches of summer campers, picnickers and vacationists enjoying radio entertainment illustrated its summer uses, and actual photographs of WTMJ announcers before the mike at football, baseball and tennis games, regattas, prize fights and important news events emphasized the year 'round idea. This type of copy aroused much interest.



News of the very latest in radio receivers and accessories together with complete details of exceptionally fine programs to be broadcast that summer made the section of intense interest to radio listeners. It was illustrated with a generous number of pictures showing the latest model radio cabinets as well as photos of radio scientists, merchants and manufacturers, and other artists.

Michael Ert, prominent Milwaukee distributor and past-president of the National Federation of Radio Associations, comments thus on the section: "It has taken years to overcome the public's idea of summer time as a season of static. With more than \$50,000,000 being spent on broadcasting annually, executives are demonstrating their belief in summer reception by elaborate programs of splendid entertainment and summer sports broadcasts."

The Milwaukee *Journal's* year 'round radio reception section helped to bring home to the public the idea of radio as a twelve months' business. It was an important step toward closing the public on the big idea that summer reception is every bit as good as reception in cold weather—and last year's summer sales of radio sets by Milwaukee radio dealers further justified this idea.

The Oratorical

Summarizing the Focal Points of the

A REFRESHING frankness in dealing with our pressing problems characterized the remarks of those who addressed the manufacturer, wholesaler and dealer meetings at Atlantic City.

The patent situation, drastic revision of manufacturers' policies toward those who sell their products, and other improvements along merchandising, rather than technical reforms, received the most attention.

To conserve the time of its readers *Radio Retailing* summarizes the principal addresses. Here they are:



J. NEWCOMB BLACKMAN
President, Nat'l Federation of Radio Assns.

Urges

DRASTIC REFORMS

THE limitations of space prevent the publication of J. Newcomb Blackman's straight-from-the-shoulder address in its entirety. It was delivered before members of the National Federation of Radio Associations on the opening day of the convention. The president of this dealer-jobber organization handled his subjects fearlessly.

"The membership of the NFRA consists of 47 radio associations throughout the United States. In addition, over 200 of the liveliest wholesalers in the country are affiliated.

"The industry with which this representative membership is associated had, prior to the collapse of the security market last October, set up a program of over-expansion which resulted in a general over-production of radio sets. Many concerns operating on the easily gotten public's money during the speculative period, became short on capital and long on merchandise and debts. The result has been liquidation, and the dumping of distress merchandise. Had this been confined to concerns that

were bankrupt, the injury would still have been far reaching but unfortunately, many leading radio manufacturers also over-produced. The result has been that sales since have been confined mostly to merchandise having extreme price appeal. Liquidation sales have been conducted with great financial loss to all but the retail buyer. The trade has had a problem to meet and we hope the lessons learned will be far reaching and capitalized to the fullest.

Price Cutting and the Remedy

"Certainly the trade has had many evidences of the fact that no one has a monopoly on price cutting and that the survivor of such a contest is not so "fit" as he expected to be. You can no more effectively cure a price-cutter by increasing his discount than you can reform a spendthrift by increasing his income. On the other hand, I do not believe the cure for general price cutting lies in shortening the discount materially and starving the patient into submission. After all, we must have strength in profits, to carry on.

"Many believe the remedy lies in making it more difficult for manufacturers to enter the business without the obviously necessary qualifications. If the present established and responsible manufacturers are given sufficient support, there will be ample to fill all the needs of the industry and keep alive healthy competition.

If the Independent Dealer Would Succeed

"The independent dealer's remedy lies in having restored to the manufacturer the legal right to enter into voluntary contracts between the manufacturer and the wholesaler, and between the wholesaler and retailer, so that every wholesaler and retailer both buys and sells under the same conditions.

"Such privilege will be restored with the enactment of the Capper-Kelley bill, reported favorably out of committee and about to come before the House for vote. I know of nothing better that the independent dealer and wholesaler can do to safeguard himself against the ruinous sales policies of his competitors, than to urge that his Congressman and Senator vote for the passage of the Capper-Kelley Bill, so that he may enjoy the benefits of controlled sales policies that are now legal only through consignment or factory controlled retail chain stores.

"If the independent dealer is to successfully compete with his chain store competitor, he must first sell himself on the idea that it is in his own interest that he express a willingness to be directed by those competent to help him make money.

"It may mean that we are in an era where there must be laws in business ethics which will be recognized to be as important to business as are certain laws regulating society.

Digest

Convention Speeches



H. B. RICHMOND

President, 1929-1930, Radio Manufacturers Assn.

Believes

PATENT INTERCHANGE VITAL

"Competition has been running riot in the radio business and I do not hesitate to make the statement that the time has now come when the successful radio manufacturers will be those who find the ways and means to adopt sales policies which can be inaugurated and controlled from the factory. Such sales policies of course can only be established and maintained by concerns of ample capital, experience, and seasoned responsibility.

"In conclusion, radio dealers have assembled in Atlantic City primarily to view new radio models, ascertain what is being offered, and determine what they are going to sell. But I believe they will make as few commitments as possible unless and until they are satisfied that the radio they do desire to handle can be sold by them under some sales policy offering protection against constant dumping, distress sales, and the many other evils that have made profits so difficult if not impossible.

"As president of this Federation, representing, through member associations, thousands of radio dealers, I think I sense the need of the radio industry greatly improving its sales conditions. This will call for *new models in salesmanship* rather than in manufactured product; *better selling methods rather than better manufacturing methods; how to sell*, rather than how to manufacture more radios; *courage to make and sell less*, if that be the means of doing business at a profit. Let's think it over and see what we can do about it."

MAJOR GENERAL C. MCK. SALTZMAN

Chairman, Federal Radio Commission

Promises

FEW WAVE LENGTH UPSETS

THE Federal Radio Commission is not on the verge of adopting drastic regulations which will upset the present wave length allocations, declared Major General C. McK. Saltzman, chairman of the Federal Radio Commission, and principal guest speaker at the Trade Show.

"Future changes will be gradual and along sound engineering lines with the sole object of providing better radio for listeners," he stated.

"Now that the commission has been made a permanent body, with heavier responsibilities, it is in a position to go at the job in a big way. With that end in view its legal, engineering and clerical departments are being placed on an efficient basis."

Among the other high points of Commissioner Saltzman's address were the advocacy of a director of broadcasting as a remedy of the evils of the zone system and the suggestions that radio manufacturers should devote more attention toward developing sets of higher selectivity rather than higher sensitivity.

IN HIS keynote speech, delivered at the open meeting of the Radio Manufacturers Association, Wednesday, June 4, President Richmond advocated the adoption of a patent interchange plan as the only way out of our present patent crisis.

"The acuteness of the radio patent problem," Mr. Richmond stated, "arises from the lack of a central control of radio patents. It is the decentralization of patents, rather than an antagonistic dominating patent control, that disturbs us. . . ."

"Our existing difficulty is that in addition to the already established license plans, both of a group and of an individual nature, there are being organized new groups for the purpose of exploiting patents. The general tendency during the past year has been for this situation to become worse rather than better. . . ."

"When manufacturers could sell all the sets they could build, the patent problem was not acute. Today the merchandising situation is so intense that immediate attention must be given to the patent problem if manufacturers are to continue to exist. . . ."

"If it could be established that any group is holding valid patents sufficient to entitle it to a royalty under the outstanding merit classification, there should be little difficulty in arranging an equitable basis for settlement. Such a plan would make it possible for organizations, which could not in any other way consider our patent interchange, to join because some such groups do no manufacturing themselves. True value would be rewarded, but bluffs called. . . ."

Suggests Central Patent Bureau

"Once the patent interchange plan is effective, and a suitable central patent bureau established, the individual manufacturers in the industry would never again be confronted by the necessity of investigating or contesting a vast number of patents annually.

"As a practical plan the Association may find it best to establish a patent information department under the supervision of a full time attorney even before the cross-licensing plan becomes operative.

"I predict that if some solution of the patent problem is not arrived at before long, the majority of the manu-

facturers of radio products, now members of the Radio Manufacturers Association, will find themselves forced out of radio."



JOHN W. VAN ALLEN
General Counsel, RMA

Discusses

SUITS, TAXES, PRODUCTION

THE comprehensive and clear-thinking discussion by John W. Van Allen, general counsel of the Radio Manufacturers Association, was one of the best papers of the convention. It is to be regretted that space does not permit its publication in full. From a strictly legal-rights viewpoint, Mr. Van Allen pointed out that in the case of the United States vs. Radio Corporation of America the questions of the federal anti-trust laws are involved rather than those of the validity of patents. If the decision goes against RCA, the Court may decree redistribution of its patents to their original owners and a cancellation of the cross-licensing arrangements between the various companies affiliated with RCA.

Whether the Government is successful or unsuccessful in the suit, these manufacturers would still be dealing with the same corporations with which they have dealt in the past with reference to the 4,000 odd patents involved and the difference would lie in whether they deal with them separately or through the medium of one company as at present.

Whether these separate companies would be disposed to grant to the industry licenses to use their patents to the extent that the Radio Corporation of America has carried out the policy of licensing the industry or retain the full use thereof to themselves, as they have the right to do by virtue of ownership of

the patents under existing patent laws, would have to be determined.

In the case of the Government of the United States vs. Lowell and Dunmore, if the plaintiff should win this case, a new owner comes into the field and it will be interesting to see whether or not the Government will issue licenses and collect royalties or offer the free use of these patents without claim for damages for past infringements.

Mr. Van Allen, referring to the South Carolina tax on radio sets, stated that this would be contested on the ground that radio is included in the interstate commerce clause of the Constitution of the United States and that this tax is not upon property but upon the use of it in interstate commerce and therefore void.

"Are we as a nation, or are the separate states, plunging headlong into a series of petty taxes costing more to collect than is received therefrom? We condemn the imposition of such taxes as unwise public policy."

Mr. Van Allen's explanation of the matter of controlling production to meet demand through an interchange of information and of agreements was particularly illuminating. He said:

"During the past year many of our manufacturers have been frequently asked why the members of the Association do not agree to limit production, to stabilize prices and discounts and to maintain prices at a fixed level.

"In answer to all such queries, may I state that in the case of the United States against American Column & Lumber Company and others, the record disclosed a systematic effort participated in by the members of the group to cut down production and increase prices and that such effort constituted a combination on the part of members to secure concerted action in curtailment of production and increase of price and such combination was held unlawful because of the violation of the Sherman anti-trust laws.

"The RMA, therefore, cannot exist and follow any such course suggested, and neither can its members indulge in unlawful practices except at the risk of Government prosecution.

"We have, in conformity with the decision of the United States Supreme Court in the case of United States vs. Maple Flooring Manufacturing Association, openly and fairly gathered information as to the volume of production and as to merchandise on hand in past months and have disseminated such information among our members without, however, reaching or attempting to reach any agreement or any concerted action with respect to prices or production or restraining competition.

"This nation in which we live was founded upon the basis of greatest equality of opportunity and of maintaining such equality of opportunity so as to safeguard it to every individual according to his intelligence, character and ability. This is one of the great purposes of our Government.

"To confess that we cannot succeed in this industry according to the intelligence, character and ability each may have without control by another competitor, is to confess that we cannot live successfully under the doctrine of free competition and equal opportunity. We, in the radio business, make no such confession even in the face of the financial disasters that befell us in the year 1929.

"We have full confidence that as an infant industry and that as our growing pains become less and less, we shall become fully stable and the economic laws of supply and demand will teach us the remedy for many bitter lessons which we have learned in the past by failure to properly recognize their force and we shall become as successful as human intelligence, character and ability will permit us to be."

10 Sales in 2 Months From Public Market

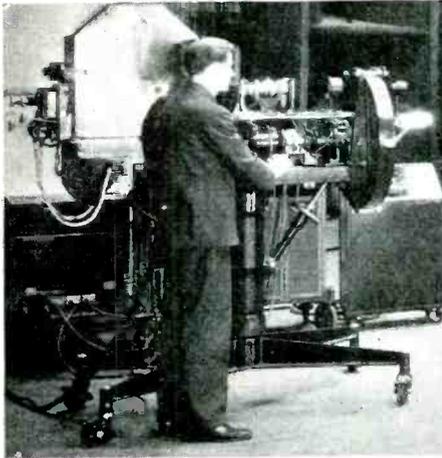
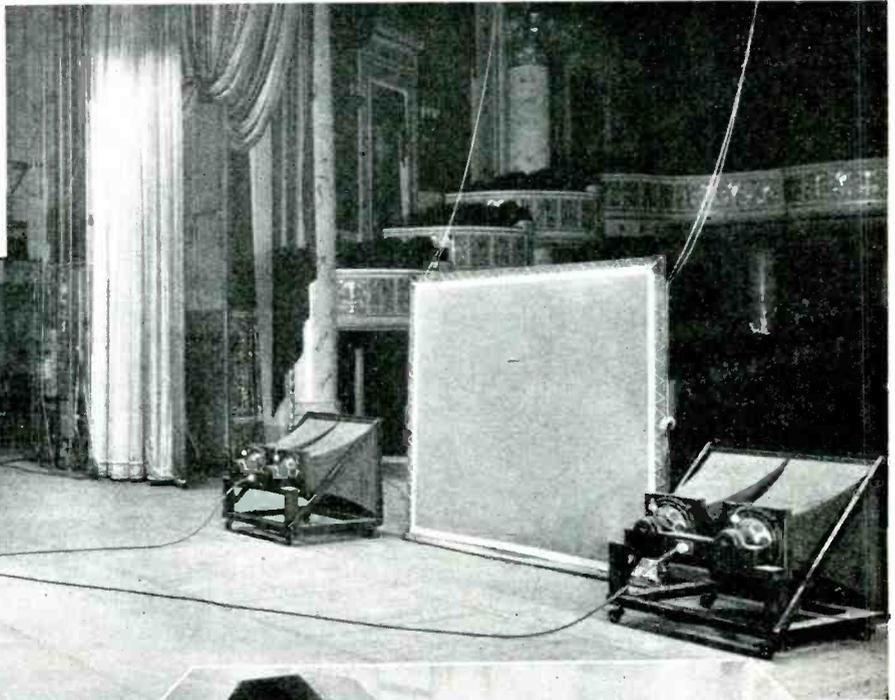
FINDING it difficult to obtain sufficient live leads through the ordinary channels, one of the enterprising salesmen of the Glendale Music Company, of Glendale, Calif., tried installing a set and loud speaker in a public market. No special type of booth was chosen. The salesman merely selected the most friendly and attractive location, where the proprietor was willing to have the instrument installed and to take the names of those interested.

The radio said nothing about the Glendale Music Company. It was marked merely with a card, "Ask for a demonstration." The instrument was tuned in by the proprietor of the booth who selected the type of program rendered, being cautioned in advance, however, against

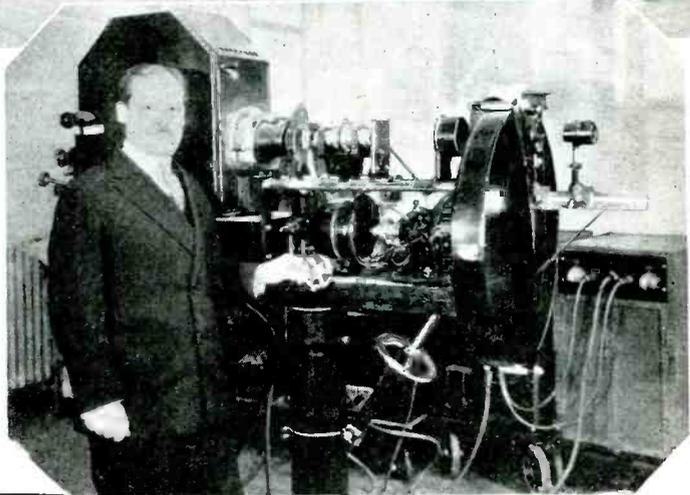
too noisy a rendition. In payment for his trouble the salesman gave the proprietor of the booth \$1 for every prospect to whom a set was later sold. He made ten sales in the first two months and now he is looking about for other markets and other interested merchants where he can repeat the experiment.

Bus terminals, beauty parlors and similar places where people wait are also suitable for the display and demonstration of radio on this interesting basis. In such cases the set not only is unobjectionable but actually aids the business of the co-operating organization. Proprietors of drug and general stores in the smaller towns are sometimes willing to demonstrate on a commission basis. All of these outlets are valuable.

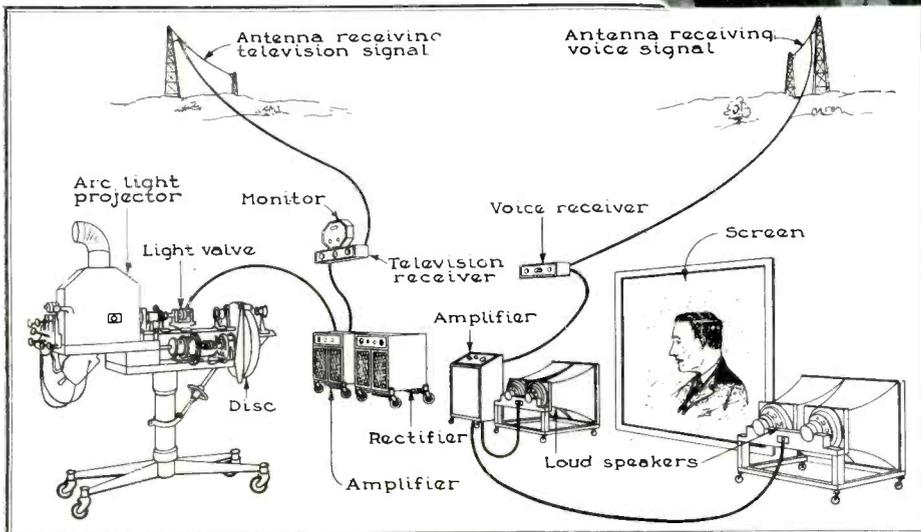
Now— *Televised* Movies



This picture, taken from "off stage" and looking out into the orchestra of Proctor's Theater, shows the 6x7 ft. screen, the receiving and projecting mechanism and the "focused" cone speakers used. (Above) The performer broadcasts from this scanning booth, miles away.



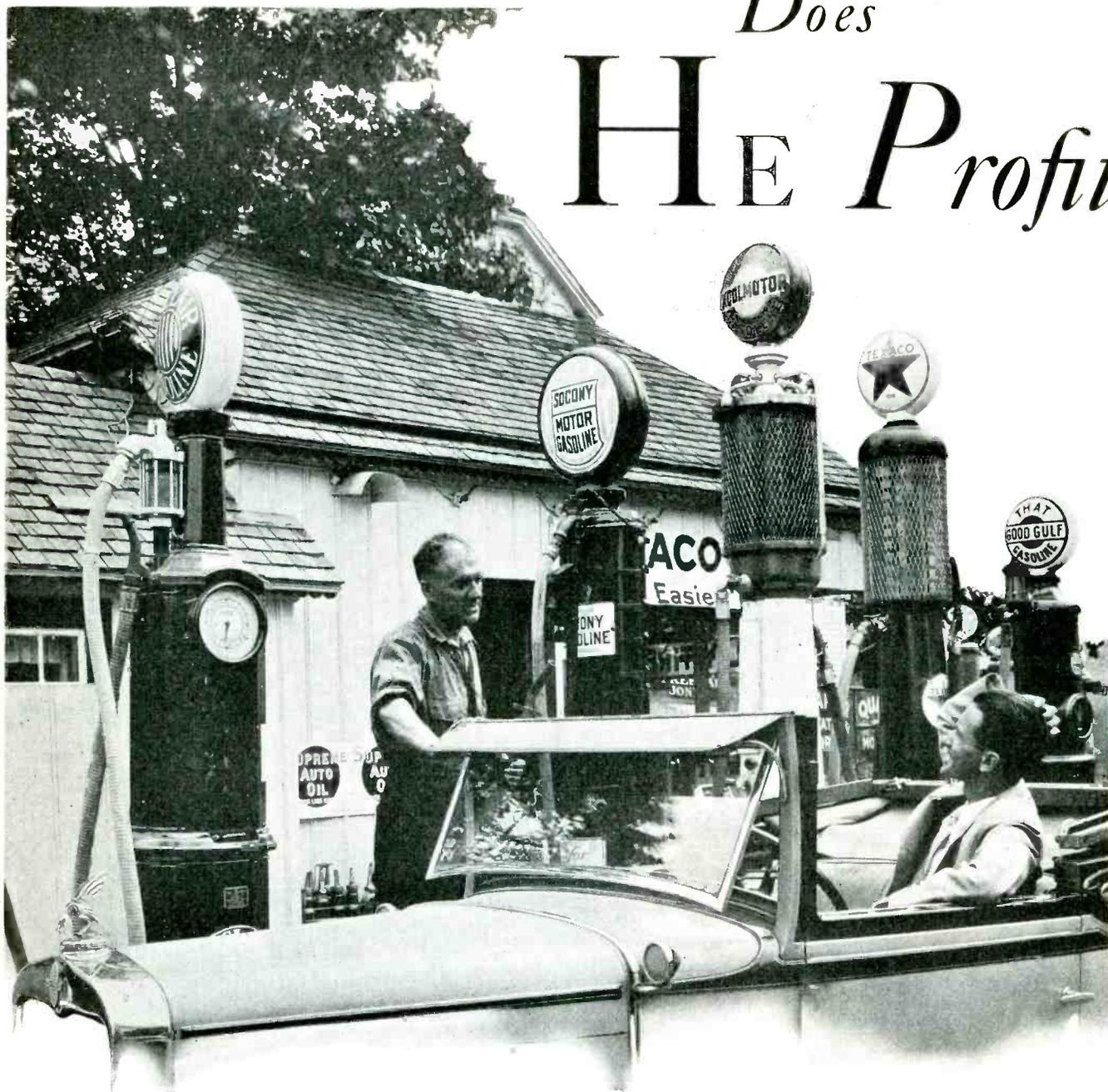
Audience at Schenectady theater enjoys a vaudeville act broadcast from local station



Dr. E. F. W. Alexanderson of the General Electric company is largely responsible for the development of this new equipment.

A high intensity arc and a new sensitive light valve, plus general improvements to existing apparatus, made reproduction on a large screen possible. Television signals were transmitted on one wavelength; voice and music on another.

Does HE Profit



Survey discloses wide difference of opinion still exists in the radio business. Read what dealers think.

LAST week-end, while burning up the Tarvia on Long Island, we lammed by a filling station with a line-up of pumps that unquestionably qualifies the place as a permanent advertising exhibit for the Oil Refiners Association. There they were—Standard, Sinclair, Gulf, Texaco, Koolmotor and a couple of others—all working shoulder to shoulder (or tank to tank) for this one ambitious dealer who had evidently decided that no matter what fuel folks preferred for their benzine-buggies he'd have it on draught.

That's one way of merchandising. Stock a dozen popular lines and work the "We have 'em all" idea overtime. Another way is to hook up with one good manufacturer and enthuse about his stuff all over the lot. A third method is to strike an average between the two.

How does the retailer make the most money; by backing one horse or by splitting his bets? In the gas business, if the number of filling stations with all their eggs in one basket is any barometer, specialization is the most profitable. But in the radio business—well, let's see what the dealers have to say:

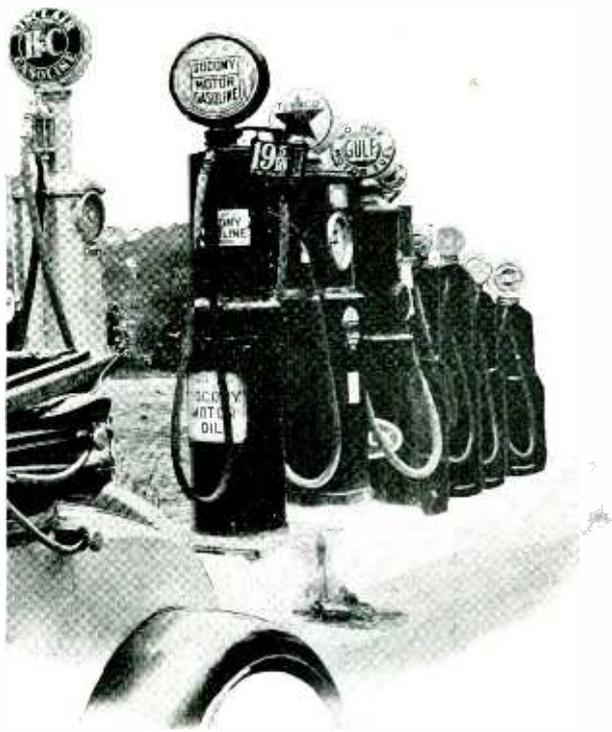
THESE FAVOR MULTIPLE LINES

THIS from M. Lewis, secretary and treasurer of Hurvin, Inc., operating two radio-music stores in Jamaica and Hempstead, N. Y.: "It is very difficult for a dealer to do a satisfactory volume of business with only one line at the present time, unless he is given the exclusive agency in his town. We think that the proper number of lines for a dealer to carry ranges from four

By
Many
Lines
or



Should HE Specialize



to six standard sets, not more, the actual number depending upon the population of his community.

"In the past, dealers have carried as many as ten lines; by cutting the number down to four or six it is possible to get behind each line more solidly, to concentrate advertising to better advantage and to feature and display more effectively. Our opinion is based on the fact that in past years we have carried as many as a dozen lines, only to find that more than 90 per cent of our business was confined to five lines. During 1929, we carried only six and yet our business showed a substantial increase in volume."

ROGER PUTNAM, of the Roger Putnam Company, St. Louis, shares Lewis' opinion but arrived at his conclusion by working up from a single original line rather than down from too many. Mr. Putnam says: "In 1927, we handled one line only. In 1928, we took on another. And in 1929, we sold four nationally advertised

makes, increasing our sales 30 per cent over 1928. Our average sale was about \$145 in 1929 as compared to \$220 in 1928. We feel that this method of catering to the public is the proper sales procedure."

P. A. Lehman, Lehman Piano Company, also a St. Louis dealer, double-checks the impracticability of specialization but adds a significant thought. He is convinced that: "We could not sell one line and get the volume that we now enjoy. If, however, we had a reasonably large territory exclusively on one good line we could easily increase our sales. Without such protection such a policy is suicide for the large dealer."

LEHMAN'S opinion, that with proper protection specialization is probably the most desirable method of selling, is reflected also in a statement from James T. Dwyer, Dwyer Piano Company, New Orleans, who writes, somewhat cynically: "It would probably be more profitable for a radio dealer to specialize in the sale of one good set if he could get any kind of protection or co-operation from the manufacturer, but as the radio business is constituted, we would not care to be the ones to try it! For some time we tried to work with two well-known lines, but as one of these lines consisted of models that the public did not want, we were actually operating with one line only. We pushed this line vigorously and did a good job with it. But it was not long before we found ourselves in competition with our own set so many times that we were forced to take on another equally popular line. Our experience with both our original lines was so unsatisfactory that we are handling neither of them now.

"Because of our experience we have discontinued all advertisements of any particular set, even of those where the manufacturer offers to contribute to the advertising. We advertise our store and our service and list the names of the sets we sell. And because of our original experience we will not take on a line until a demand has been created for it locally."

DWYER'S cynicism is probably justified, for L. A. Rose of Rose Radio and Electrical Supply, in the same city, expresses more or less the same feeling:

(Please turn to page 69)

We "Do" the Trade Show



NOW that the Trade Show exhibitors have folded their tents and departed from the Happy Hunting Grounds, it is our guess that there is a lot of quiet thinking going on back home on Main Street about the new lines and their significance.

Just before the shindig closed we made the rounds. These notes may serve to freshen the memories of dealers who trod the Boardwalk and will afford a bird's-eye of The Show for those who could not be there.

Facts About New Lines —for Salesmen

Exhibitors	<i>37 manufacturers displayed new chassis and cabinets. (Several others had booths but no merchandise ready.)</i>
Prices	<i>Average "low," \$130. Average "high," \$260. (Trend to slightly higher prices this year.)</i>
Furniture	<i>15 ornate set lines shown, walnut universally used. (Greater ornamentation this year.)</i>
Cabinets	<i>31 lines include lowboys, 14 include highboys, 8 make table models. (Predominance of lowboys noted.)</i>
Combinations	<i>22 companies have phono-radio models. (Automatic record-changing on the increase.)</i>
Phono. Jacks	<i>20 make provision for the use of electric pick-ups. (11 provide switch changeover on tuning dial or volume control.)</i>
Tone Control	<i>Found in 14 lines. (Much talked about feature.)</i>
Remote Control	<i>9 companies supply with one or more stock models. (6 lines have extended condenser shafts for future addition.)</i>
Auto. Volume	<i>11 lines include non-fading, uniform volume feature. (Usually incorporated on higher priced models.)</i>
Easier Tuning	<i>3 manufacturers use "flash-light" mechanical tuning indicators, 2 others use tuning resonance meters. (Numerous full-vision and similar dial improvements shown.)</i>
Speakers	<i>Dynamic cones used in practically all sets. (Most of the "midgets" and auto-radios use magnetics, one condenser speaker shown.)</i>

A First in the "A's," *Acme Electric* gets the position break in our report. *Acme* exhibited a new line of power transformers, chokes and audio equipment of particular interest to manufacturers. Dealers don't ordinarily see this stuff but "just know she wears 'em!" *Acme Wire* showed interesting samples of conductors, while *Adler Manufacturing* was right on deck with a swell line of cabinets, including one for the King chassis. *Aerial Insulator* displayed a line of combination synchronous electric clocks and aeriels, something new, ranging from \$14.50 to \$19.75 list. *Aerovox* built a nice display around its new resistances and condensers.

All-American, now backed by *Wurlitzer* money, showed three new lowboy consoles, a combination and remote control. Tone control and automatic volume control were also featured in the new *Lyrics*. \$99.50 to \$199.50. *Allen-Bradley* spotlighted suppressor-resistors for motor car ignition and *Allen-Hough* sported a new portable phonograph with electric pick-up, a pick-up head and an automatic record changer. The *Aluminum Company* provided its usual interesting display illustrating various uses of its product and *Amperite* attracted a crowd with an automatic line voltage control tube.

Amrad Corporation exhibited with *Crosley*. *American Bosch* attracted attention with a motor car set, a motor boat receiver and a complete line of home sets from \$144.50 to \$250. Line-O-Lite tuning, automatic volume control and tone control, also separate chassis for audio end interesting. *Anaconda Wire* had an educational exhibit. *Arcturus* played up its quick-heating tubes. *Audak* showed the *Musichrome*, a portable phonograph with its tuned pick-up. *F. A. D.* *Audrea* introduced a new chassis in sets from \$159 to \$328, with *Flash-O-Graph* tuning, automatic volume, two-element detection and an extended tuning condenser shaft as a provision for remote control. *Fada's* name for a tuning refinement commonly labelled tone-control has merchandising possibilities. The feature is called a "Noise-Filter." *Audiola* has graduated from chassis to complete console sets ranging in price from \$107 to \$119. *Atwater-Kent* had a booth but no merchandise to show until August.

B *Nathaniel Baldwin* crashed into the field with a midget set at \$99.50 with tubes, the same set on legs for \$129.50 and a "Hydaway" model designed to be remotely controlled by means of Baldwin's interesting



— and Report the Outstanding Features of Each Exhibit

By

W. W. MacDonald

two-motor and phasing arrangement accessory which sells also as a kit for \$35. *Belden* and *Birnbach* and *Brach* came through with some interesting antenna equipment; *Bond* and *Burgess* with a complete line of batteries, including types for auto-radio. *Browning-Drake's* new models, \$95 for the table set to \$262.50 for a deluxe console incorporating remote control, automatic volume and antennaless reception, plus an interesting type of dial which reflects call letters on a ground glass strip, held interest. *Brunswick*, \$139.50 to \$450 for a combination, featured tone-control, made provision for future addition of remote and incorporated one of the new-fangled strip type dials in which an oblong sliver of celluloid moves across the panel in front of a stationary pointer. *Bush & Lane*, big piano people from the West, presented its 1931 line of sets and cabinets featuring some small models.

Cable, *Ceco* and *Cunningham* had the customers all "het up" about the new low-drain battery tubes. *Caphart* exhibited working models of both commercial and domestic automatic record-changing *Amperions* and *Cardon Phonograph* featured a corking combination including an automatic-record changer and a *Sparton* radio. *Cordonic* had the only condenser-speaker at the show, *Clarostat* featured its new variable resistors, *Centralab* flashed tapered volume control resistances and general purpose units. *Champion* tubes and *Columbia Phonograph* had space right in the center of things, as did also *Continental Diamond*, showing molded products. *Caswell-Rumyon*, with a new cabinet specialty and the *Concert-Trope* outfit and its automatic record-changing, coin-operated phonograph. *Cornish Wire's* display for manufacturers and the *Container Corporation's* excellent demonstration of a new set packing method were noteworthy. *Columbia Radio* showed a full line of Duo-vac tubes and *Crowe* introduced a lot of new ideas in dial and panel escutcheons and ornaments.

Colonial, with three snappy console cabinets from \$129.50 to \$139.50, played up *Fulton Cutting's* remote control both as stock equipment and as an accessory. *Colonial's* new models include automatic volume control. *Crosley*, in conjunction with *Amrad*, featured a complete line of exceptionally small, though highly ornamental, console models ranging in price from a \$69 model that would make a peach of an end-table to an automatic record-changing combination. The *Roamio* auto-radio announced a short time ago by the *Cincinnati* production genius was also pretty well oiled.

D*eca Disc* sprang a new record-changing *Creatone* with space for an *Atwater-Kent* radio chassis, *DeForest* provided not only its usual special tube display but also a new short-wave receiver almost small enough to put in your hat and *Diamond* offered a couple of new battery types. *DeJura-Amsco* presented, among other things, gang-condensers and power rheostats, *Dongan* appealed directly to visiting manufacturers with its power transformers and chokes and *Dudlo* was "among those present" with a wire display. Some of these big wire boys spent considerable jack to give their 1931 products a send-off with set manufacturers. *Dudlo's* booth was a splendid example.

Facts About New Lines — for Technicians

Exhibitors	37 manufacturers displayed new chassis and cabinets. (Several others had booths but no merchandise ready.)
R.F. Circuits	35 companies used tuned screen-grid. (3 stages average, though few use 2 or 4.)
Untuned R.F.	5 sets use one stage of untuned or "broad-band" screen-grid r.f. in conjunction with tuned stages.
Pre-Selection	15 lines have some form of tuned circuit preceding the first r.f. stage. (A few use band-pass filters and modifications.)
Antenna Adjust.	18 makes provide adjustments for antenna lengths. (Mica variables, fixed series condensers, coil taps seen.)
Detection	11 lines incorporate screen-grid power detectors. (Majority still use '27s, 3 have two-element systems.)
Resist. Audio	18 manufacturers use single resistance coupled a.f. stage between push-pull and detector.
Push-Pull	33 sets use two '45s in push-pull following detector or resistance a.f. stage. (Tuned a.f., double push-pull and parallel, '45s also shown.)
Double-Chassis	4 lines include audio tubes and equipment, power supply with dynamic speaker chassis, keeping r.f. and detector in separate chassis. (8 incorporate '80 and power pack with speaker.)
Dial Types	16 makers use drum type dials, 14 disc and 5 "strip" or full-vision types. (14 sets use friction drive dials, 14 cord and pulley systems and 3 use gears.)

TONE CONTROL *Much* Discussed—

E *Easton Coil* was represented, *Eby* broke into the volume control game with some new wire-wound units and *Electrad* checked in with variable resistances, its *Loftin-White* kit and one or two new small items. *Edison*, headlining *Light-O-Matic* tuning, announced two new models at \$297 and \$268, in addition to displaying its three sets listing at \$175, \$215 and \$325. The line includes a model with automatic volume control and a combination. *Erla* announced two new consoles at \$130 and \$160 and also an a.c. midget at \$67.50; with a built-in electric clock for \$75.

F *Fansteel's* booth spread the news about the alloy Tantalum, *Federal Wood* and *Furnas* announced new cabinet specialties, *French Battery's* timely introduction of an auto-radio B-battery was of general interest and both *Frost* and *Fast* displayed radio parts. *Jesse E. French* presented four new screen-grid sets, three in lowboy and one in a high-boy cabinet, priced from \$136 to \$152.

G *General Motors*, one of the largest of the newcomers using the former *Dayfan* manufacturing facilities, made quite a splurge in period furniture, introducing a *Heppelwhite* at \$136, *Sheraton* at \$152, *Late Italian* at \$172, *Queen Anne* combination at \$198 and a *Georgian* combination at \$270.

One of the interesting features of the GM line was the tone-control with a dial showing graduations from bass to treble. *General Electric* had no sets ready but it is understood that the line will include one t.r.f. and three super-heterodyne models, the chassis being identical with *Westinghouse* and *Radiola* but the cabinets differing. *General Dry Batteries* contributed a full line of *Kleartone* tubes and a new auto-radio battery which is shielded and equipped with a special "one-shot" connection plug. *General Industries* exhibited a constant speed turntable, *General Radio* a rather complete line of laboratory testing instruments including a new receiver-gain measuring set, *Gilby* a good wire exhibit and *Gold Seal* some new "dated" tubes.

Grebe has departed from its well-known horizontal "thumb" dial for the more conventional disc type but is still playing up "Colortone." Price available only on one highboy, the AH-1, which lists at \$225. *Gulbransen* concentrated on its *Champion* model at \$130, with tone-control and a cabinet made by men who obviously know how. *Grigsby-Grunow* obliged with a brand new line of screen-grid *Majestics*, including a combination, but had not fully decided on the new prices. Stock cabinets appeared to be very much similar to the excellent styles introduced in 1929, but with a tendency to lowboys. In addition, several custom-made special cabinets were shown, which we understand will be offered to authorized dealers.

H *Hammond's* new synchronous electric turntable has many possibilities, *Hygrade* had a full line of tubes and *Hoyt* showed, in addition to set checkers, a new tube-tester and a grid-dip oscillator for servicemen. The line also includes one of the new direct-reading ohmmeters. *Howard's* new remote control system, by which tuning is accomplished from a remote point merely by turning a dial which is an exact duplicate of the set dial, attracted most of the visiting firemen. It will probably sell for about \$100. In addition the company had three console sets, price \$175 to \$210 and a fourth, including remote control at a somewhat higher price.

I *Insuline* and *Isolantite* displayed insulation products in various forms. *International Resistance* had some new power type resistances which were particularly interesting. *International Resistance* is specializing in replacement units for practically all manufactured sets this season and has gotten out an interesting booklet which lists these alphabetically by sets, giving the code colors of wires to which they are normally attached.

J *Jefferson* showed a full line of power transformers, chokes, audio transformers and similar specialties, *Jenkins* presented its latest television equipment and received a couple of programs from *Jersey City* by way of demonstration, *Jensen* brightened its corner with three new dynamic speaker chassis, *Jervell* catered particularly to servicemen with a

display of instruments and meters for their use, including a new portable voltohmmeter and *Howard B. Jones's* booth featured master control system switch panels and wall outlets.

K *Kennedy*, with *Studebaker* backing, is with us again, offering 6 console models including a combination. One model, which will sell for about \$200 boasts two separate chassis, one for the broadcast band and the other a short-wave set. This particular model appears to have interesting possibilities as the inclusion of the short-wave outfit interferes not at all with the furniture value of the cabinet. Tone-control and remote-control in one model. *Ken-Rad* outdid itself with a tube display. *Kester* still specializes in solder. *King* is going after the "market-your-own-chassis" idea with a couple of new screen-grid models.

M *Magnavox* presented some new, smaller dynamic cones and electrolytic condensers made under the recent "Mershon" purchase but did not have a midget, which we understood the company is producing, at the Show. *Marvin*, *Micarta* and *Mc-Millan* were on hand. *Micamold* specialized in fixed, molded condensers and *Muter's* line shows improvement in aerial equipment since last season.

N *National Carbon* gave over practically all of its booth space to *Eveready* four-pillar tubes. The *National Company*, in addition to a rather complete line of transmitting condensers and equipment, offered a new double screen grid short-wave kit with plug-in coils. *National Radio Tube* had a complete stock exhibit while *National Transformer* pushed eight new screen-grid chassis to be equipped with selected escutcheon plates. All chassis list at \$71. The company also makes the "Balkeit" complete console job for \$135 list. *National Union's* booth, indelibly impressed upon our memory by virtue of the several young ladies who so ably dispensed circulars, was given over to an explanation of the concern's "Radio Star" advertising idea. The company is bringing out new 2 volt d.c. tubes.

O *Operadio's* booth was given over to several of its speech amplifier control panels and associated equipment. *Oxford* displayed its new dynamics and the *Chromatrope*, an electric-phonograph, amplifier and two dynamics in one large console, with space for a radio chassis. This outfit if equipped with a radio chassis, would closely resemble a lowboy combination.

P *Pacent* had its *Phonovox* electric pick-up at \$15 list and a new constant speed electric turntable at \$25. *Perryman* exhibited an up-to-date line of tubes. *Philmore* spot-lighted its crystal sets and whats more, claims to be selling them in satisfying quantities. *Polymet* announced some new coils as well as its usual line of resistances and condensers, while *Potter* concentrated largely on fixed condenser blocks. Several interesting *Pooley* cabinets were at the Auditorium, though most of these were at a closed exhibit at a nearby hotel. *Pilot* displayed its short-wave kits, a broadcast kit, a speech-amplifying system and a new auto-radio kit selling for \$106.50 with magnetic speaker. *Philco* with five models, including a table set at \$55 less speaker and a combination with automatic volume control and a built-in aerial as two special features, includes tone-control with every model in the line. One small highboy type of console includes a partially concealed speaker which is mounted horizontally beneath the cabinet.

R *Racon* gave over much of its space to exponential horns and also exhibited a small dynamic unit. *Radio Master* displayed a dozen new cabinets listing between \$35 for an early American maple design to \$450 for a massive, hand-carved model. The line included a *Duncan Phyfe* model, several highboys and lowboys, an end-table or chair design, a desk and several chest models. *Radio Products*, showing practically its entire line of testing instruments stressed particularly its new grid-dip meter, modulated oscillator and output meter and a new automobile radio set tester with special 5,000 ohm per volt

SCREEN-GRID Almost Universal

voltmeter. *Radiola*, like G.E., had space but did not exhibit new models. Also like the G.E. line, it is understood that these will be the same chassis as employed in Westinghouse sets, but in different cabinets. Naturally, G.E., Westinghouse and Radiola sales and distribution plans will differ. *Radiotron* had an interesting exhibit but displayed its tube line, including the new two-volt d.c. types, at the Traymore Hotel. *RCA-Victor* announced its entire line for the coming season at Atlantic City and displayed models using the familiar full-vision dial, embodying tone-control and generally resembling the original line in all but minor details. *Readrite* now makes a \$12 tube tester for all the new tube types and has also a smaller tester for \$2.10 designed for rapid test for shorted elements and achieving this price through the use of flashlight bulbs as indicating devices. *Rola* is swinging its production facilities, apparently to the manufacture of smaller, more compact dynamic speakers. *Rochester* reproducers, three dynamics for auditorium and radio cabinet use, also a small magnetic cone for auto-radio, have made their appearance.

S *Sampson Industries* is still boosting the ingenious combination of adhesive tape and metal foil aerial for indoor use and aptly called Stiktape, while *Samson Electric* is plugging its efficient Pam speech amplifying equipment. *Scoville's* variable condenser gangs interested many manufacturers as did also *Sprague's* screw-type electrolytic condensers for filter design and replacement. *Super-Ball* was on hand with its familiar compact antenna system, *Swan-Haverstick* displayed a more orthodox type of antenna equipment and *Sylvania* exhibited a full line of tubes.

Silver-Marshall models offer many refinements, both with respect to circuit design and cabinets. Four models were shown, at \$135, \$160, \$185 and \$225, the line including optional remote control, tone-control, automatic volume control and the exclusive Clough system of tuned audio amplification. *Sparks-Wilmington's* line, without screen-grid but employing band-pass tuning throughout, comprises nine console models which might properly be called "semi-highboys." Prices range from \$115.50 to \$580 for the new ensemble with automatic record changer. *Starr Piano* has added several interesting models to its cabinet line. *Sterling* is making sets employing the Loftin-White amplification system and called "Minstrel." *Stettner* has a line of special cabinets and phonographs with space for radio, featuring built-in Steno-vox speakers and special baffle board arrangement. The cabinets bear the trade-name "Stenola." *Stevens* showed the latest in its cone speaker diaphragm line and an electric phonograph motor. *Superior* introduced a number of new cabinet designs. And *Supreme* in addition to its Diagonometer for servicemen exhibited a brand new set analyzer, model 25, \$78.50, which is considerably smaller than the company's original hit.

Stewart-Warner's 1931 sets range in price from \$99.75 for a table model to \$197.50 in four period models with hand-carved decorations. All four sets are highboy models. *Stromberg-Carlson* presented five straight radios in highboy cabinets, one lowboy and two lowboy radio-phonograph combinations, the price range being from \$239 to \$645. The line includes in several models automatic volume control, a resonance meter which automatically indicates "center" when tuning in a station, and a silent switch which permits these sets to be tuned with the speaker temporarily disconnected by means of a depressed button. *Story & Clark*, piano people who have just entered the field, introduce three models, a lowboy at \$208, one with automatic volume control at \$248 and a third top article at \$317, also with automatic volume control. The cabinets are richly ornamented and other refinements include tone-control.

Real wood, and not "compo" ornamentation is used throughout the *Story & Clark* line of consoles.

T *Tobe-Deutschmann* presented two interference-finding set models, equipped with the necessary pick-up loops and in the case of the larger unit an extension pole for the loop to permit the user to get quite close to sources of trouble. The large unit is apparently complete in every respect and includes a noise intensity meter. *Triad* and *Tungsol* exhibited their respective tube lines. *TCA-Clarion* displayed three new high consoles at \$109, \$129 and \$199, interesting by virtue of their representing the company's original models as well as in themselves. All three models are in matched swirl walnut, the highest priced set being a phono-radio combination.

U *U. S. Radio & Television "ApeX"* receivers were priced from \$105 to \$185, including tone-control, a combination and Utah remote control. *United Scientific* exhibited a selection of parts. *Upco* had a selection of its new dynamic reproducing heads and a complete pick-up on tap. *United Air Cleaner's* modernistic "Sentinel" sets and combination were priced at \$127.50, \$135 and \$180. And *Utah Radio* exhibited its remote control accessory used in a number of the sets on display in other parts of the Auditorium under license arrangement.

V *Victoreen* is making what is probably the only super-heterodyne in the country outside of those produced by the G.E., Westinghouse and Radiola group. The *Victoreen* seen at the Show is a 14-tube job, all rectifying and audio amplifying equipment being in a chassis separate from the r.f. and detectors. Three console models were in the company's booth at \$345, \$395 and \$595, the latter price for a combination available in either oak or walnut. *Valley*, now hooked up with Colonial Radio, had a separate display of power equipment.

W *Ward-Leonard* still specializes in resistors and had several types embodying refinements over last year at the Auditorium. *Webster Electric* split its space between an electric pick-up and the more recently introduced power amplifying equipment. *Weston* brought one of its new counter tube-checkers to the Show along with the general assortment of meters and test equipment manufactured in Newark. *Wright-DeCoster* showed a line of Hyflux speakers, one for flush wall mounting, one for surface mounting, a table model and a chassis, as well as a console type.

Westinghouse's new line includes a t.r.f. set which has not yet been priced, a super-het. at \$142.50, another super at \$179.50 and still another at \$259. The line, encased in walnut consoles, includes one remote control model, which is designed for use with two separate control boxes, and a combination. All models use screen-grid tubes, have tone-control and employ pre-selector tuning. The various chassis used in Westinghouse models are understood to be the same as those which will be found also in G.E. and Radiola cabinets this season. These use four 224's, two 227's, two 245's and one 280 rectifier, the super-het. circuit employed utilizing a pre-selector with two tuned circuits, a stage of tuned screen-grid r.f., screen-grid first detector, two intermediate, long-wave stages, also using screen-grid, a power second detector and a final push-pull audio stage which feeds the built-in dynamic speaker.

An additional set, which will undoubtedly be the low-priced model of the line, is also to be added shortly. It will, we hear, be a tuned radio frequency set and not a super-het.

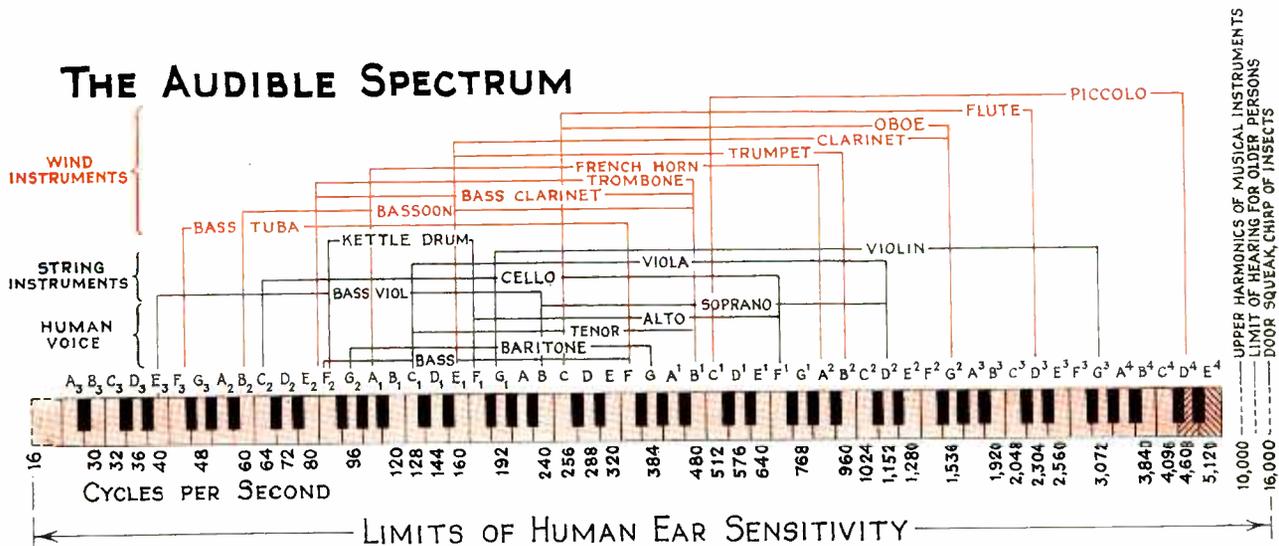
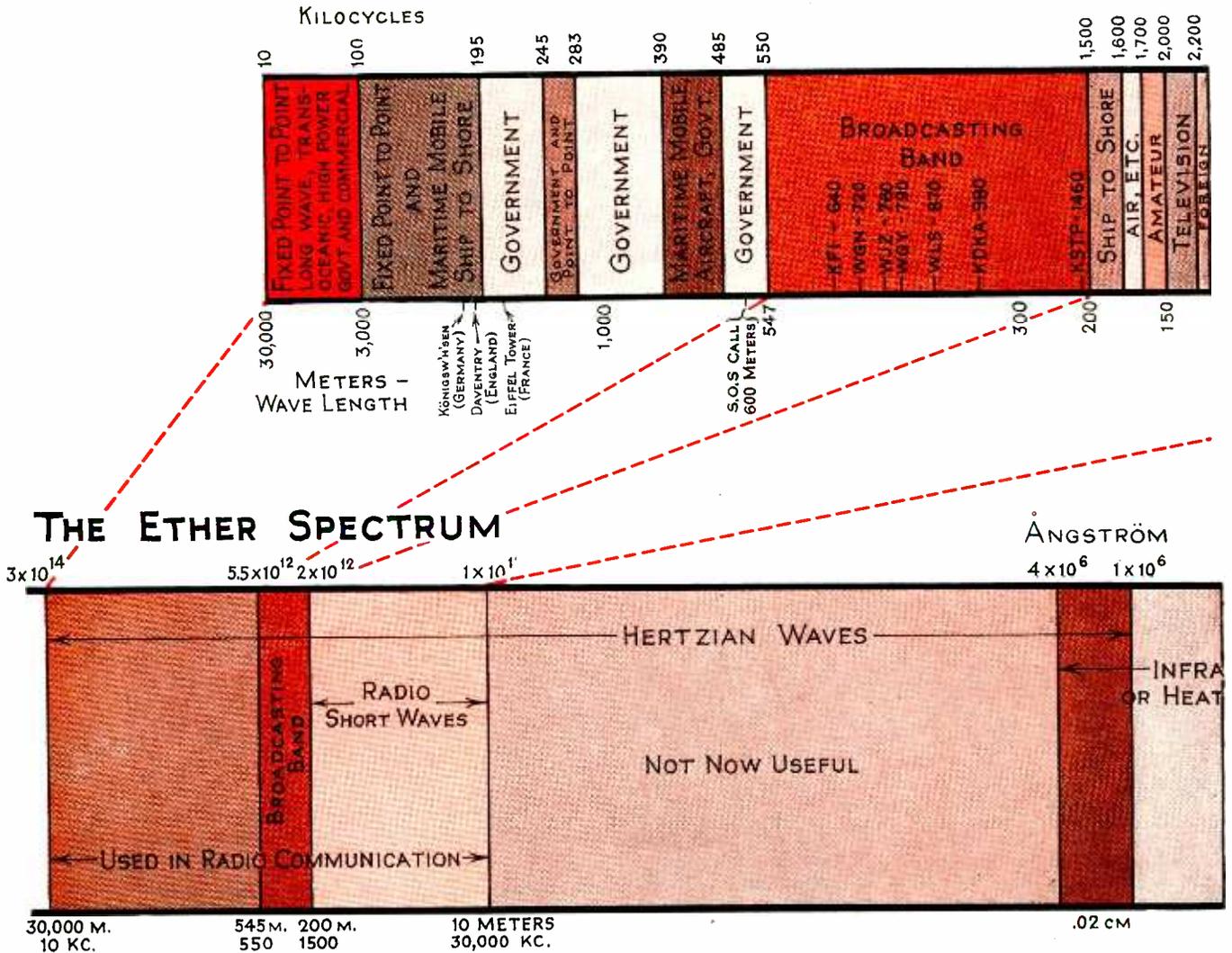
Y *Yaxley* featured a complete selection of radio convenience outlets for master control and apartment installations.

Z *Zaney-Gill*, winding up here in the rear, cut quite a swath into the business with the new Music Box Clarion midget at \$49.50 and the Legionair at the same list. The Clarion is in a small Gothic style cabinet while the Legionair is modernistic in design. Both are a.c. operated.

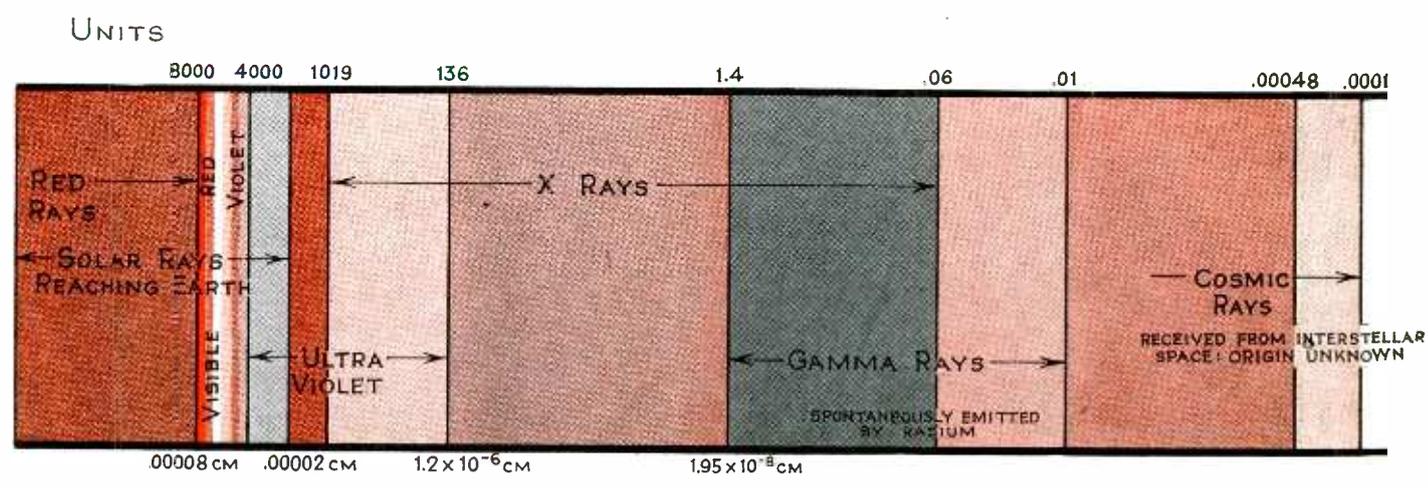
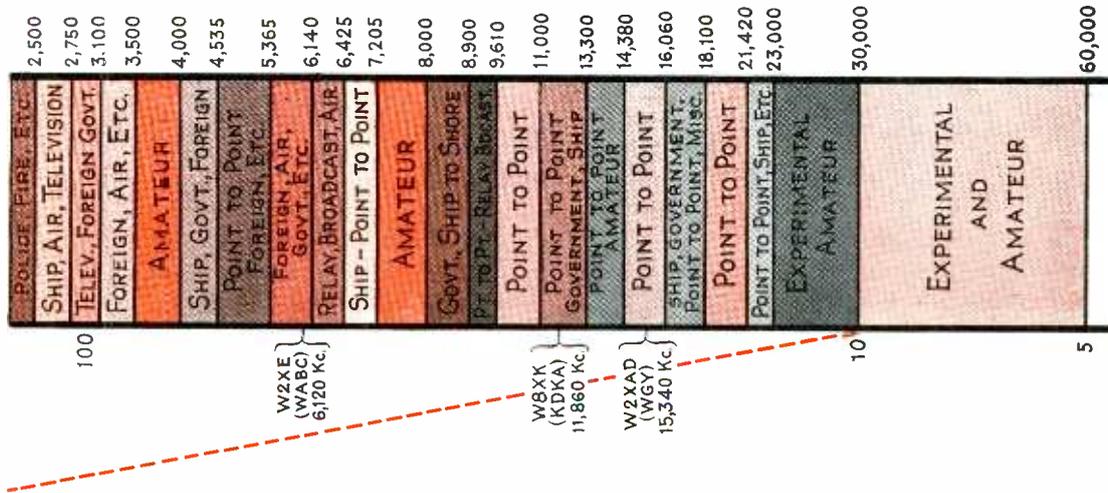
Well, sir, if your eyes are in the same condition as were our feet after completing this circuit of booths you will probably double-check our little prayer of thanksgiving—"Hooray for the Trade Show, but thank gosh it's over!"

EDITOR'S NOTE: This article, written at the Trade Show, includes a brief description of the items featured by each manufacturer. It was obviously impossible to cover every detail and feature of each item so we refer those readers who desire more information than is presented here to the New Merchandise section of this and future issues of *Radio Retailing*.

Radio's PLACE in



the ETHER Spectrum



BEYOND THE RADIO DIAL

WHAT wave-lengths lie on either side of the upper and lower end-stops on the radio dial?

This question has been asked by countless radio men. The chart above answers it, showing that what we call radio is but a part of the whole system of vibrations in the ether.

Light, heat, X-rays and many other natural phenomena are all the result of some kind of ether-wave vibrations.

If we could tune our radio sets up through the longer meter wave-lengths we would swing through groups of radio channels now allocated for S O S calls, aircraft, ship to ship, trans-Atlantic and other long-wave purposes.

Turning past the lower side of the dial, 200 to five meters, one comes upon the con-

siderable group of bands assigned to point to point, ship, television, amateur and experimental usages.

Beyond these radio frequencies are other extremely interesting waves or rays of the same general nature but, because of their higher frequencies of vibration, they take the form of heat and light phenomena. These are the infra-red, the solar rays, ultra-violet, X-rays, gamma rays and finally the cosmic rays. The latter, whose origins are unknown, are received from interstellar space. Cosmic rays are the shortest of any now known to science.

On the facing page, lower illustration, are shown the frequencies of musical instrument and voice vibrations within the limits of the human ear—the audible spectrum.



HOLLAND

In the

TONE

Walter E. Holland—*for the* **DEFENSE**

*Chief Engineer, Philadelphia
Storage Battery Company*

WHEN the smoke of shows and advertising announcements clears away, tone control will probably emerge as this season's outstanding contribution to radio development. Before going into the reasons back of tone control let us define it and find how it works.

Tone control is an accessible device on a radio receiver by means of which the relative proportions of low and high frequencies coming from the speaker can be varied at will so as to change the tone quality. Inside or semi-permanent adjustments affecting tone quality do not come under the heading of tone control.

In its simplest and most practical form, the tone control unit consists of an adjustable condenser, or a variable resistor and fixed condenser combination, connected across some portion of the audio system of the receiver in such a way that more or less of the higher frequencies are by-passed or shunted out as the control is turned. The adjusting unit may be designed to vary the tone continuously throughout the range of tone control or to vary it in a number of fixed steps. The audio system and speaker should be designed to reproduce an excess of high frequencies with the tone control set in the initial position where little or none of the high frequencies are shunted out.

Tone control is technically sound. It would be so even if we had speakers which were one hundred per cent perfect and would reproduce all frequencies in the exact proportions in which they existed in the broadcasting program entering the receiver. There are a number of reasons for this.

Six Reasons for Tone Control

1. In the first place the broadcasting is seldom if ever perfect and often very imperfect. The broadcasting may be deficient in high or in low frequencies due to improper placement of instruments with respect to the microphone

in the studio, or to losses or unbalancing of frequencies in the transmission equipment of the broadcasting station. Also, in chain broadcasting or where the transmitter is located at a distance from the studio, there may be losses of frequencies in the wire lines that carry the program from the studio to the transmitter. Nearly everyone knows that certain stations come in with an abnormally deep tone while others are high-pitched and apparently lacking in low tones. In any case, and whatever the reason for the improper balance of low and high frequencies in certain station programs, tone control on the receiver gives the user the means of compensating deficiencies and making the reproduction more natural and more enjoyable.

2. Room acoustics also affect the tone quality considerably. Selective absorption of some frequencies and reinforcement of others, depending on the design and furnishings of the room and the location of the speaker in it, may throw the low and high frequencies out of balance so that the reproduction sounds unnatural. Here again tone control on the receiver is needed.

3. Acoustic engineers tell us that to have correct, natural reproduction of music and speech it is necessary to bring up the volume at the speaker to the full original volume of the speech or music at the source. If the volume at the loud speaker is made greater or less than the original, the relative volume of the lower to the higher frequencies seems to change even though the speaker actually reproduces low and high frequencies in the same proportion at different volumes. This is due primarily to certain well-known characteristics of the human ear. Obviously, it is impracticable to reproduce all programs at their original volume. For speech it may be necessary to bring up the volume above the original in order that a roomful of people may hear it. On the

(Please turn to page 84)

vs. KRANZ

case of

CONTROL



for the *OPPOSITION*—Hermann E. Kranz,

Vice-President in Charge of Engineering, Grigsby-Grunov Company

THROUGH the development of the rich, virile bass in reproducers the public has been made conscious of the part that tone plays in radio reproduction.

This year it is being offered something called tone control which capitalizes on this acceptance of the bass register. You ask me why Majestic opposes it. While I do not speak for the company, I feel that my concern, who pioneered this movement, is in an honest position to know when to call a halt. Why should the industry be stampeded, to use Shakespeare's words, to—

lay on, Macduff;

And damn'd be him that first cries, "Hold, enough!"

A proper amount of salt in a soup, put there under a chef's direction, may give it a delightful flavor. But it will not improve the taste to dump in a whole salt cellarful. That, in my mind, sums up the position of those people, who, seeing that a corrected bass helped radio reception, now propose to dump into the listener's lap unlimited opportunities for changing sopranos to tenors and piccolos to baritones.

Tone control, as I see it, is merely a proposition of robbing Peter to pay Paul. You simply cut off your high or your low notes, stressing one side or another. This is something different than making audible a bass that *was not heard before*. I do not think the public will be satisfied with it.

Broadcasts Generally Right

Let me state that broadcasting stations, the country over, were not generally sending out low tones at the time the Majestic receiver was introduced. Most of them were cutting off at 60 cycles.

That has been corrected today, with the exception of a handful of small, isolated stations. You get tone modulated as the artist creates it. Imagine a concert by

Walter Damrosch put on the air perfectly, and distorted by some set owner who thinks he is doing right, and then wonders what is the matter.

It is true that persons' ears vary. The per cent is very small, however, compared with the number of people suffering from defective eyesight. A man or woman with defective hearing likes to listen to music with a clear, vigorous bass accompaniment. Miss Ada Mattson of the Chicago League for the Hard of Hearing says that they reserve seats for their members at the symphony concerts in the third and fourth rows on the left side, next the bass section.

But with a corrected radio that gives this bass distinctly, what point is there in altering the whole concert? Would you give a blind man a palette of colors and expect a painted masterpiece from him? Surely Frederick Stock does not ask his tubas to pump away with vim and vigor, while pulling his violins down to a whisper. Such music would be distasteful to the bulk of the audience. Radio music so distorted is distasteful to most listeners.

Few People Deaf

I understand that during the late war, physical examinations of 2,753,922 men revealed that 5.47 men per thousand were hard of hearing, and that deafness ran 1.22 men per thousand. This number is too small to be considered commercially in making a set for popular use.

Only an expert can measure the capacity of the human ear and prescribe for it. The average man cannot tell a sharp from a flat. Few can remember the pitch of a tone. Human hearing varies at different points. I cannot hear well with one ear over the telephone, which operates at a frequency of 200 to 1,200 cycles. Apparently my hearing is insensitive at this point.

(Please turn to page 84)

EYE and



The motion picture camera captures the personality of those who use it. It produces red hot fans



Chicago's Leading Retailer of home motion picture equipment says

Pick your salesman with a "bend" for pictures. You stand or fall through him, and he must combine technical knowledge with enthusiasm for what the camera will do.

The home motion picture is a rich man's sport. The average owner's income is around \$6,000. You who remember the thrill of building a radio can visualize what type of fan a home movie outfit turns out. The retailer becomes guide, philosopher and confidant to the best customer list in town.

Radio dealers have the right business set-up to capture this eye entertainment market—and it offers volume business in summer.

The near future promises home sound films, and rental libraries are coming sidelines.

REMEMBER the days when the president of the bank was building a radio set? How feverishly he clung to the radio dealer and made him guide, confessor and philosopher in his quest to capture music from the empyrean?

That's where the home motion picture camera is today. Strong men are moved to rush into the store and relate the antics of their cherubs on the silver screen. There is a sporting tie-up that begets confidences. If, therefore, a following and friendship with people whose incomes are \$5,000 and above is worth anything to the radio dealer, he is automatically interested in this new eye entertainment specialty, advertised by millions of dollars and solidly founded.

"Yet why don't the drug and department stores do a land office business?" inquires the cautious radio dealer. "I've seen motion cameras in their show cases several years."

Charles Bass, of the Bass Camera Co., Chicago, puts

EAR Entertainment

Bass and Hanley

Sell Both

By Tom F. Blackburn

a finger on the reason. Known as a camera headquarters since 1917, his store sells more of this type of equipment than any three other outlets in Chicago, it is said.

"Get Your Man"

THE motto of the mounted police, "Get your man," is the advice Mr. Bass gives to radio shops who are considering motion picture lines.

"First, get the right type of salesman," he declares. A local camera fan is ideal material. We make it a rule to employ old time photographers who have selling ability, knowing that their capacity to answer all questions is equally as important as sales skill. I believe that lack of success with motion picture outfits has been due mostly to failure to understand the operation of the instruments and to get over their simplicity to the prospect.

"People who buy home motion cameras are intelligent and demand an intelligent presentation. Questions are asked that rival those put by set builders in the days of the home-made radio. Customers want to know the technique of exposure, facts about film, and display an endless curiosity as to how tricks are done. The mechanics of the camera and projector are simple, and there is virtually no service. Film development is included in the sale, and no questions of chemistry arises.

"Possibly the service man is the best bet in the radio store for taking charge of the home camera department, provided no kodak fan is available. He is experienced in technical detail. By reading one or two good books on picture making, and experimenting for a month with a camera and studying the results, he will be in a position to answer ordinary questions and keep ahead of his customer's questions."

The Market

"TODAY'S motion picture camera market, in my opinion, is a city market," continues Mr. Bass. "Let me explain. I hold that less than 10 per cent of the population can afford home motion pictures at present prices. A man has to have an income of \$5,000 a year or better to support such a hobby. I except, of course, the true fan who will go without food to enjoy his pleasure. A specialized business such as ours is possible only in population centers. In towns, the sale of motion cameras is best confined to a department. You will find the people who buy equipment come under these categories: fashionable buyers, 20 per cent; camera fans, 20 per cent; home loving types, 30 per cent; commercial users, 30 per cent.



Charles Bass is one of the "granddaddies" of the home motion picture camera business, though he started in 1917

"The fashionable buyer purchases a motion picture camera because he sees smart people carrying them at the Kentucky Derby. He does not use much film and often fails to call for developed pictures for months. The fan or 'bug' is a law unto himself. I've known men earning only \$35 a week to purchase motion cameras worth \$500. These chaps even collect lenses, just like stamp collectors. However, I doubt if the average radio store will ever see many camera fans. Their tastes are too specialized.

"Families fond of their children as well as relatives who live well-to-do, rounded out lives with many interesting phases, are excellent customers for cameras. Their days are rich in events worth recording and they appreciate perpetuating these memories.

"More and more industrial and commercial firms are

(Please turn to page 86)



"Demonstration in your home? Certainly."



"O. K. Mrs. Binson. We'll have it there in an hour."



"Sure. Will 5 o'clock do?"

She Had 11 DEALERS Demonstrate But No

AMONG the wails berating dumping and excessive trade-in allowances there also comes to our ears a hardly less mild discussion of that third radio Horseman of the Apocalypse—the demonstration joy-rider. The parasitic custom of this fiend is made possible by the uncontrolled "free" home demonstration policy employed by the majority of dealers.

Despite the warnings and the educational measures taken by the trade journals for combating a too promiscuous home demonstration policy it is nevertheless a fact that, for the present at least, home demonstrations are rather firmly established in the sales procedure of the retail trade—and justifiably so; for it cannot be denied that there exists a certain type of potential radio customer that can be reached only by high-pressuring a home demonstration. And to *any* prospect a sales argument of this type is compelling. As we see it, demonstrating in the home is a thoroughly modern, competitive, and aggressive type of salesmanship.

Having to some degree justified the home demonstration, let us now see what measures may be taken to combat the evil that seems to be an inherent part of this sales method—joy-riding. Here is what we are doing in St. Louis:

The Plan

On Jan. 2, 1930, every radio retailer in St. Louis and surrounding suburbs received a bulletin mailed from the office of the St. Louis Radio Trades Association requesting them to mail to the association office a list of all radio re-possession and radio no-sale home demonstrations having occurred as far back as their records showed. It was explained in the bulletin that these names, as received by the office, were to be alphabetically arranged and card filed, each card carrying a brief demonstration history of the party listed. The dealers were further encouraged to telephone the Demonstration Record Department and request information on parties to whom they contemplated demonstrating a receiver.

The response to this plan was co-operative and full-hearted. The lists started coming in almost immediately. Every dealer was called by telephone and either urged to use the service or to mail his list of demonstrations promptly if it had not been received.

Four months after the inauguration of this service there was on file well over 2,500 names, the great majority of whom were persons having had no-sale demonstrations.

In the latter half of January, the first month of the service, the office handled information requests on 53 names, or better than four names a day, and this before the solicitation or filing of names was complete. Since then the quota has steadily risen, due partly to stimulated trade conditions but mostly to the fact that more dealers are religiously employing the service. At this writing an average of 20 names each office day is handled by the Record Department.

Lessons Learned

Some peculiarities of the confirmed joy-rider have been gleaned from dealer's reports. For instance: Telephone calls for home demonstrations are to be suspected. The majority of demonstrations requested by telephone do not result in a sale. If the party telephoning is not interested enough to come to the store and look over the sets on display, he should be investigated thoroughly and demonstrated to discreetly, if at all.

Shortly after the Demonstration Record Service had reached an active stage it became evident that some joy-riders, having been recorded two or three times and received refusals to their request, resorted to trickery and gave assumed names on their next dealer call. Apparently a number were successful in this attempt for recently a card index file of demonstrations by street and house number has been compiled from the alphabetical name file. Over 150 cases of two or more sets having been demonstrated at the same address under various

(Please turn to page 86)



"Gladly. What's your address?"



"This evening? Righto."



"I'll send one right over."

SALE!

By Henry W. Clark, Jr.
St. Louis Radio Trades Ass'n.



DEMONSTRATION RECORD

NAME	ADDRESS
Mrs. G. Binson	1713 Whittier Ave.
Dec. 31, 1929	Arion Radio Company
Jan. 8, 1930	Beacon Radio Company
Jan. 22	Morton Electric Company
Jan. 31	Gaertner Electric Company
Feb. 1	Roger Putnam Radio Company
Feb. 4	Brandt Electric Company
Feb. 18	Barthel Duesenberg Piano Co.
Mar. 20	Manufacturers Electric App. Co.
Mar. 28	Show Boat Radio Stores
Apr. 16	J. C. Gordon Company
Apr. 26	St. Louis Radio Engineering

REMARKS: Also using assumed names: Allen, Murphey, Maurathy, Whalem

For Mrs. Binson

(at times "Allen", "Murphey", "Maurathy" or "Whalem"!) was a chronic joy-rider until the St. Louis Radio Trades Association found her out

Installing

AUTO-RADIO

THE JOB of installing receivers in automobiles is preferably one for a serviceman who is essentially "long" on mechanical horse-sense, with a good general knowledge of radio and possibly ignition systems. For while there are certain broad rules for good motorcar reception, sets are usually installed in many different cars and models. Most of these differ with respect to dash and instrument panel dimensions, which govern the placing of the radio chassis; top construction, which influences antenna design; and in ignition systems, which require individual consideration for the suppression of motor interference.

A serviceman who has made one or two installations can complete an average job in approximately 7 hours working time.

Screen Antennas

A few American cars come from the factory equipped with built-in antennas, the lead-in being coiled under the instrument panel near the right-front body post. The majority of cars which do not come so equipped are sedans having semi-soft tops supported by wooden cross-bows and slats. In these models, a copper-screen tacked to the underside of the bows under the headlining, which is temporarily removed, and

Work takes serviceman about 7 hours. Methods of "erecting" antenna, securing chassis, locating speaker. Ignition interference suppression.

carefully spaced at least three inches from all metal body parts, including the dome light, will provide satisfactory pickup. As pointed out by "Transitone's" engineers the "effective" height of such an antenna is its distance from the nearest metal body part rather than its actual height above the ground so the screen should never be jammed close to the body in an attempt to secure greater area.

The dome light wiring, however insulated, should be tacked above the roof-bows, as far as possible from the screen. A sketch on these pages illustrates the manner in which the screen is cut to provide proper clearance.

Metal Top Cars

A few of the older cars have all-metal, instead of semi-soft tops. These cars require the use of a capacity plate antenna. Several new models secure top support by means of a layer of iron mesh screening. If a top antenna is to be used this must be entirely cut out, close to the body, upholsterers cloth webbing being substituted

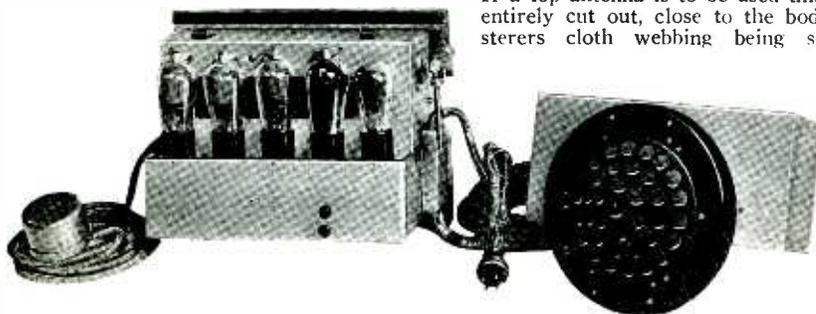
before the usual copper screen antenna is tacked in place. If a sedan has metal bows it is usually preferable to form an antenna beneath the bows by zig-zagging 65 to 100 feet of No. 18 rubber covered, stranded copper wire between loops of cord projecting out from the top supports as shown in the drawing on the third page of this article and providing the required three-inch spacing between antenna and metal portions of the body.

Screening may also be used in cars having metal bows if the serviceman is sufficiently ingenious to find a way of fastening small squares of it between bows, preserving the three-inch spacing, later bonding these squares together with soldered leads. Town-car and other two-compartment models may be handled in this manner if desired. U. S. Radio suggests as an alternative for standard sedans a grid of tape antenna on the *outside* of the top, held in place by a covering of adhesive and top dressing.

Open Car Models

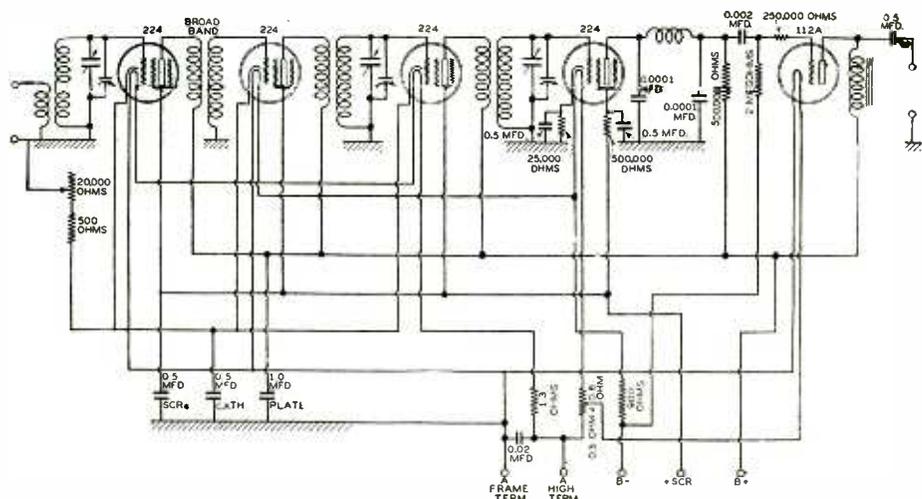
Open cars, unless used with capacitor plate antennas, require the use of a "grid" of flexible wire, as shown on page 68, successive turns being woven in a drill cloth "filler" at least three inches apart and concealed between top and the headlining of some sort. The antenna should be well spaced from the windshield supports, which are grounded.

Numerous other methods of installing antennas in both open and closed cars will suggest themselves. It should be kept in



Typical Set and Circuit

This auto-radio receiver (Bosch) uses a capacitor plate antenna coupled to the set via a shielded two-wire r.f. line. A step-down transformer (encased in the circular can shown at the left of the chassis) is fastened directly to the plate beneath the car and feeds the r.f. line which terminates within the set at a step-up transformer.



Some 1930 Sedans, With Dash and Instrument Panel Dimensions

Car	Auburn	Butek	Chevrolet	Cord	Essex	Ford	Graham	Hudson	Hupmobile	Lincoln	Marquette	Olsmobile	Pierce-Arrow	Reo	Studebaker	Viking
Models (sedans only)**	6-85, 8-95, 125	47, 57, 60	1930	L-29	1930	A	822 Std., Spec. 8	Great 8	1930	1930	M-37	F-30	132-139-144	15, 20, 25	Pres. 8 Comm. 8 Diet. 8	V-30
Built-in Antenna?	No	No	No	No	No	No	No	No	No	No	No	No	Yes, screen	No	Yes, screen	No
Roof-bow Material	Wood	Wood	Wood	Wood	Wood	Fordor-wood Tudor-wood, steel	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood
Metal Screen Support for Soft Top?	No	No	No	No	No	Yes	No	No	Yes	Yes	No	No	Yes, antenna	Yes	Yes, antenna	No
Inches Between Dash and Instrument Panel	10	Mod. 47-12½ Mod. 57-12½ Mod. 60-13	14	*None, duplicate inst.	12	*None, gas tank	15	12	18	12	13½	12½	12½	12½	10	14½
Inches Between Bottom of Instrument Panel and Underside of Cowl	6	Mod. 47-9½ Mod. 57-9½ Mod. 60-9½	8		5		7½	5		7	10½	*None, panel braces	6½	8	5 slope to 4	*None, panel braces
Inches on Instrument Panel Between Instruments and Right End of Panel	14	Mod. 47-12 Mod. 57-12½ Mod. 60-12½	11½		7	12½	13	7		13	15½	12½	Mod. 132-14½ Mod. 139-16½ Mod. 144-16½	13	9	15
Dashboard Material	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Meta.	Metal	Metal	Metal	Metal	Metal	Metal, compo. liner	Metal
Battery Ground to Chassis	Pos.	Neg.	Neg.	Pos.	Neg.	Pos.	Pos.	Neg.	Pos.	Neg.	Neg.	Neg.	Pos.	Neg.	Pos.	Neg.
Fused Battery Lead	Neg.	Neither	Pos.	Neg.	Neither	Neither		Neither		Pos. circuit-breaker	Neither	Neither	Optional	Pos.	Neg. cutout relay	Neither
Ignition Wires Encased in Metallic Jackets?	No	All	No	No	Partially	Most primary wires	No	Partially	All	Partially	All	No	All	No	No	No
Shielded Spark-Plugs?	No	All	No	No	No	No	No	No	No	No	All	No	No	No	No	No
Generator Brushes	3	†3	3	3	3	3	3	3	3	3	†3	3	3, one movable	†3	3	3

*Sets may be installed on dash under engine hood, under seat, on running board or in trunk compartment and tuned by means of a flexible cable from small control panel clamped to instrument board.
 **Open models usually have similar dash and instrument panel dimensions. Capacity plate antennas or false top and flexible wire systems are customarily used in such cars.
 †Shunt condensers not necessary at generator in these cars. †A 1 mfd. condenser across coil on ignition switch side may be necessary.

mind however that the antenna should at no point approach the metal body closer than three inches. Electrical insulation alone will not do. It is well to mention at this point that sets designed for use with top antennas do not ordinarily work well with capacity plate collectors and vice versa. Antenna circuit adjustments, possibly changes, are ordinary necessary.

Lead-in Systems

In sedans the lead-in is best carried to the set through the hollow right-front post and should not be shielded unless specifically called for by the manufacturer. Ordinarily, it is desirable to secure maximum spacing between lead and post by using a heavily insulated wire or separate insulated bushing. In town cars and open cars the lead may be dropped to the floor back of the driver's seat and then carried forward either in a groove cut in the boards or in a non-metallic protective cable covering beneath the body. It should never be carried through the engine compartment and should under no circumstances be "looped" or "bunched" with other wires.

If the lead is carried closer than three inches to the chassis, body or grounded accessories for any distance a high-capacity antenna system may result, making it difficult to adjust the antenna circuit of certain sets to track with succeeding r.f. stages.

Antenna Tests

It is advisable to test for undesired grounds between the lead-in terminal and the chassis, at least once before the head-

lining is restored and again when the antenna work is completely finished, using a sensitive low-range voltmeter in series with the proper drycell. In certain rare instances partial deflection of the meter needle is caused by the presence of "green" or wet roof bows, or certain painted bows to which the antenna shorts. Such a condition necessitates the use of a "grid" type antenna

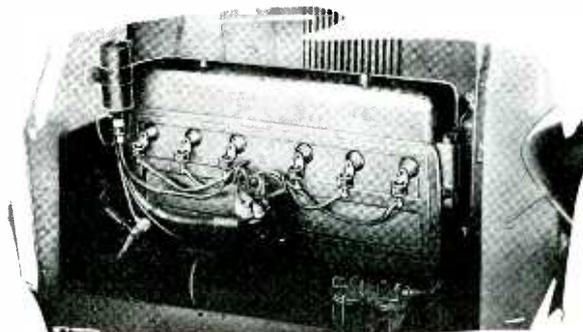
The performance of a roof-type antenna may be checked by comparing volume with that secured when a twenty-foot rubber covered lead lying flat on the ground is substituted. This test should be made in the open.

Ignition Noise

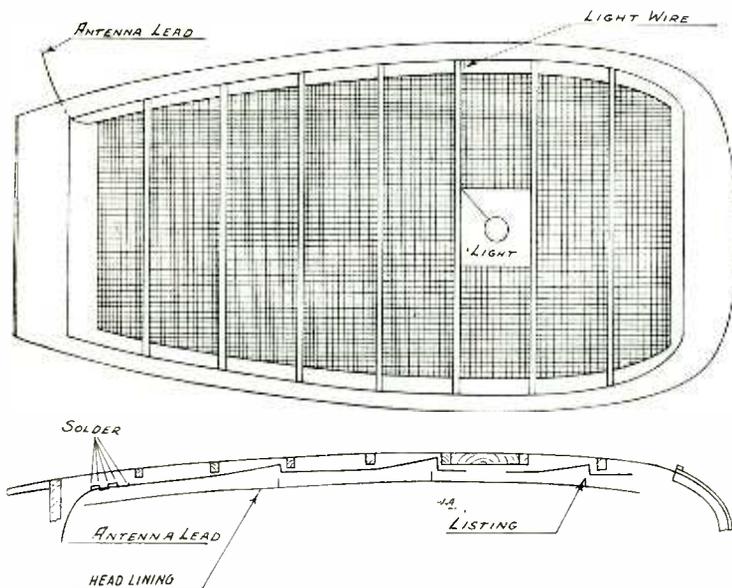
Where the installation of 25,000 ohm suppressors at the spark-plugs and dis-

tributor, and the use of condenser-filter units at the ignition coil and generator do not reduce ignition interference below the objectionable level it is often found that high-frequency currents are being carried to the radio receiver by innocent-looking metal parts running between the motor compartment and the driving compartment, such as choke-rods, oil-tubing and metallic cable coverings, which sometimes get into the high frequency induction fields beneath the hood. These may be located by running the engine with the hood closed, tuning the set to a low wavelength and momentarily grounding suspected metal parts to the chassis with a screwdriver, later soldering short permanent bonding leads in place if the offending "gadget" is located.

Low-tension electrical leads such as those to the thermostat, horn, dome light,



Seven 25,000 resistors, six at the plugs and a seventh in the center distributor lead, effectively suppressed ignition noise in this Chevrolet. When disturbance persists it is sometimes found that innocent looking choke-rods, oil-gauge tubing, metal cable coverings are acting as conductors for the offending high-frequency currents. Run the motor, hood closed, and short suspected parts to chassis with a screwdriver. (Delco)



Good Antenna for Most Sedans

In the average soft-top sedan with wooden roof-bows a copper screen spaced at least 3 inches from all metal parts including the dome-light provides satisfactory pick-up. It is advisable, after installing such a screen, to check for a short to the chassis with a series voltmeter and dry-cell and to avoid the use of corrosive soldering pastes. Rosin core solder is recommended for all auto-radio work.

electric windshield wiper and ignition switch sometimes offend in a similar manner. These may be located by momentarily grounding them to chassis through a high-capacity condenser. Shorting these leads without such a condenser or filter unit, which may be furnished with the set, naturally would cause a storage battery short. Bunching of the horn and other low-tension leads to the storage battery in a common manifold with the spark-plug or ignition coil wires, as employed in several new cars, is also a common source of ignition noise as the ordinarily inoffensive low-tension leads pick up ignition noises by induction. Where this condition produces objectionable interference the low-tension leads should be removed from the common manifold and taped to the radiator tie-rods or some other rigid support, at some distance

from the high-tension current carriers.

Suppressor Units

A few cars still use wooden dashboards. It will be necessary to shield these, preferably on the driver's side with galvanized iron, bonding the shield to the chassis in several places. Several of the newer cars also mount their ignition coils on the driver's side of the dash in which cases it will be necessary to shield the coil lead through to the engine side of the dash with copper braid, grounding this braid both at the coil and on the engine side.

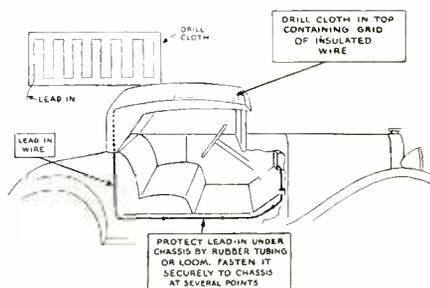
Suppressor units should be mounted as close to the plugs as possible and the one furnished for the high-tension distributor should be inserted close to its cap. Dirty distributor points often produce ignition

noises which are difficult to reduce below the objectionable level. It is sometimes necessary, in violent cases, to shield and ground all leads running between the instrument and the motor compartment, back of the panel. Care should be taken in attaching filter condenser units that these are not connected to the low-tension or battery side of the ignition system in such a way as to alter the spark, affecting motor operation. If suppressor and filter units are properly installed we have it on the authority of 16 motorcar makers that engine performance is not impaired and some say it is improved.

Chassis, Speaker Mounting

Twenty-three companies now make auto-radio and chassis, with methods of mounting, differ so widely that it is impossible to make specific suggestions which will be of general interest. Servicemen may well keep the following facts in mind, however: Batteries should not be mounted near hot exhaust pipes. Cables of all kinds should be kept out of the motor compartment. Care should be taken that sets are not used with 12 volt storage batteries unless the proper filament resistors are included in the circuit. Cables running beneath the car should be securely fastened and protected against abrasion by objects in the road. Cables leading from battery compartments to set, beneath the car should be carefully waterproofed and joints made watertight. The car generator should be advanced if the radio is to be used a great

Open Car Installation

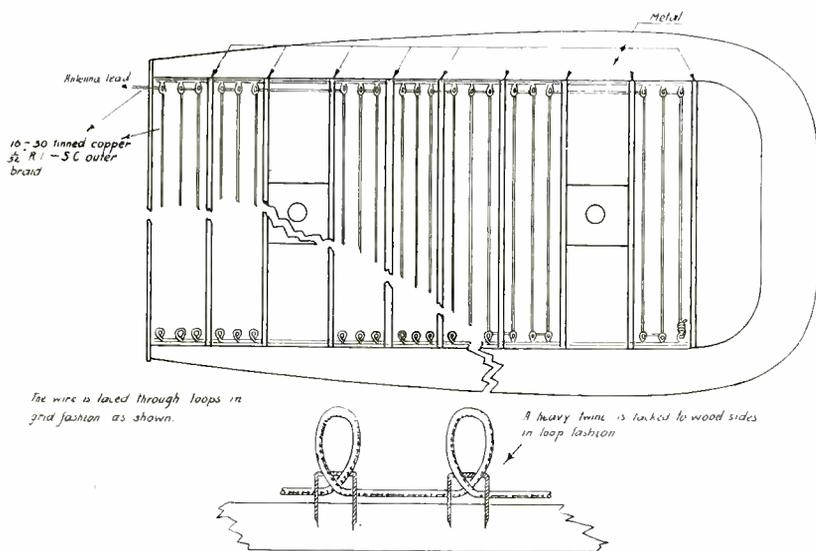


Installation of sets which are not designed to use capacitor plate antennas in open cars necessitates the design of a "false top" type of antenna and the exercise of considerable ingenuity in concealing and fastening the "grid" arrangement illustrated (Crosley) in the top. The wire used must be stranded and sufficiently flexible to fold with the top without ill effect.

deal at night. The ignition chart should be carefully examined and grounded battery lead determined before set is installed, manufacturer's instruction being carefully followed on this point to insure grounding of the proper filament lead.

Permanency Essential

Rosin core solder, which does not produce corrosion when exposed to the weather should invariably be used throughout such jobs and all connections not soldered should be equipped with proper lock washers. It is absolutely essential in this new field that all installations be made in a thorough, workmanlike manner so that sets will not only perform when first turned over to the purchaser but will continue to deliver satisfactory reception for a reasonable period thereafter. "Botch" installations, in view of the comparatively rough treatment which such sets are certain to receive on the road, will unquestionably prove to be false economy.



For Cars With Steel Roof-Bows

A few sedans use metal roof-bows and in these models the difficulty of installing roof antennas is considerably amplified. One effective method employs loops of cord stapled to wooden sides and a "threaded" wire system. (Transitone) It is in all instances advisable to keep antenna wiring and leads at least three inches from metal chassis parts.

One or Many Lines?

(Continued from page 53)

"In my opinion, one good set is all that is necessary, if the proper co-operation can be secured from jobber and manufacturer," he says. "However, lack of such co-operation from these two groups almost invariably makes it necessary for the dealer to carry two or more sets of different makes.

"To be more specific, jobbers in this section have been the dealer's biggest competitor, as they operate a retail store in many instances along with their jobbing business. Several operate a chain of retail stores. It can be readily understood, therefore, that it is necessary under the existing circumstances for the dealer to compete against his own jobber. Where we call on a prospect, and that prospect has already been approached by a jobber, we have no chance at all of making a sale. We have at all times two sets supplied by one jobber, with which to compete against our third set which is demonstrated direct by another jobber whom we also represent but who in this instance competes with us. Only in this way have we been able to maintain our quota.

"Ninety-nine out of a hundred salesmen follow the line of least resistance in selling and one set would be ideal if we could select the one we want. How profitable it would be for all of us if we had only one line to push and could concentrate our entire effort and advertising on it. We naturally realize that jobbers and manufacturers have their own difficult merchandising problems. But we state facts which actually exist here in New Orleans to the detriment, we think, of radio."

WH. Decker of the Decker Music Company, St. Louis, believes that a dealer must handle several good lines for best results. "Sell one line only? It cannot be done very well until there are but few standard brands, especially where half a dozen firms handle radio within two blocks. I prefer to convince people by comparison. Naturally, salesmen have pets, one this set and another that, but in the last analysis they sell whatever a customer wants."

AND THESE FAVOR ONE LINE

NOW for a complete right about face to the ranks of the one-set sellers. John H. Boos, Jr., vice-president of Standard Home Appliances, St. Louis, has: ". . . personally handled, as most dealers have in the past, practically every line imaginable, from three to four standard lines at all times until September, 1929, when this company was organized and my partner and I decided upon a definite policy of handling one line exclusively. Since then we have handled nothing else and have found our business to be good right through. In spite of the fact that we hear numerous complaints about business in the month of April our sales were ten sets ahead of November and only 16 behind December, therefore, we believe our policy best. The profit to a properly protected dealer should be better.

LEO H. Ernst, Ernst Electric Shop, Alton, Ill., also favors the one-line plan. He writes: "We feel that it is more profitable for a radio dealer to handle one line exclusively if the manufacturer will reciprocate. We started our radio department five years ago with three lines but found that both our salesmen and customers had a hard time in determining which set they should buy. After discontinuing two lines and devoting our time to the one, the salesmen were better satisfied and we expect to continue along these lines. By handling one line we are able to display all models with a minimum stock investment and have found that both manufacturer and distributor take more interest in us."

B. T. STILL, of the Still Furniture Company, Moultrie, Ga., has tried both methods and favors one line. "For the past several years we have been selling radios. At first we had more than one brand in stock

as we thought this would be the best idea—a high-priced and low-priced set. In the course of four years we have tried out at least 15 different lines. But today we handle only one. We had a very annoying time when handling several sets, as prospects usually wished demonstrations on at least two before they would make up their minds. In many instances the sales talk on one machine killed the others. In addition, our salesmen are opposed to selling more than one set. They, too, think that more sales and satisfied customers result if we back one line."

"Ain't It the Truth?"

Many dealers who favor the one-set plan but cannot secure "sufficient territorial protection" evidently desire exclusive franchise for an area approximating that of the State of Texas.

In all fairness, a distributor must appoint enough dealers in each territory to produce volume which will satisfy the manufacturer, despite the fact that any one dealer could no doubt increase his own sales if given the "exclusive."

The whole system hinges on sane manufacturing quotas. If these are properly gauged it becomes unnecessary for distributors to over-franchise.

THE SUMMING UP

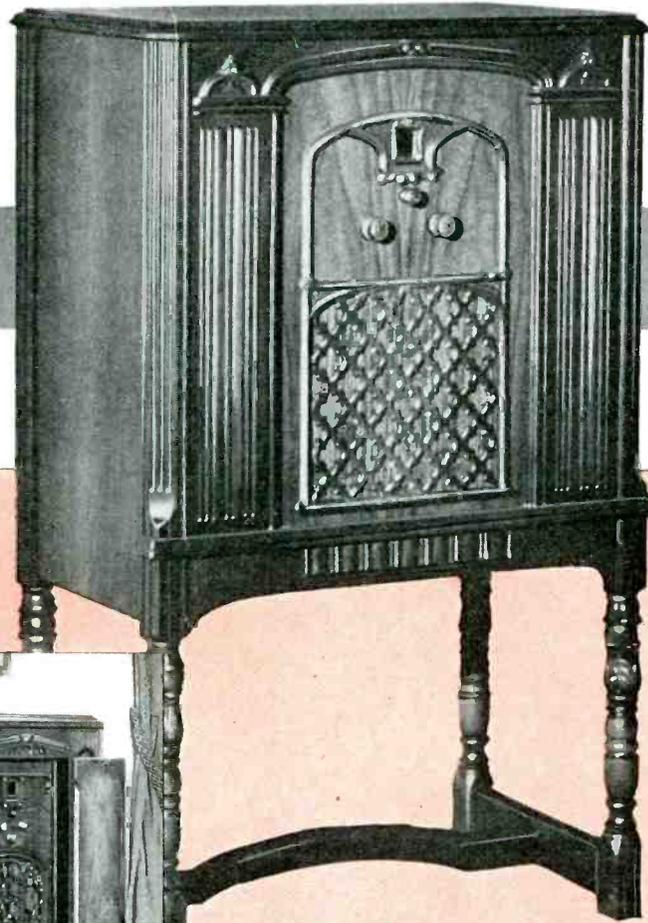
IN GENERAL the advantages of the one-set line idea might be summed up as follows: (1) Better trade discount due to quantity handled. (2) Greater co-operation from jobber and manufacturer with respect to territorial protection, advertising allowances and shipments, due to importance of account. (3) Comparatively low stock investment if line selected comprises few models. (4) Greater stimulus to specialty salesmen if line has features about which they can enthuse, due to concentration of interest and effort. (5) Lessened sales resistance in some customer contacts if line is in good repute locally and is widely advertised by manufacturer. (6) Ease of servicing and handling.

The possible disadvantages of the plan are: (1) Dependency upon one jobber and upon one manufacturer. (2) Difficulty of securing territorial protection sufficiently binding on jobber and manufacturer to insure continued benefit to dealer who pioneers. (3) Difficulty of selling customers who are already half-sold on other lines. (4) Necessity of selling and advertising intensively in order to create demand for one set above all competitors. (6) Possible "pressuring" for more volume by suppliers.

The advantages of the many-set sales policy appear to be as follows: (1) Comparative independence from specific jobbers and manufacturers. (2) Practicability of selling line offering least sales resistance in each case. (3) Generally greater store-traffic interest due to variegated stock. (4) Possibility of appealing to widely dif-

(Please turn to page 84)

now you can sell
RCA RADIOLA



RADIOLA MODEL 80—The new 9 tuned circuit Radiola Super-Heterodyne combined with Screen-Grid, in a 9 tube chassis. Magnified and illuminated tuning dial, accurately calibrated in kilocycles, volume control, local-distance switch, push-pull power amplifier, improved electro-dynamic speaker, and completely hum-free filter. Radiotron complement four UY-224, two UY-227, two UX-245, and one UX-280. Cabinet constructed of handsome, five ply walnut veneer, early English design.

RADIOLA MODEL 82—The new Radiola Super-Heterodyne combining Screen-Grid as in Model 80 with the addition of Tone Color Control. Cabinet of early English design. Doors hinged with an inconspicuous pivot to lie flat against the end panel. Cabinet acoustically matched to the improved electro-dynamic speaker.

**The new
 RADIOLA
 SUPER-HETERODYNE
 MODELS**

*Selling Features that
 Will Meet the Demands
 of Every Buyer*

- 1** The most highly perfected Super-Heterodyne circuit.
- 2** Three times as selective as previous model—four times as sensitive.
- 3** Screen-Grid Radiotrons.
- 4** Latest type Electro-Dynamic Speaker.
- 5** Nine tuned circuits.
- 6** Push-Pull Amplification.
- 7** Improved "Local-Distance" Switch.
- 8** Tone Color Control.
- 9** Perfected Volume Control.
- 10** Magnified Illuminated Dial.
- 11** Accurate Kilocycle Dial Marking.
- 12** No A.C. Hum.
- 13** Outstandingly Beautiful Cabinets.
- 14** Startling New Low Prices.

RCA Radiola

SUPER-HETERODYNE

to every prospect

Now, with the Super-Heterodyne principle receiving the acclaim of the entire radio world, its original sponsors present a line that sensationally out-performs any previous models; that incorporates every tested feature known to radio science, and is sensationally low in price.

These new RCA Radiola Super-Heterodyne models represent the climax of seven years' effort on the part of the greatest group of radio engineers ever mobilized to produce the finest in radio at a price within the reach of all.

RCA Radiola Now Controls its Own Engineering and Manufacturing Facilities

The new RCA Radiola line is the first to be produced by the new Radiola manufacturing organization at Camden, N. J. From now on, Radiolas will be built completely in one plant, under one responsibility, by the most efficient and economic system of straight line production in the industry.

Stabilized Business through Controlled Production

The production of Radiolas in the future will be controlled by weekly recommendations of the Sales Department, thus "gearing" production to public demand, preventing overproduction, yet assuring sufficient merchandise at all times.

Advertising and Sales Promotion

RCA Radiola will launch the most aggressive and sensational national and sales promotion campaigns in the history of Radiola.

Price Protection to Dealer

The RCA Radiola dealer will be definitely protected against price decline. The complete policy of dealer price protection will be announced by Radiola distributors, who will also act for the RCA Victor Company, Inc., in the execution of the guarantee.

Discounts and Prices

Prices and discounts are now being announced by Radiola distributors. These guarantee the future security of the Radiola dealer.

The Radiola Organization Aims, under this Policy—

To serve the ultimate consumer first, last and always, and to give the dealer a consistent, profitable Radiola business.

This Policy Is Safe.

This Policy Is Tried?

This Policy Is Profitable.



RADIOLA MODEL 86—A combination instrument. The new Radiola Super-Heterodyne combining Screen-Grid, with addition of Tone Color Control, Radiola electric phonograph, including constant speed induction disc motor volume control, automatic stop and the new "Inertia Pick-Up." Beautiful cabinet of early English design in walnut and veneers.

*Display the famous
RCA trade-mark*



**RADIOLA DIVISION
RCA VICTOR CO., INC.**

◆ Editorial Comment on

For an Independent, Endowed "Broadcasting Foundation"

A TREMENDOUS and impressive project for the stabilization of radio broadcasting as a great American institution of the future, has been launched at New York City. Mr. John D. Rockefeller, Jr., will donate \$250,000,000 to erect a great group of buildings occupying three whole city blocks, and containing a battery of theaters and studios from which radio and television programs can be broadcast to the nation.

The vision of Owen D. Young, David Sarnoff and M. H. Aylesworth is evident in this astounding and magnificent proposal. Under the auspices of these three men, who have contributed so much to the radio industry, this huge new radio entertainment plant is to be set up and started into operation. With their practical experience and with an endowment of a quarter of a billion dollars, a truly remarkable institution *must* result,—fully adequate even to the task of entertaining and educating a whole continent.

BUT when this magnificent studio group is once in operation and going, we cannot but hope that the RCA interests which have brought it to fruition, *will then step aside*, turning over the direction of this vast endowment to a representative and self-perpetuating board of trustees, to administer solely in the public interest, without any radio-industry influence whatever.

Surely such a disposition of the vexing problems of program production and control of two of the nation's leading chains would be a relief to the manufacturing

group which has so capably shouldered the task in the past,—as well as to those critics who view with suspicion the control of the mechanism of the air by any single set of interests.

Certainly the manufacturers of electrical and radio apparatus who suddenly found themselves in possession of important channels controlling the entertainment and political opinion of the nation, must welcome an opportunity to escape from this responsibility—which they assumed primarily that broadcasting quality might be established at a high level.

WITH the new Rockefeller Broadcasting Foundation in operation, amply financed and competently staffed, there will then be no reason why the RCA interests should not withdraw entirely, leaving program production to the endowed institution, which under a suitable board of representative citizens, can be conceived to operate only in the public interest.

The radio-electric group could then proceed with its manufacturing and communication businesses, and would be forever free of the recurring charge in Washington and elsewhere, that it is attempting to shape political or public opinion.

It may be that back of the present broad-visioned plans of the Young-Rockefeller negotiations some such beneficent abdication as this is intended. Certainly if such a withdrawal is proposed, it would be the most magnificent possible outcome of an already magnificent plan.

◆ Those Raucous Loudspeakers

NEW YORK papers report that a fine has been imposed on one T. Hill, proprietor of a radio store, upon complaint by an undertaker, a minister and twelve other citizens in less significant walks of life who had endured shrill noises emanating from the Hill loudspeaker for three long years. Thus the first test of the Eastern metropolis' new anti-noise ordinance, which has also been adopted by San Diego on the West Coast and other cities, swelled the municipal exchequer by some \$50 and depleted a brother dealer's pin money by the same amount.

Naturally we sympathize with our trade associate, who has become sadder and wiser, rather than with the clergy or its associate industry, but we must say in all fairness that such complaints are often justified. If all the radio dealers who crowd their demonstration speakers to the last gasp were laid end to end it would probably be a good thing for the radio business. For even if Justice wore ear-muffs in place of her customary blindfold this lady could easily distinguish between the ear-splitting racket produced by many such speakers and real, sales-making radio reception.

Better dealers are operating sets just inside their open doors at a pleasing volume. They are making a good impression on a few passersby rather than a bad impression on the entire county. And they do not have to placate John Law.

◆ The Psychology of the Demonstration Booth

APART from the convenience and privacy afforded by a good-sized demonstration booth adjacent to the main sales floor is the economic advantage it gives for forestalling requests for home demonstrations.

"There is a psychological reaction on the customer's part," declares Massir Odeh, secretary of the Sun Radio, Inc., Akron, Ohio, "which makes it harder for him to demand the favor of a home trial after he has received a satisfactory hearing in the dealer's store."

Odeh answers the doubt as to the possibility of the set's unsatisfactory home operation by his three-day exchange plan. This provides that the purchaser may return the set for full credit, to apply on the purchase of any other set in the store, within a three day period.

Eighty-five per cent of his set sales are consummated

Recent Developments

in the store. He estimates that the financial saving from this policy has paid for his demonstration room many times over.

They Agree With Us

	Primary Radio Dealers	Music & Phonograph Dealers	Electrical Dealers	Automotive Dealers	Dept. & Furniture Stores	All Groups Combined
 Yes	77%	65%	69%	75%	53%	70%
 No	22%	32%	25%	23%	39%	27%
 Uncertain	1%	3%	6%	2%	8%	3%

THE last issue of *Radio Retailing* carried a feature article titled, "It's Your Market, Mr. Radio Dealer." In this article we pointed out why the radio dealer also is the logical one to sell the automobilist his radio equipment.

That the average reader of this magazine agrees with us is proven in conclusive fashion by the results of an extensive survey along these lines, recently concluded.

"Would you sell properly designed radio equipment for the automobile?" we asked 6,000 typical radio merchants.

The above tabulation of their replies to this questionnaire speaks for itself.

Reading the Business Barometer

THE volume of American business touched new lows during June. The middle week of the month witnessed general trade on a plane about 11.3 per cent below the estimated normal, compared with 9.1 per cent above normal during the same week of July last year.

Two favorable factors appear on the business horizon—the inherent purchasing power of the American people and the low and declining money rates. Not only does the American consuming public grow at the rate of about 1,400,000 per year, but the standards of living of the people have advanced definitely and considerably in the past five years. Past history would indicate that this purchasing power of the country cannot be held in abeyance indefinitely. All the history of past periods of slow business indicates that the end of the present recession is approaching.

The view is general, however, that despite this potential purchasing power and plentiful money at low rates of interest, the current situation—locally and world-wide—is so marked by elements of weakness, that sustained recovery will not be prevalent before autumn, and may possibly be delayed until the opening of 1931.

"Worry Antidotes" Are Best Sellers

WHEN a man sits down to worry these days, it isn't long before he claps his hat on his head and is off to a movie to help forget. Despite unemployment and the fact that the motion picture is a luxury, this type of entertainment was listed recently by the Standard Statistics Company as being in a most promising business position at the present time.

There is no reason why radio, which fills the gaps in lives made vacant by loss of jobs or illness, should not be a close second to motion pictures from the viewpoint of business. Averaged by cost per member of the family and per hour of entertainment supplied, radio offers the cheapest solace the world has ever seen.

This situation prompts the question: Isn't radio a natural hardtime seller? The answer is, Yes!

Let's follow up this answer, and this special opportunity, by a hard selling effort from now on.

Installment Sales Show Biggest Loss

LOSSES on installment sales, through bad debts, are proportionately twice as large as on ordinary charge account transactions, although the latter method is used in 32.2 per cent of the country's retail business, while but 9.2 per cent is handled on the installment plan. The remainder is on a cash basis. Installment losses amount to 1.2 per cent of the total installment business, and charge account losses are 0.6 per cent.

So says the first of three bulletins giving the results of a nation-wide survey undertaken by the Department of Commerce with the co-operation of 1,000 credit bureaus and 25,000 merchants. The survey is based on an analysis of sales amounting to almost \$5,000,000,000.

From the above, dealers will note that if their time paper losses exceed 1.2 per cent they are running above the national average.



Courtesy of Judge

Bringing the Show



Sparton 610

New Sparton Line

TEN new models were recently shown to the trade by the Sparks - Withington Co., Jackson, Mich. They include, in addition to the regular receivers, a phonograph combination with automatic record-changing device and an automobile radio set. Information on the latter is not available at this time, but will be covered in a future issue.

Models 591 and 593 are made for the popular price market but without loss of quality. They retail at \$115.50 each.

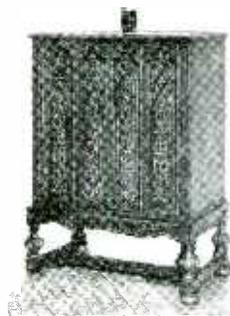
Model 610 is a 10-tube set, in a semi-highboy cabinet, listing at \$136.75.

Model 600 incorporates the same chassis in an "apartment" cabinet, so called because of its compact design. \$136.75.

Model 620 is also a 10-tube set with a half-door cabinet, listing at \$151.75.

Model 740 is an 11-tube set in an attractive cabinet, retailing at \$182.25.

Model 750 has the same



Sparton Ensemble

chassis, but lists at \$225.25, the difference being in the cabinet work.

Model 870 is a de luxe set, conservative in line but of unusual appeal, \$323.75.

The "Ensemble," a radio-phonograph combination, made by the Cardon-Phonocraft Corp. and distributed through Sparton distributors, has an automatic record-changing device accommodating up to 25 records in the magazine. Practically the entire front of the cabinet consists of doors that open in accordion fashion. The price is \$520.75.

Model 234, a new addition to

the Cardon-Phonocraft line, is a single record combination instrument listing at \$234.—*Radio Retailing*, July, 1930.

Combination Phonograph and Speaker

A COMBINATION phonograph and power radio speaker with modulator control, in an Old English type cabinet, is the latest addition to the line of speakers made by Wright De Coster, Inc., St. Paul, Minn. It embodies the capacity of the company's new speaker supplemented by an amplifier and magnetic pick-up.

The carved grille has a background of metal silver cloth, through which a number of colored electric lights cast their glow. A compartment for records and a jack at the side for radio connections are furnished. The dimensions are 34 in. high by 24 in. wide by 16½ in. deep. The tubes required for the amplifier are two 210's, one 281 and a 227. The price is \$425.—*Radio Retailing*, July, 1930.



S-M Queen Anne 7

Silver-Marshall Sets

THE line of Silver-Marshall, Inc., 6401 W. 65th St., Chicago, Ill., includes two entirely new chassis and four cabinets.

Model 34 chassis requires three 224's, one 227, two 245's and a 280. There are four tuned circuits, two of which precede the input tube (dual pre-selection).

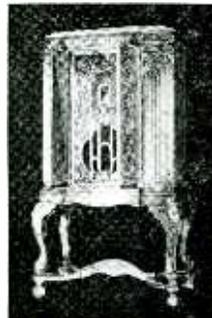
Model 35 chassis has nine tubes, namely, four 224's, two 227's, two 245's and one 280, and has two tuned circuits preceding and two following the input tube. This chassis has automatic volume control.

The "Princess" cabinet with chassis No. 34 is a lowboy with a centerpiece of matched Australian laurel. The price is \$135.

"Queen Anne Seven," with the 34 chassis, has a four-pieced center-matched butt walnut top, and swinging doors, \$160.

"Queen Anne Nine" has the 9 tube chassis and comes in a somewhat larger cabinet on the same lines as the "Queen Anne Seven." \$185.

The "Elizabethan" is built entirely of walnut. This model has the 35 chassis and retails at \$225. Remote control on any model, \$50.—*Radio Retailing*, July, 1930.



Story & Clark 51

Story & Clark Radio Sets

STORY & Clark Radio Corp., 173 N. Michigan Ave., Chicago, Ill., has entered the radio set field. This company is a division of the house of Story & Clark, makers of musical instruments since 1857.

The chassis is designed to use three 224's, one 227, two 245's and a 280. Model 36 is not equipped with automatic volume control but models 43 and 51 are and an extra 227 tube is used in these sets. The tuner and audio system are in one unit and the power pack with built-in speaker comprises another unit. Some of the features of these sets are a tone control, linear power detection, phonograph switch on front panel, extra large filter and bypass condenser, and separate cord and plug for lamp or electric clock.

Model 36 is a low-boy with attractively carved panels. The intended retail price is \$208.

Model 43 is semi-high boy retailing at \$248.

Model 51 is a deluxe high-boy with French doors and lists at \$317.—*Radio Retailing*, July, 1930.



Wells-Gardner Sets

THE illustrated lowboy cabinet of Wells-Gardner & Co., 816 N. Kedzie Ave., Chicago, Ill., may be had with a choice of three chassis.

Model 82 uses three 224's, two 227's, two 245's and a 280. Model 802 is the same but is built to operate on 25 cycle. Model 52 is a battery set with the following tubes: two 224's in two stages of r.f., a 201A

detector, 201A in the first audio and a 171A in the second audio stage. All have tone control.

The intended retail prices in the cabinet shown are: Model 82, \$99.50; Model 802, \$110, and Model 42, \$83.—*Radio Retailing*, July, 1930.

Zaney-Gill Midget Sets

ZANEY-GILL CORP., 5914 S. Western Ave., Los Angeles, Calif., offers two midget receivers; one in the Gothic style, the other modernistic in design. Each uses one 224, one 245, three 227's and a 280 and has a dynamic speaker. The chassis is made of die cast Duralumin.

The "Clarion," illustrated, comes in a solid mahogany cabinet, (14x18x8 in.). Price, \$49.50.

The "Legionair" is the modernistic companion to the "Clarion." The cabinet is walnut (16x13x7 in.), and is \$49.50, also.—*Radio Retailing*, July, 1930.



Zaney-Gill "Clarion"

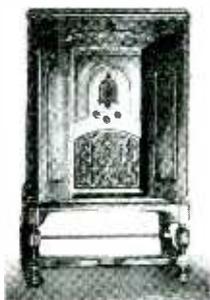
Pilot Auto-Radio in Kit Form

AN AUTOMOBILE radio receiver in kit form has been placed on the market by the Pilot Radio & Tube Corp., 323 Berry St., Brooklyn, N. Y. The set fits into a steel case which can be mounted on the running-board. It is operated by means of a small control panel, which is connected to the receiver by a flexible cable and a series of connection wires.

This receiver uses a high gain screen-grid circuit, comprising three stages of tuned r.f. amplification, a screen-grid detector and two stages of audio amplification. The tubes used are four P-224's, one P-227 and one P-245, the total filament drain being 4 amperes. Plate voltage is furnished by either three 45-volt B-battery blocks or by a single 140-volt unit of the aircraft type. A cone speaker, octagonal in shape, measuring 8½ in. in diam, and 3½ in. in thickness, will be supplied as an accessory at \$7.50.

The retail price of the kit of parts, less tubes, batteries and speaker, is \$47.50.—*Radio Retailing*, July, 1930.

to the Dealer at his Desk



Radiola 86

Radiola Line

AT PRICES lower than Radiola Superheterodyne sets have ever been marked at heretofore, three new receivers are announced by the Radiola Division of the RCA-Victor Company, Inc., New York City.

The specifications are as follows: 4-224's, 2-227's, 2-245's and a 280. The 224's are used in r.f., first detector and intermediate stages, while the 227's are employed in the oscillator and the power (second) detector, and the 245's are used in the push-pull power stage. Nine tuned circuits are employed, four being variable.

Model 80 is a lowboy, standing 43 in. high by 27 in. wide. Model 82 is a highboy console, 48 in. high. A tone control is furnished.

Model 86 also possesses a tone control. It is the radio-phonograph combination of the line. This instrument is 46 in. high.

Prices have not been established.—*Radio Retailing*, July, 1930.



Radiola 80

Sentinel Models 10, 11 and 12

USING 7 tubes, i.e., three 224's, two of which are in two stages of tuned high gain r.f. amplification, and one as a linear power detector; one 227 in the first audio stage, two 245's in push-pull and a 280 rectifier, the three new "Sentinel" models made by the United Air Cleaner Corp., 9705 Cottage

Grove Ave., Chicago, Ill., made their appearance at the Trade Show.

Two high gain radio frequency stages preceded by a band pass type pre-selector, result in uniform selectivity and sensitivity, the announcement states. A moisture-proof, non-rattling, large size electro-dynamic speaker is mounted on the power unit chassis.

Model 10 is a period cabinet of modernistic design, done in burl and butt walnut. It is an open face model, retailing at \$127.50.

Model 11, with center doors, is \$135.

Model 12, a combination, lists at \$180.—*Radio Retailing*, July, 1930.



General Electric 31

General Electric Line

COMPRISING two radio sets enclosed in Duncan Phyfe cabinets and a combination, the line of the General Electric Co., Bridgeport, Conn., has just made its appearance. The chassis, which is common to each, has nine tubes, namely: four 224's, two 227's, two 245's and a 280. A tone control is also furnished.

Model 31, the lowboy of the line, is made of brown walnut and is of the open face type. The dimensions are 43 in. high by 27½ in. deep.

Model 51 is a 48 in. highboy of brown walnut with narrow doors.

Model 71, the combination, is conservative but attractive in line.

Prices are not available at this time.—*Radio Retailing*, July, 1930.



General Electric 51



Westinghouse WR6

New Westinghouse Radio

A SCREEN-GRID superheterodyne radio set is announced by the Westinghouse Elec. and Mfg. Co., E. Pittsburgh, Pa. The following tubes are used: four 224's, two 227's, two 245's and one 280. This set makes use of a preselector of two tuned circuits, a stage of screen-grid amplification, a screen-grid detector, two stages of screen-grid immediate amplification, power detector, push-pull amplifier and a dynamic speaker. Tone control is provided on Models WR6 and 7.

Model WR5 is an open face lowboy of Elizabethan design in walnut with satin finish. It is 43 in. high and 27½ in. deep.

Model WR6 is a highboy with two doors. The cabinet is built on Early American lines.

WR7, a combination, has two full length doors.

Prices have not been announced.—*Radio Retailing*, July, 1930.



Westinghouse WR5

Reinforced Tube

A SCREEN grid tube in which a heavy arch supporting all elements at the top is employed, has been brought out by the Diamond Electric Corp., Newark, N. J. It is claimed that the rigid construction of the elements eliminates possibility of their getting out of place.—*Radio Retailing*, July, 1930.

New Philco Line

FOUR degrees of tone quality are available with the tone control on the new line of Philadelphia Storage Battery Co., Philadelphia, Pa. An important advance has been made in the size and design of the electro-dynamic speaker. Automatic volume control is another feature.

Model 96, a highboy, uses three '24', three '27's, two '45's and a type '80 rectifier. The cabinet is American butt walnut and the retail price is \$145.

Model 296, a radio-phonograph combination, has the



Philco 77 Lowboy

same chassis and speaker. \$198.

Model 77 lowboy employs three '24's, one '27, two '45's and an '80 rectifier. The open-faced cabinet is of American walnut, and lists at \$110.

Model 77 console has the same chassis and is priced at \$95.

Model 41 to be used in d.c. districts employs three '24's, one '27, and two '71-A tubes in push-pull. This chassis is available in the lowboy, highboy, or console cabinets.

In addition to the above, Philco offers table models 77 and 96, and a battery-operated set, Model 30 in the highboy or lowboy styles. It uses three '32 screen grid tubes in the r.f. circuit, one '30 detector tube, a '30 detector amplifier tube, a 30 first audio tube and two '31 power tubes in push-pull. This set also has the tone control.—*Radio Retailing*, July, 1930.

Resistance Coupled Amplifier Units

A LINE of resistance-coupled amplifier units for all purposes now supplements the line of the Stevens Manufacturing Corp., Newark, N. J.

The new resistance-coupled amplifiers are available in several types, ranging from a simple three-tube chassis with a single '45 tube, to a larger unit with two '45's in push-pull, preceded by two '24's and a single three-element tube, including meter and controls if desired. The units are compactly designed, with self-contained power pack for ready incorporation in any radio set console.—*Radio Retailing*, July, 1930.



Edison R-7

Edison R-6 and R-7

THE two new models, R-6 and R-7, just added to the new line of Thomas A. Edison, Inc., Orange, N. J., employ a triple screen grid circuit. The r.f. system uses three tuned circuit input filters before the r.f. amplification begins. Two r.f. stages are tuned and one is semi-tuned, and the detector stage is of two-element design, using a 27 tube. The sets use three audio stages, two of which are resistance coupled, the final stage being a transformer coupled push-pull stage, utilizing two '45 power tubes. One '80 tube is used for rectification.

The new models have an electro-dynamic speaker and they are also equipped with automatic volume control. A phonograph jack and switch is also provided.

Model R-6 is made of walnut, with panels and doors carved in the linen-fold motif. It is 48½ in. x 34½ in. x 18½ in. The intended retail price is \$297.

Model R-7 is also finished in walnut, with linen fold design doors and panels, and is slightly smaller in size. It lists at \$268. —Radio Retailing, July, 1930.



Sterling "Little Symphony" Set

THE miniature set being made by Sterling Mfg. Co., 2831 Prospect Ave., Cleveland, Ohio, may be had in a number of different clock style cabinets. The illustrated model is walnut and measures 14x18x9½ in. The speaker is a full size dynamic.

The five tube r.f. circuit, with power detection, incorporates the Loftin-White amplification system. Three 224's (first and second stages of r.f. and detector), a 245 and a 280 are used. Intended retail price, \$69. —Radio Retailing, July, 1930.

Brunswick Prices

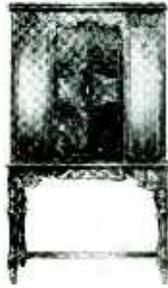
ANNOUNCEMENT has been made of the prices of the new Brunswick line. They are as follows: Model 15, \$139.50; Model 22, \$170, and the automatic radio with Panatrop, \$450, including a set of records. —Radio Retailing, July, 1930.

Bosch Receivers

TWO chassis designs are included in the new line of the American Bosch Magneto Corp., Springfield, Mass. Model 58 employs eight tubes: four 224's, one 227, two 245's and a 280. Two loosely-coupled tuned circuits are incorporated in the first and third r.f. stages. The second is untuned. The fifth tube, Model 59 is the same but for 25 cycle operation.

These two chassis are available in a choice of several console cabinets. The "A" console is 39 in. high x 26 in. wide and lists at \$144.50 with either chassis. The "B" console is a little larger, and has sliding doors, \$159.50.

In addition to these models, a



Bosch "D" Console

de luxe line is also made. A larger and heavier speaker is used and nine tubes are employed. They are five 224's, one 227, two 245's and a 280. An adjustable tone control is included, as well as a speaker mute, to eliminate the sound of stations when changing the dial setting. These models have automatic volume control.

Model "D" is a highboy, with sliding doors, measuring 47 in. high x 28 in. wide. \$195.

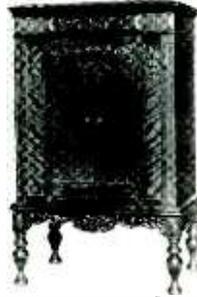
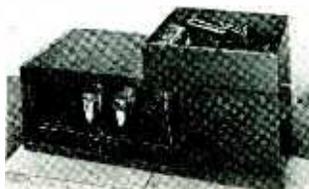
Model "E," fashioned after the Italian Renaissance period, is 52 in. high. \$250.

In addition to these models Bosch also makes a set known as Model 62C which has an a.c. chassis with power equipment which permits it to be operated direct from the 110-volt d.c. line. —Radio Retailing, July, 1930.

Operadio Portable Amplifier

A PORTABLE amplifier particularly suited for outdoor use is being produced by the Operadio Manufacturing Co., St. Charles, Ill. It is entirely self contained, capable of driving four standard electro-dynamic speakers, or two of the large bowl speaker.

The complete unit contains a microphone with extension cord, control panel, and electric phonograph, as well as the line amplifier. The key switch permits the operator to shift from voice to music instantly. A compartment is provided for the storage of the microphone, and power supply cord. —Radio Retailing, July, 1930.



Fada 47

Fada Line

THIS years Fada line embraces a number of new features. For instance, amplification begins with the second transformer, so that interference from powerful local stations, riding on the carriers of other stations, is not encountered. Other innovations are: the "flashograph" by which the name of the stations appear in lights; automatic volume control; two-element detector, providing straight line distortionless detection; tone character control, a device which eliminates or minimizes static by cutting out high frequency disturbances; and double coupled transformers to maintain uniform amplification over the whole broadcast band.

Nine tubes are used, namely: three 224's in r.f. stages, one 227 operating as a two element detector, and a four tube audio system consisting of two 227's and two 245's in combination resistance and push-pull transformer coupled audio system, and one 280.

Model 42, an open face lowboy, is priced at \$159.

Model 44, a de luxe lowboy with sliding doors is \$188.

Model 46 is a de luxe high boy with carved pilasters and quarter French doors. \$238.

Model 41 comes in a highboy of the French Renaissance period. The price is \$218.

Model 47, illustrated, is the combination of the line. It comes in a walnut cabinet of the Italian Renaissance period and lists at \$328.

The above models are also available for 25 cycle operation at a slight increase in price. —Radio Retailing, July, 1930.



Victoreen Highboy

Victoreen Superheterodyne

THE chassis of the new console of the Victoreen Radio Co., 2825 Chester Ave., Cleveland, Ohio, comes in two parts, the tuner and the amplifier each being held in a cast-aluminum case. Six tubes are used in the tuner, including one stage of r.f., oscillator, first detector and three stages of intermediate frequency. The r.f. stage, as well as the intermediate frequency

stages, use screen grid tubes. Eight tubes are used in the amplifier. Two 227's in the second detector and the first stage of audio. Full wave rectification is provided with two 281's, permitting a 250 tube to be used in the output. In addition, two 374 voltage regulator tubes have been worked into this circuit, one providing a constant potential of 90 volts across the first seven tubes and the other 180 volts on the first audio tube. The 201-A tube is used as a rectifier for the C bias.

There are three cabinet choices: first, a lowboy listing at \$345, a highboy at \$395, and a combination at \$595 in antique oak finish, and \$645 in walnut. —Radio Retailing, July, 1930.



Home Televisor Kit

FOR those desiring to build their own home radiovisor or television device, a kit of parts is offered by the Jenkins Television Corp., 370 Claremont Ave., Jersey City, N. J. It includes all necessary components, completely machined, ready to be assembled and wired, with the exception of the wooden pieces and bakelite panel for the platform on which this unit is mounted. A Faraday induction motor which drives the scanning disc at synchronous speed, a motor control rheostat and a television lamp house, are included. The scanning disc is obtainable in the 48, 60, 24 and 45 hole types.

The kit retails for \$42.50. A Jenkins television lamp is \$7.50 extra. —Radio Retailing, July, 1930.

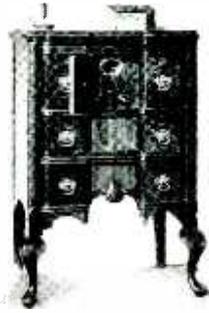
New "Speed" Tubes

FIVE new types of "Speed" tubes are now ready. They are made by the Cable Radio Tube Corp., 84 N. Ninth St., Brooklyn, N. Y. Three are of the new low wattage type (230, 231 and 232) of the same general characteristics as described in this department in the June issue. The other two types are S-34 and S-32B, which correspond to the Cardon types used in Sparton sets.

"Armored Bridge" construction, permitting improved spacing of tube elements, and assuring more perfect balance by doing away with top heavy bead construction, is a new feature of the "Speed" line. —Radio Retailing, July, 1930.



Radio Retailing, July, 1930



Grebe Period Cabinet

Grebe Line

IMPROVED "Colortone" control is being featured in the new sets of A. H. Grebe & Co., Inc., 70 Van Wyck Blvd., Richmond Hill, N. Y. A new chassis, known as the AH1, has been introduced, using three 224's, one 227, two 245's and a 280. The SK4 chassis with advancements is retained and is available in two consoles at \$265 and \$285.

Model 160 is an open face lowboy listing at \$160.

The illustrated cabinet is a period piece which readily adapts itself to most any interior, \$222.—*Radio Retailing*, July, 1930.



Stewart-Warner Graham

Four Stewart-Warner Sets

OLD World Period design is interpreted in the new consoles of the Stewart-Warner Corp., 1826 Diversey Parkway, Chicago, Ill. The new "100" series screen grid set and electro-dynamic speaker are incorporated in these new models.

The "Raphael" is done in the Italian Renaissance period. The center front panel is hand-carved and the entire cabinet finished in a dull-rubbed lacquer. This model is 42 in. high x 25 in. wide, and lists at \$162.50, a.c. or d.c. operated, and at \$144, battery operated.

The "St. James" follows the lines of the Elizabethan period, with a front of solid walnut ornamented with genuine hand carving. It is 48 in. high x 24 1/2 in. wide x 15 1/2 in. deep, listing at \$197.50 a.c. or d.c. operated, and \$179, battery operated.

The "Graham" (illustrated) is a lowboy, much more simple in design, with distinctive relief carving. Its dimensions are 42 1/2 in. high x 25 in. wide. The intended retail price is \$137.50 for a.c. or d.c., and \$119 for battery operation.

The "Avon" uses the Series 950 radio and is the smallest set of the line, being only 40 in. high x 25 in. wide. It lists at \$99.75 a.c. or d.c. operated, and at \$81.25 battery operated.—*Radio Retailing*, July, 1930.

Radio Retailing, July, 1930

Gulbransen Model 161

INSTEAD of bringing out several types of chassis and cabinet, the Gulbransen Co., Kedzie & Chicago Aves., Chicago, Ill., has decided to concentrate on one model. It will be known as "Champion" Model 161, and list at \$130.

Model 161 is an 8-tube set, using three 224's, two 227's, two 245's, and a 280 rectifier. The screen grid tubes are used in three stages of r.f. amplification, with one 227 as a power detector, and one in the first stage of a.f. amplification. The speaker is a new stadium type reproducer. A tone control knob will be found on the panel.

The cabinet is made of 5-ply walnut veneer, with a selected Oriental walnut dial panel. It is 48 in. high, 28 in. wide and 15 1/2 in. deep.—*Radio Retailing*, July, 1930.



Gulbransen 161

Apex 1931 Line

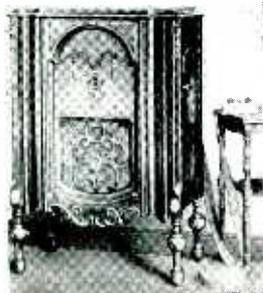
UNITED States Radio & Television Corp., Marion, Ind., has brought out four new "Apex" models for the coming year. Features of this line are a tone blender on all models, remote control on one model, and oversize electro-dynamic speaker. The remote control box, which will be found on Model 31-D, is very compact and small, and has a tuning and volume control knob on it.

Model 28A uses three 224's, two 227's, two 245's and a 280. The American walnut cabinet is 36 in. high x 26 1/2 in. wide. Intended retail price, \$105 complete.

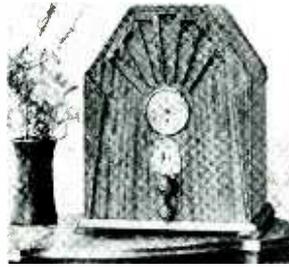
Model 31B has American walnut matched panels. It stands 48 in. high x 27 1/2 in. wide, and lists at \$127.50, complete.

Model 31C is a combination with Webster pick-up, automatic stop, etc. In appearance, it is practically identical with model 31-B and retails at \$175, complete.

Model 31-D is equipped with remote control. The box is 2 1/2 in. wide x 5 in. long. The intended retail price, complete with tubes and remote control, is \$185.—*Radio Retailing*, July, 1930.



Apex 31D Showing Remote Control at Right



Erla 72

New Erla Line of Sets

A CHOICE of two chassis is offered by the Electrical Research Laboratories, Inc., 2500 Cottage Grove Ave., Chicago, Ill. Model 225 utilizes four 224's, one 227, two 245's and one 280. Four tuned circuits, screen grid power detection, and push-pull amplification are employed. A tone control is included. Model 34, a lowboy, is listed at \$134; Model 36, a semi-highboy, at \$160, and Model 38, a combination, is \$230.

These three cabinets, with the Model 230 chassis installed, will be known as Models 35, 37 and 39, and list at \$140, \$170 and \$240, respectively. Model 230 chassis has 9 tubes, automatic volume control with an additional 227 as a relay tube.

A small compact table model with built-in speaker and available with or without an electric clock on the panel is being featured. This receiver is practically a portable set. The tubes used are two 224's, two 227's, two 171's and one 280. Without clock this set is known as Model 71 listing at \$69.50 complete. With clock the price is \$79.50, complete.—*Radio Retailing*, July, 1930.



Stromberg 14

Stromberg-Carlson's New Models

THE chassis of the Model 10 and 11 receivers made by the Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., employs five tuned circuits, four of them used in two bi-resonator circuits. The fifth is used to couple the third R. F. stage to the detector circuit. The tubes used are four 224's, two 245's and a 280.

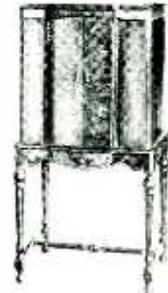
Model 10 is a low console of open face design. It lists at \$259.

Model 11 is what is known as a "convertible" console, because it can be made into a radio-phonograph simply by installing the No. 1 phonograph panel assembly. The chassis in this set is the same as the Model 10, and the list price is \$285. The phonograph panel assembly is \$75.

Model 12 is a ten tube set, with three 224's, three 227's, two 245's and two 280's. It

has automatic volume control and provision has been made for installing an electrical remote control. The cabinet is walnut, in the half-octagonal shape, with six legs. The list price is \$355.

Model 14 is a radio-phonograph combination, equipped with automatic record-changer. It has a capacity of 12 records, either 10 or 12 in., or both together. The chassis is the same as used in Model 12. The cabinet is walnut, and exceptionally compact. Price \$645.—*Radio Retailing*, July, 1930.



Colonial Windsor

Colonial Line

PROVISION is made for the installation of a Cutting automatic remote control in each of the three new sets in the No. 33 line just announced by the Colonial Radio Corp., Long Island City, N. Y. The tubes used in these sets are three 324's, one 327, two 345's, and a 380. With speaker is a Cutting dynamic, with 14 watt field.

The "Princess" is a low cabinet of sliced and oriental striped walnut, with simulated floral design inlay on the front. It is 38 in. high by 24 1/2 in. deep, listing at \$129.50.

The "Mayflower" is a highboy with antique bronze grille. This model is 47 in. high by 24 1/2 in. wide, \$139.50.

The "Windsor," also a highboy, has matched butt walnut doors. It is four inches taller and three inches wider than the "Mayflower," \$149.50.

The automatic remote control developed by Dr. Fulton Cutting allows automatic tuning of ten pre-selected stations. Several control boxes may be used, and manual tuning is independent. The price is \$34 installed. This remote control is made for Colonial sets only.—*Radio Retailing*, July, 1930.



Colonial Remote Control

"Umbrella Aerial" Kit

PREMAX Products, Inc., Niagara Falls, N. Y., offers an "umbrella aerial" kit in which every necessary item is included. All wires are connected at the top by the umbrella connector, which also provides the necessary insulation from the mast itself.

This kit is supplied in two forms, No. 1, which contains everything needed for the aerial erection, and No. SK-2, which consists only of accessories, without aerial, ground wire, lightning arrester, etc. The complete kit lists at \$5.75 and the skeleton set at \$4.—*Radio Retailing*, July, 1930.



New Jackson-Bell Model 60

DUE to the wide appeal and popularity of its midset set, the Jackson Bell Co., 1682 W. Washington Blvd., Los Angeles, Calif., has brought out a new and improved Model 60. It is a screen grid receiver using seven tubes. The speaker is an electro-dynamic. Push-pull amplification is incorporated and the chassis is fully shielded. The cabinet is modernistic in design but sufficiently conservative to fit into most any interior. It is compact in size and has an intended retail price of \$59.50, complete. — *Radio Retailing*, July, 1930.



Self-Contained Ohmmeter

A SELF-CONTAINED ohmmeter in a case of molded bakelite has been announced by the Jewell Electrical Instrument Co., 1650 Walnut St., Chicago, Ill. The Pattern 89 Ohmmeter, as it is called, has a 1½ volt flashlight cell inside the case, and is therefore independent of external voltage supply. A convenient adjustment to correct for variation in the cell voltage is provided by a magnetic shunt. In operation the instrument can be adjusted to the cell each time a series of tests is made, and the result is a very high degree of accuracy. — *Radio Retailing*, July, 1930.



ALDEN Electric Plugs "SUREGRIP" Plugs, which may be used to plug in a radio set, as well as various other electrical appliances, are made by the Alden Manufacturing Co., Brockton, Mass. They are available in various colors to match the cords or woodwork, and are flat on either side of the handle, making them easy to grasp. They retail for 15c. each, or two for 25c. — *Radio Retailing*, July, 1930.

Step Down Transformer

FROM the Acme Electric and Mfg. Co., 1444 Hamilton Ave., Cleveland, Ohio, comes an announcement that it is making a step down transformer with a capacity of 150 watts, the transforming range being from 220-240 volts to 110-120 volts. The transformer operates on 50-60 cycle current. Core loss is 6 watts and the temperature rise is less than 20 degrees C. Overload capacity without undue heating is 50 watts making it ideal for use in warmer climates. It comes complete with plug, cord and bakelite receptacle ready to mount in the cabinet. The intended retail price with closed ends is \$2.75. — *Radio Retailing*, July, 1930.



The Oxford Chromatrop

A NEW full range speaker is incorporated in the "Chromatrop" made by the Oxford Radio Corp., 2035 W. Pershing Place, Chicago, Ill. This new instrument is made available to the public in the form of a complete radio set and also of a radio-phonograph combination. Two electro-dynamic speakers, actuated by a radio amplifier of peculiar characteristics are used, all being housed in specially constructed baffle chambers.

The addition of an electric pick-up for phonograph reproduction and of a tuner for radio reception is a detail and follows the conventional practice.

Model 150, complete with electric pick-up and turntable is \$260.

Model 151, without pick-up and turntable, but with pick-up jacks, is \$200. — *Radio Retailing*, July, 1930.

Multi-Speaker Relay

THE new multi-speaker relay of the Insuline Corp. of America, 78 Cortlandt St., New York City, is a compact device with which the radio dealer can test and compare from one to four speakers and also play two speakers at one time. This sort of a device is especially useful for demonstration purposes. — *Radio Retailing*, July, 1930.



Electric Soldering Iron With Heat Control

A DEVICE has just been produced by the Clarostat Mfg. Co. Inc., 285 N. Sixth St., Brooklyn, N. Y., permitting the quickest possible heating time for electric soldering irons, together with the best operating heat for satisfactory soldering. It is in the form of a metal box with front panel carrying a pilot light, a receptacle to take the soldering iron plug, a heat control knob, and a three-position snap switch. — *Radio Retailing*, July, 1930.

Direct Coupled Amplifier

MANUFACTURING under Loftin-White patents, Kelley-Wiegand, 304 W. 231st St., New York City, N. Y., are making a direct coupled amplifier, completely assembled and ready to operate on 115 volts, 50-60 cycles, a.c.

This amplifier has practically a flat amplification curve over all of the audible frequencies and is especially suited for use as a phonograph amplifier, according to the announcement. It can also be used for public address work or coupled to a radio set. The list price is \$45. — *Radio Retailing*, July, 1930.



Polymet Products

POLYMET Mfg. Corp., 829 E. 134th St., New York City, announces a new line of wire-wound tubular resistors in single value units or in tapped units.

A line of volume controls is also ready, consisting of several forms of carbon volume controls, available in either single or duplex units.

An electrolytic condenser has been developed using a special electrolytic solution. It is available in capacities up to 72 mfds. — *Radio Retailing*, July, 1930.

Dynamotor for Aircraft Radio

A NEW type aviation dynamotor for aircraft radio has been developed by the Eclipse Aviation Corp., East Orange, N. J., division of Bendix Aviation Corp. It is especially designed for radio power of multi-engined transport and passenger planes. — *Radio Retailing*, July, 1930.

Dry Cell Tester

WITH the type BME dry cell tester of the Roller-Smith Co., 233 Broadway, New York City, the current flow is limited to about 6 amperes on a new cell and the instrument indicates whether the condition of the battery is good, medium or bad. It does not show voltage or the current in amperes flowing when applied to a cell, but gives, instead, a reading which shows the relative condition of the cell. The instrument is built without polarity so that no time is lost in reversing connections. — *Radio Retailing*, July, 1930.



Pierce-Airo D. C. Chassis

PIERCE-AIRO, Inc., 117 Fourth Ave., New York City, announces a screen grid d.c. chassis designed to utilize a.c. tubes. The construction is the same as the Model A.C.1724, but it is so designed that with the same a.c. tubes it will operate on d.c.

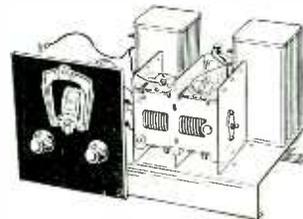
Three screen grid tubes are employed. Specially designed selected control tuning with double push-pull amplification and humless filter circuit is used. The radio frequency assembly is completely shielded with a special bridge circuit compensated antenna. Provision is also made for automatic phonograph attachment. — *Radio Retailing*, July, 1930.

Electrad-Loftin-White Tuner Kit

ELECTRAD, INC., 175 Varick St., New York, N. Y., is now in production on a tuner kit especially designed for use with direct-coupled amplifiers similar to the Loftin-White power amplifier kit.

It contains one stage of 224 screen-grid R. F. amplification, preceded by a tuned antenna stage, which requires no tube. A volume control in the antenna circuit regulates the signal input to the tuner. The R. F. transformers are completely shielded. A metal drilled chassis is provided for all parts and permits the wiring to be made underneath. A., B. and C. voltages for the tuner are taken from the power supply of the amplifier that works with it, a special connecting cable being supplied for that purpose.

The tuner will list at \$40 complete except for tubes. — *Radio Retailing*, July, 1930.





The "Foto-Voice"

A 33½ r.p.m. synchronous motor driven turntable unit for reproducing electrically transcribed programs in radio broadcasting and all special or synchronized disc recordings, is made by the Foto-Voice Company, Inc., 817 Granby St., Norfolk, Va., and distributed solely by Stoner & Heath, Inc., 122 Greenwich St., New York City. It may be had in either single or double turntable models, and comes in a completely enclosed console cabinet with synchronous motor drive, fader and switching controls, pilot light, and balanced tone arm furnished with pick-up of any desired standard impedance. The entire driving mechanism is direct connected, employing no governors or similar devices.

Type A-1, single turntable, is 27 in. square by 36 in. high, and weighs 85 lb. List price, \$275.

Type S-2, double turntable, is 48 in. long, 27 in. wide, and 36 in. high, weighing 145 lb. \$400.—*Radio Retailing*, July, 1930.



Majestic Electric Clock

FURTHERING the idea of selling an electric clock with every radio set, the Grigsby-Grunow Co., 5801 Dickens Ave., Chicago, Ill., has made it possible for Majestic dealers to secure a Hammond electric clock with the Majestic eagle across the face. It is 5½ in. high by 6 in. wide and comes in an attractive bakelite case. The Jeffrey Jewelry Co., 4 S. State St., Chicago, is sole distributor of this clock, which has a suggested resale price of \$12.—*Radio Retailing*, July, 1930.

Duo Type Volume Control

TO MEET the requirements of radio assemblies calling for the simultaneous control of two circuits, the Clarostat Mfg. Co., Inc., 285 N. Sixth St., Brooklyn, N. Y., announces the "Duo-Type" wire-wound volume control clarostat. It is made up of two standard volume control units, with tapered windings, if so desired, to match any resistance curve. The units are mounted in tandem so as to operate with a single knob.—*Radio Retailing*, July, 1930.

Radio Retailing, July, 1930

Toman Electric Pick-Up

E. TOMAN & Co., 2621 W. 21st Place, Chicago, Ill., announces a pick-up which, it says, is entirely new in electric principles. The initial impulse is so powerful that it insures fullest volume and purest tone. Convenient throw-back arm is utilized, and this pick-up is available in all sizes.—*Radio Retailing*, July, 1930.



New Sylvania Tubes

TWO new types of 224 and 226 of tubes have been developed by the Sylvania Products Co., Emporium, Pa. Hum is virtually eliminated through the use of the looped type filament and the new shaped mica support makes these tubes non-microphonic.

A special Sparton Tube, the SY-484, for use only in Sparton receivers, is also made now. It employs an indirectly heated cathode which requires three volts for operation. It is similar in characteristics to the Cardon 484.—*Radio Retailing*, July, 1930.

Simplex Public Address System

A COMPLETE public address system to which any number of speakers may be added, each individually operated through the speaker selector switch board is made by the Simplex Radio Co., Sandusky, Ohio. The frame is heavy channel steel, to the front of which are bolted six panels, two containing the power amplifier, one the radio



unit, one the speaker selector switchboard, and two are blank for extra output units when required. One or more electric phonographs may be used. They are ordinarily bolted to the frame as shown in the illustration, but may be installed elsewhere if desired. The entire system is portable and may be used indoors or out.

The dimensions, less phonograph, are 52 in. high by 20½ in. wide, by 8 in. deep. The weight is 130 lbs.—*Radio Retailing*, July, 1930.

"National" Parts for Auto-Radio

The kit as it looks when assembled, showing, speaker, junction box and receiver.



NATIONAL Co., Malden, Mass., has designed a series of parts with which to make an automobile radio set. The receiver employs five tubes, namely, three 224's and two 112-A's, arranged with filaments and heaters in series parallel so as to minimize the drain on the storage battery. The circuits comprise two stages of screen grid r.f., power detector,

screen grid resistance coupled a.f., and an 112-A power output stage. The receiver is so designed that it can be readily removed by means of the handy cable and plug system.

The list price of the complete set of parts, including the receiver parts, junction box, battery box and speaker, but less tubes, is \$89.50.—*Radio Retailing*, July, 1930.

Radio Condenser Tester

ESPECIALLY constructed for radio work, the condenser tester made by the Electric Heat Control Co., 5902 Carnegie Ave., Cleveland, Ohio, is extremely valuable to service men. It measures capacity from 1/10 to 8 microfarads. It can be used as an ohmmeter to measure resistances from 150 to 30,000 ohms, also as a tester for radio transformers and as a continuity tester. It is equipped with a tube socket for a type 281 tube, and thus may be used on 500 volts d.c. or a.c. The intended retail price is \$17.50.—*Radio Retailing*, July, 1930.



Walker "Flexi-Unit"

UNDER the name of "Flexi-Unit" the Workrite Radio Corp., 1812 E. 30th St., Cleveland, Ohio, has placed on the market a device which may be used in any of the seven following ways: as a single tube short wave receiver, short wave adapter, r.f. oscillator, wave trap, broadcast receiver, r.f. pre-amplifier or wave meter. It is designed to operate with battery, eliminator or a.c. receivers.

The "Flexi-Unit" is built in a cast-aluminum case with the binding posts conveniently arranged to permit changing of the circuits to meet requirements. The panel measures 5 in. by 7½ in. and the case is 2½ in. deep. Weight assembled, 2½ lb. The list price is \$16.

A No. 01 adaptor plug, extra at \$2, provides for short wave reception and use of the unit as an r.f. pre-amplifier or booster with battery receivers.

No. 27 detector adaptor plug, \$2.50, provides for short wave reception with a.c. receivers, using a 227 in the detector socket.

No. 24 screen-grid adaptor plug is extra at \$3, and provides for use of the unit as a screen grid r.f. booster with a.c. receivers employing 224's in the first r.f. socket.—*Radio Retailing*, July, 1930.

International Metallized Resistance

RESISTANCE in highly compact and convenient form is now possible through recent developments not only in metallized filament, but also in special high heat-conducting crollite or synthetic ceramic tubing. The International Resistance Company, Philadelphia, Pa., is now producing a powerohm metallized resistor measuring ¾ in. long and ¼ in. in diameter. This unit is available in resistance values of from 30 ohms to 3 megohms, with pigtail leads 2 in. long.—*Radio Retailing*, July, 1930.



Sangamo Electric Time Switch

SANGAMO Electric Co., Sangamo, Ill., announces a new electrically-wound time switch. It keeps accurate time, is independent of frequency or voltage variations, and may be used on either a.c. or d.c. Owing to the reserve power in the main-springs, the time and switching mechanism will operate through current interruptions up to 18 or 20 hours, if only two switching operations are necessary. The applications of this time switch are manifold, and a complete line is available.—*Radio Retailing*, July, 1930.

Radio Convenience Outlets

RADIO convenience outlets in twelve combinations, ranging in price from 90 cents to \$3 were recently announced by the Insuline Corp. of America, 78 Cortlandt St., New York City.—*Radio Retailing*, July, 1930.

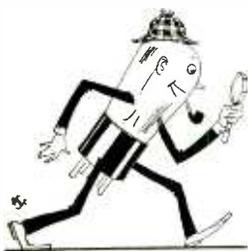
Rockefeller Backs Vast Other Events of

JULY, 1930

Ambitious Plans for \$250,000,000 "Radio City" on Fifth Avenue, New York—RCA and NBC Interested—Grigsby-Grunow Sues RCA—But First Let's Review the Trade Show

By Detector

*The tumult and the shouting dies;
The captains and the kings depart:
Lord God of Hosts, be with us yet
Lest we forget—lest we forget.*
—KIPLING.



AND now that it is over, what shall we tell the absent ones about the "convention of magnificent distances," the "battle to find Mr. Plotz," the "quest for new models" or, if you will, the "great carnival show"?

If those who attended the Fourth Annual Trade Show and Sixth Annual Convention of the Radio Manufacturers Association at Atlantic City, June 2-6, failed to have a good time, blame it on some inhibition complex—not on any lack of entertainment institutes at the "Nation's Playground." If radio tradesmen hoped to see more in the line of new sets and gadgets—well, that's something else again (see the leading editorial in this issue).

Of publicity stunts on the boardwalk, in the air and on the restless surface of the sea, there were aplenty—and to spare. Tens of thousands of dollars must have been poured out in the name of advertising. "What price glory?"

'Twas a Good Show

All in all it was a good convention and well attended. Twenty-six special trains brought delegations from as far west as Seattle. The total registration was 31,000. Western manufacturers contacted many an Eastern dealer and jobber. Furthermore, hundreds of tradesmen had an opportunity to view this demonstration of industry strength and enthusiasm for the first time.

The speeches and the technical trends are reported elsewhere in this issue. As for the monster banquet; 2,100 hardy souls partook of Louis Sherry's menu, cooked, incidentally, in New York City and brought all the way to Atlantic City by motor truck. The entertainment was superb and the crowd most orderly.

Morris Metcalf, RMA's new chief, will make a mighty good president. He is a keen business man, a clear thinker and a fearless doer. His job will not be an easy one. Detector, therefore, bespeaks the sympathetic co-operation of all in the industry to help Mr. Metcalf lead us, if not to the promised land, at least out of the wilderness.

By the way, the above sketch shows Detector trying to run down a heavy "date" with an exhibitor.

Blessed Be the Bond



More welcome signs. Bond P. Geddes, executive vice-president, RMA, shakes the hand of R. W. Jackson, Brunswick Radio Corporation, while James Burt, Atlantic City dealer, adds his blessing.

New Epoch for Radio

With the recent announcement that the money of John D. Rockefeller, Jr., will be largely instrumental in financing the erection and operation of a vast entertainment center, the permanency and high character of radio programs are assured.

It is proposed to erect a great entertainment center between 5th and 6th Avenues, midtown, in New York City. In addition to four theaters for various types of amusement, there will be broadcasting and television facilities which will far surpass any sending plant now in existence.

Not only will the best of entertainment be sent directly from these theaters into

the air and into the homes of millions but Mr. Rockefeller has been interested in advancing the cause of education and a new and better type of radio programs. With the ample operating equipment programs not heretofore practicable, because of their cost, will now be made available to the radio public.

Art and science will be allied in this development according to the announcement made public by Todd, Robertson and Todd, the engineering corporation representing the interests of Mr. Rockefeller. This prospectus was confirmed also by the officials of RCA and NBC.

These latter two concerns were largely instrumental in interesting Mr. Rockefeller in this project and will, it is understood, be very active in an advisory and operating capacity. There will be a battery of 27 studios for NBC laid out along original lines.

Ground will be broken for this new edifice next month and the complete project will be finished sometime in 1933.

Now turn to page 72 and read our leading editorial on this same subject.

Cordonic to Make Condenser Speakers

The Cordonic Manufacturing Corporation, Holland, Mich., has recently been organized to produce a new type of condenser speaker.

The organizers of this new concern are already well known in the industry. Its president, Arthur A. Visscher, has contacted personally most of the manufacturing trade.

General Sales Manager, W. Keene Jackson, was for four years sales manager of Arborphone and more recently sales manager of United Reproducers.

A. W. Spiers, who will be chief engineer, has the distinction of being the original inventor of the Cordonic principle. He will refine this development in his laboratory at Michigan City, Ind.

Recently Honored



R. L. EGLASTON
(Above)
In Charge Sales
Nat. Transformer

H. S. HYDE
RMA Director
Radio Master
Corp.



Broadcasting Enterprise

the Month Epitomized

NEW YORK, N. Y.

Poole Electric Clocks Distributed Through Radio Outlets Only

Two months ago the Poole Manufacturing Co., Inc., conceived the plan of merchandising its new line of gravity-electric clocks exclusively through radio distributors. The wisdom of this plan is indicated by the fact that, since this time, its factory at Ithaca, N. Y., has been unable to maintain pace with demand.

The inventor of this supplementary line, which is making its bow to the consumer through the radio industry, is Arthur F. Poole, vice-president and general manager. He is a graduate of Stanford University, majoring in astronomy. He is a director of the Wahl Company.

When, on March 15, Poole was ready to launch its sales campaign, R. A. Simmonds, of Buffalo, N. Y., formerly in charge of sales for the National Magnetic Clock Corporation, was employed as general sales manager. Mr. Simmonds made an exhaustive survey of the radio industry with a view of reporting on its fitness to merchandise electric clocks. His favorable analysis has been borne out by the sales responses so far recorded.

Just Off the Boardwalk



The official greeter meets J. Newcomb Blackman and H. G. Erstrom of NFRA.

Grigsby-Grunow Resigns from RMA

The Grigsby-Grunow Company has resigned from the Radio Manufacturers Association. In a statement to the public press, Majestic gives as the motivating reason an alleged control of RMA by the "radio trust."

In a rebuttal statement issued by Morris Metcalf, recently elected president of the manufacturers' association, the assertion is made that the resignation of this Chicago concern was requested by unanimous vote of the directors present at the regular meeting of the RMA board held at Atlantic City, June 6 and that the reason for this request was based upon the indisposition

RADIOTYPES



OTTO FRANKFORT

Now that Otto Frankfort is general sales manager of the Story & Clark Radio Corporation, he'll be flying about the country more than ever. Otto hops a plane with the same nonchalance that the rest of us display when we light a Murad. Once his ship was flagged down east of Cleveland by a storm, but to date he has never had to take a parachute leap.

Otto Frankfort has sold hair nets, tombstones and cough drops. Radio lured him from advertising work because of its fundamental appeals. We started to ask Otto another question, when—lo! we discovered he had hopped off for Atlantic City.

of Grigsby-Grunow to play the Association game according to the rules.

"Pays your money and takes your choice."

Detector has reason to believe that the recent resignations of Zenith, for more or less personal reasons, and of Majestic from the Radio Manufacturers Association are not an indication that other manufacturers will follow in these footsteps or that the association is fundamentally or in any wise wobbly. Special conditions and differences of opinion were the reasons for these unfortunate disruptions.

Stahl Joins Arcturus

C. E. Stahl has been elected to the board of directors and appointed general manager of the Arcturus Radio Tube Company, Newark, N. J. Mr. Stahl comes to this company with a wide experience of the radio business gained since the early days of the industry.

Getz President of Steinite

The many friends of Oscar Getz will be pleased to learn that he has been advanced to the position of president of the Steinite Radio Company, Ft. Wayne, Ind.

First Pacific Trade Show Draws Large Crowd

The West's first annual radio trade show was staged at the William Taylor Hotel, San Francisco, on June 30, July 1 and 2, in conjunction with the seventh annual convention of the Western Music and Radio Trades Association Convention. The auditorium, third and fourth floors, were taken over for display space, many of the exhibits having been brought direct from the Atlantic City Trade Show.

Over 60 eastern and western manufacturers were represented and the three days were brimful of show features, meetings, lectures, luncheons, banquets and dances.

The convention of the Western Music and Radio Trades Association opened on Tuesday. The keynote address, "Give Us Music," was delivered by Lloyd Taylor, of Sparks-Withington. A luncheon and entertainment followed; the day's festivities ending with a Brunswick dance in the evening.

On Wednesday, at the session of the WMRTA, Robert D. Eastman, president Radio Retailers Association, talked on "Effective Retailing," while J. L. Ray, vice-president, RCA-Victor, took as his subject "Let's Look Ahead."

The "good-bye" banquet was held that evening with entertainment by the Atwater Kent Musical Follies, followed by a Radiola Dance.

On the closing day, a golf tournament was held, terminating in a dinner for golfers and guests at the California Golf Club.

George H. Curtiss was manager of the show, assisted by H. R. Curtiss, E. A. Portal, E. Lloyd Sutton and L. W. Yule.

Four Sheiks of Araby



The president of the Audiola Radio Company and three of his tribesmen emerge from their tent, at the Edgewater Beach Hotel, Chicago, long enough to have their picture taken.

Reading from left to right: Mortimer Frankel, president, Audiola; E. F. Lindman, guest; M. H. Morris, Furnas Furniture Co. and Jack Fink, St. Louis representative.

Majestic Sues RCA for \$30,000,000

General Electric, Westinghouse and Others Also Named as Defendants—
Reed Claims Illegal Patent Pool Has Damaged Plaintiff's Business

In a suit for triple damages totaling \$30,000,000 filed June 26, at Kansas City, the Grigsby-Grunow Company, Chicago, charges the Radio Corporation of America and its affiliated companies with the maintenance of an illegal pool of radio patents created in violation of the Sherman Anti-Trust law. The General Electric Company, Westinghouse Electric & Manufacturing Company and others are also named as defendants.

James A. Reed, of Kansas City, former senator from Missouri, and Ernest P. Reichman, of Chicago, are attorneys for Majestic.

The petition charges that the defendant companies illegally created the patent pool and compelled payment of almost \$6,000,000 in royalties by the Grigsby-Grunow Company.

It sets forth that under the "tube clause" contained in the license agreement which the Chicago company received from the defendants it was compelled to buy radio tubes and was prevented from engaging in the vacuum tube manufacturing business

until the clause was declared illegal by the United States District Court of Delaware. On this account, the petition alleges, the company was damaged to the sum of about \$3,000,000 more, which with the other damages brings the total to \$10,000,000. Three times this amount is asked because the Clayton act entitles a plaintiff in such cases to recover threefold.

Other charges made in the petition are: That while the Chicago company was compelled to buy tubes from the Radio Corporation, the latter failed to deliver an adequate supply, although dealers and distributors selling radio receivers of the Radio Corporation received sufficient tubes.

That the defendants entered into cross license agreements by virtue of which they allocated among themselves exclusive rights in the radio and vacuum tube fields not only under existing patents but all future patents.

That they used "more than 4,000 patents as a part of their common plan and design to unlawfully restrain trade and commerce."

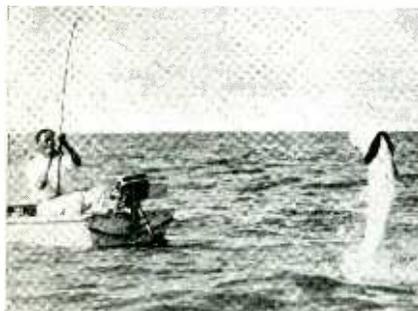
will continue to manufacture dynamic speakers and will form the speaker division of Magnavox Company, Ltd. Amrad, as formerly, will manufacture electrolytic condensers and will be known as the condenser division of Magnavox.

DuMont's New Tube



The "birdie" at which Allen B. DuMont is staring so intently is an electron motor vacuum tube, pride and joy of DeForest's chief engineer. The grid can be made to rotate, suggesting a number of commercial possibilities, by applying proper filament, plate and grid potentials.

Tarpon Tournament by Radio



A new sporting contest went on the air the middle of June, when WLW described, direct from a boatside seat off the coast of Florida, the landing of this championship calibre tarpon.

This latest demonstration of the possibilities of radio broadcasting was made possible through the initiative of Powel Crosley, Jr., of Cincinnati.

NFRA Reports Progress

The key address, delivered before the opening meeting of the National Federation of Radio Associations at Convention Hall, June 2, by J. Newcomb Blackman, is reported elsewhere in this issue.

It was brought out at this meeting that the Federation now numbers 49 live local associations and that it is maintaining close and harmonious relations with the Radio Manufacturers Association and with the organized wholesalers.

Henry Steussy, chairman of the retailers' group, delivered a splendid address on "The Advantages of Local Associations to the Retailers." Mr. Steussy stressed the advantages of local associations adopting standards of trade-in values for sets. He urged also that servicemen be trained, examined and registered.

Executive vice-president H. G. Erstrom announced at Atlantic City that the definite date of the next annual convention of the National Federation of Radio Associations and of the Radio Wholesalers Association would be Feb. 16-17, 1931, at Indianapolis.

Music Industries Convention Elects Otto B. Heaton

Otto B. Heaton, of Columbus, Ohio, will be the new president of the National Association of Music Merchants. He was elected to this office at the annual business meeting of this national music organization, held at the Hotel New Yorker, New York City, June 12.

The convention of the music industries officially opened with a luncheon to nearly 1,000 delegates on Monday, June 9, Mark C. Campbell presiding.

One of the interesting highlights of this successful convention was the decision to revive and re-organize the division of the chamber known as the National Musical Merchandise Association.

The other officers elected during the convention were: vice-presidents: Edwin R. Weeks, Binghamton, N. Y.; Jay Grinnell, Detroit, Mich.; Charles H. Yahrling, Youngstown, Ohio, and C. A. Andrews, Charlotte, N. C.

The Music Industries' Chamber of Commerce elected C. Alfred Wagner, Aeolian Company, New York City, president; Henry C. Lomb, New York City, first vice-president; Parham Werlein, New Orleans, second vice-president and Mark Campbell, New York City, treasurer.

Haugh Zenith Sales Manager

Arthur T. Haugh, who has held executive positions with two other leading radio manufacturing concerns, has been appointed sales manager for Zenith Radio Corporation. Mr. Haugh was formerly president of the Radio Manufacturers Association and is at the present time a member of its board of directors.

Amrad and Magnavox Consolidate

The Amrad Corporation announces that it has disposed of its receiving set business and has become associated with the Magnavox Company, Ltd., a holding corporation controlling the stock of the Magnavox Company.

The Magnavox Company, of Arizona,

Philco Has Busy Month Three Outstanding Activities—the Bermudian Cruise, Tube and "Transitone" Policies

When the 19,000 ton, five-deck ocean liner, *Arcadian*—filled to capacity with 500 Philco representatives and executives—headed for Bermuda just prior to the Trade Show everyone expected a good time but was hardly prepared for the outstanding success which marked this innovative distributor convention.

During the opening business meeting, held in the main dining salon, vice-president J. M. Skinner announced that the Philadelphia Storage Battery Company had arranged to market its own tubes under the brand name, Philco. This policy will make practically a factory-controlled balanced unit, it was stated.

Another announcement of equal import was to the effect that plans had practically been perfected whereby the Automobile Radio Corporation, manufacturer of "Transitone," and Philco will co-operate closely in the manufacture, sale and installation of the latter's automobile radio equipment. Under the plan, this product will be manufactured in the Philco factories at Philadelphia and will be distributed through both Philco and Transitone wholesalers and dealers. Transitone service stations will be available to all dealers for both installation and service.

"Transitone" automobile-radios have been on the market for two years and this concern has been experimenting in this field for over five years. It holds basic patents on many fundamental features which are an inherent part of reception of radio "en route."

What the Wholesalers are Doing

RWA Atlantic City Activities

The opening meeting of the Radio Wholesalers Association, held during the Trade Show, was well attended. Harry Alter, Chicago, presided and reviewed briefly the many constructive activities of this live jobber outfit.

The association favors the Capper-Kelly Bill. It has done much to stabilize the handling of radio tubes and to eliminate abuses in the placing of local advertising.

Another activity is that of the establishment of the audit bureau. This bureau deals with the installation of uniform cost accounting systems in dealer establishments—the wholesalers affiliated with this group provide the books free of charge while the dealer pays for their installation and monthly audits.

Sign Oil-Burning Refrigerator Contract

Recognizing the opportunity for profit from supplementary sources, Costain Music Company, Huron, S. D., dealer in "Everything in Music," has signed a contract to act as distributor of Superfex oil-burning refrigerators.

Another music dealer who recently secured the distributor franchise for this line is the Pioneer Music Company, operating stores in Emporia, Chanute and Burlington, Kan.

Bailey's Beau Brummel



"The best dressed jobber in the radio game" is the way his friends characterize Eddie Joyce, vice-president and general manager of the C. E. Bailey Company, Boston, Mass. Too bad you can't see the spats but "you just know he wears 'em."

Gray & Danielson Manufacturing Company is occupying its new three-story plant at 2101 Bryant St., San Francisco. The company recently had a disastrous fire at its former location.

Hollenberg Music Co., of Little Rock, Ark., and J. S. Wingo & Co., of Spartanburg, S. C., are now distributors for Stewart-Warner.

Glasgow-Allison Company, of Charlotte, N. C., was recently appointed distributor of Lyric radios in that territory.



Maharajah of AK

False whiskers and a borrowed bath towel effected this transformation of Ernest Ingold, Atwater-Kent's 'Frisco distributor, in his more serious moments. "Down with the salt tax!" says Maharajah.

New Connections

Frank M. Brown Company, of Portland, Me., is now distributor for Atwater Kent receivers and speakers in Maine.

Seals Piano Company, Inc., of Birmingham, will have control of Edison Radio distribution in Alabama and the Chattanooga trading area.

C. C. White, Houston, has been appointed distributor of Radiolas in Texas.

Executives of the Lucker Sales Company have recently returned to Minneapolis from New York where they concluded arrangements to distribute RCA Radiolas in Minnesota, North Dakota, South Dakota and part of Wisconsin. In western Missouri and most of Kansas, Moser and Suor, Inc., of Kansas City, is sole distributor of this line.

Frederick D. Bourret has been appointed manager of the electrical and radio department of J. A. Hearn & Son, 14th St. and 5th Ave., New York City. Mr. Bourret was formerly with the Graybar Electric Company at Richmond, Va., and prior thereto was sales engineer with the Electric Bond & Share Co., operating stores in Cuba.

Schoellkopf Co., Dallas, Tex., has taken over the radio, panatropes and record departments of the Dallas branch of the Brunswick-Balke-Collender Co. Also added to the list of Brunswick distributors are the Selco Co., of Cincinnati, and the Sioux Falls Paint & Glass Co., of Sioux Falls, Iowa.

New officers of the Radio Manufacturers' Agents Association of Southern California are Lombard J. Smith, president; E. R. Patterson, first vice-president and J. J. Perlmuth, second vice-president.

Peaslee-Gaulbert Corporation, Louisville, will represent Bosch in Kentucky and Texas.

Motor Equipment Company, located in Salt Lake City, Utah, will distribute RCA Radiolas throughout a large territory which includes parts of Utah, Idaho, Wyoming and Nevada.

Old Head on Young Shoulders

To attain the presidency of one of the largest distributing organizations in New York City at the age of 22 is the unusual accomplishment of Lawrence R. Fink, who now heads the New York-Kennedy Company, New York City.

Mr. Fink is the son of Ben Fink, well-known in the radio industry as a manufacturer and distributor of radio products, and more recently as the president and general manager of the First National Radio Corporation, of New York City, now introducing to the trade First National radio sets and chassis.



L. R. FINK
Youthful Jobber
N. Y. Kennedy Co.



L. T. JOHNSON
Pres. Kimberly
Radio Corporation

William J. Seroy, formerly Pacific Coast sales manager for Grigsby-Grunow, has entered the radio wholesaling business in Oakland, through the purchase of the Electric Radio Company, one of the Majestic Radio distribution outlets.

Halsey Supply Corporation, Newark, N. J., has just been appointed distributor of National Union radio tubes in New Jersey, part of Pennsylvania and New York.

A "First-Timer"



Maurice Raphael, who headquarters with the Grebe Sales Company in Los Angeles, claims the distinction of being the first actual road salesman to travel nationally selling complete radio receivers. He hit the road in this capacity away back in 1920—traveling for Grebe then as now.

Here we find Maurice looking them over at Atlantic City.

In the Case of Tone Control

¶ *For the Defense* (Continued from page 60)

other hand, it is usually necessary to reduce the volume to a fraction of the original in order to listen without discomfort to an organ or band program in a small room. Tone control can be used to correct the apparent unbalance between high and low frequencies that results from changes in volume level. For instance, speech can be had without boominess at high volume and music at low volume can be given the full low tones which make it so much more enjoyable.

4. It is a well known fact that the ears of different people vary enormously in sensitivity to different frequencies or tones. Audiometer tests of different people show, for instance, that one person may barely hear the high frequencies which to another will produce a sound impression so strong as to be unpleasant. Such differences in hearing are not exceptional but are about as common as the differences in sight which cause so many of us to wear glasses. Due to ear variations, different persons listening to the same music may hear quite different effects. It is quite likely that this may have a great deal to do with our different musical tastes and may account for the fact that some persons have never enjoyed music to any extent. Tone control will compensate for differences in hearing and bring a greater appreciation and enjoyment of music to many people whose ear characteristics hitherto have hindered such appreciation and enjoyment.

5. Many people living near car lines, electric transmission lines or factories, or in the centers of cities, heretofore have not been able to enjoy radio to the full because the programs are often marred by crackles, buzzes and other extraneous noises. Such noises are not in the broadcasting but are the result of sparks and other electrical disturbances from the local electrical apparatus. This so-called interference noise, being chiefly in the high frequency range, can be greatly subdued and the radio programs made much more enjoyable by setting the tone control where it filters out a proportion of the higher frequencies. Tone control may likewise be used to subdue static on distant stations, and needle scratch from phonograph records.

6. With tone control on the modern radio receiver, the user may adjust the tone quality to suit his temperament, mood or personal taste as applied to any particular program. He can do this just as conveniently and quickly as he can regulate the volume, and the added enjoyment that this brings to radio is hard to believe until tried. If tonal correctness or fidelity does not appeal to the prospective purchaser, because to him the reproduced music is more pleasing when the deep tones are somewhat over-emphasized, why should we not provide the simple means on the receiver to give him what he wants?

¶ *For the Opposition* (Continued from page 61)

Tone control permits the average man, who cannot pretend to know music like an artist, to alter and chop up programs. Some weird effects are certain. I wonder if it is wise, remembering that radio was simplified from three dials to one to make it easier for the public.

Surely this innovation cannot be charged to the matter of acoustics. For the average living room offers no problem in acoustics. Those of a large hall vary with volume. Remember the air program is heard through one small speaker. This is no question of placing different instruments here and there. Listening to a radio is like looking at a picture, whereas listening to an orchestra is like viewing a landscape.

Does Not Mar Reception

It has always been my attitude and belief that radio music should constantly elevate and improve human taste. Even jazz bands, playing in New York City, do it better than local organizations and raise standards. Tone control lets the listener superimpose his ideas on the program. How would you like to go to a theater where members of the audience talked back to the actors during the lines of a play? Or have some one join in singing with Galli Curci? Not so good?

The average man has to be led in his music taste. Left alone, people will revert to the tom tom, just as the average farmer will paint his barn red if not guided.

I have a static eliminator which works perfectly. But it distorts tone. Purity of tone must be foremost. So my static eliminator is not used. If our sets give true, perfect pictures of each broadcast, we are satisfied. When I, the engineer, must keep my static eliminator off the set because it might mar reception, it is quite natural that we do not include tone control which would permit the owner to mar his own program.

One Line or Many

(Continued from page 69)

ferent buying classes through variety in price, cabinet models, etc.

The apparent disadvantages, in turn, are: (1) Lower discounts on individual lines due to division of volume. (2) Somewhat greater stock requirements. (3) Possible lack of interest in retailer by distributor and manufacturer. (4) Danger of loss of individuality if dealer is not well established locally. (5) Possible lowering of specialty salesmen's efficiency by splitting of interest. (6) Danger of picking up slow moving lines in effort to effect stock coverage. (7) Increasing difficulty of servicing and handling.

THE opinion of any dealer on this question is governed largely by the type of organization with which he is associated, and secondarily by sales and distribution conditions in his immediate territory. We know, for example, that there are two broad groups of dealers, the first composed of those who depend largely upon the effort of outside salesmen to produce volume and the second consisting of retailers who rely upon store-traffic for their business.

It is probably safe to say that the average dealer in the first group casts his vote for the one-set idea. Dealers in the second group, which includes such store-selling outlets as department houses and hardware shops as well as Main Street dealers handling radio alone in a big way, lean toward diversification.

Radio Retailing will welcome additional "Letters to the Editors" from dealers and jobbers on this subject.



KEEP COSTS FROM "FLYING HIGH"

If the cost of radio selling is going up—don't blame the industry—blame the line. Feature the Edison and bank the difference.

Helping you to sell the Edison are the fame of Thomas A. Edison as a scientific genius . . . the superb excellence of the Edison Radio . . . the fact that

both you and your trade know Edison products are to be depended upon . . . the fact that Edison policies and prices are stabilized—not subject to the overnight changes so prevalent in the radio industry.

Sell the Edison and build a big radio business—profitably—at low selling cost.



EDISON *LIGHT-O-MATIC* RADIO

DESIGNED AND BUILT IN THE LABORATORIES OF *Thomas A. Edison*, ORANGE, N. J.

EDISON DISTRIBUTORS:

EDISON DISTRIBUTING CORP. AT THE FOLLOWING ADDRESSES: BOSTON, Statler Bldg. . . . CHICAGO, 3130 S. Michigan Ave. . . . DALLAS, 500-502 Elm St. . . . DENVER, 1636 Lawrence St. . . . KANSAS CITY, 2107 Grand Ave. . . . ORANGE, N. J. . . . PITTSBURGH, 909 Penn Ave. . . . RICHMOND, 1204 East Main St. . . . SAN FRANCISCO, 1267 Mission St. . . . SEATTLE, Volker Bldg.

* * *
ATLANTA, Southern Electric Supply Co., 81 Marietta St. . . . BALTIMORE, Girard Phonograph Co., Pythian Bldg. . . . BIRMINGHAM, Seals Piano Co., Inc., 1814 Third Ave. . . . BOSTON, George H. Wahn Co., 737 Boylston St. . . . BUFFALO, Alliance Motor Corp., 1460 Main St. . . . CHARLOTTE, American Hardware and Equipment Co. . . . CINCINNATI, Edi-Radio Mart, 622 Broadway . . . CLEVELAND, B. W. Smith, Inc., 6545 Carnegie Ave. . . . DENVER, Whitney Sporting Goods Co., 1640 California St. . . . DES MOINES, Stoner Piano Co. . . . DETROIT, E. A. Bowman, Inc., 5115 John R. St. . . . GRAND RAPIDS, Morley Brothers . . . GREEN BAY, McIntyre-Burrall Co. . . . INDIANAPOLIS, Peerless Electric Supply Co., 122 So. Meridian St. . . . LOS ANGELES, Fey & Krause, Inc., 1616 So. Figueroa St. . . . MEMPHIS, Russell-Heckle Co. . . . MILWAUKEE, McIntyre-Burrall Co. . . . MINNEAPOLIS, The Belmont Corp., 316 So. 3rd St. . . . NEW HAVEN, Risley-Leete Co., 16 Whalley Ave. . . . NEW ORLEANS, Southern Radio Distributors, 128 Chartres St. . . . NEW YORK, Blackman Dist'g Co., Inc., 28 West 23rd St. . . . OGDEN, Proudfit Sporting Goods Co. . . . PHILADELPHIA, Girard Phonograph Co., Broad and Wallace Sts. . . . RICHMOND, Benton-Bailey Co., Inc., 220 Hull St. . . . ROCHESTER, Alliance Motor Corp., 727 Main St., East. . . . SAGINAW, Morley Brothers . . . ST. LOUIS, Stauffach & Duffy Co., 918 Franklin Ave. . . . TAMPA, Tampa Radio Corp. . . . WATERBURY, Sprague Electrical Supply Co.

Eye and Ear Entertainment

(Continued from page 63)

coming to value the opportunity of recording matters of business and work. Once executives thought only of keeping memoranda on paper. Today they know that motion picture machines grasp and preserve detail in far more understandable fashion."

Starting Investment

July and December are the peak months of the year, most authorities agree, with the bulk of the sales made during the summer. The market offers equipment at three retail price levels. As a starter, the radio retailer will need to make an investment of from \$500 to \$1,500. This will go primarily for cameras, projectors, film, tripods and lighting equipment. Later, accessories, for which a dyed-in-the-wool fan spends as much money as for his primary tools, may be added.

A projection room where pictures can be shown to customers must be provided, and here the usual generous space available in a radio store is an advantage.

The radio house with a good mailing list of customers has a flying start toward sales. The type of man who purchases a high priced radio is precisely the kind who wants a motion picture camera. The market must be developed. Store displays alone will not yet produce volume business.

A man who understands and is enthusiastic about business, and who is accustomed to going out after business will readily obtain worthwhile volume from this line. *It's what the cameras do, and not the merchandise itself, that must be sold.*

Laurence Hanley, of the Hanley Photo Shop, Kansas

City, Mo., for example, closes all his sales by home contacts. Mr. Hanley's method is to call on a prospect with a loaded camera. After taking 25 feet to insure some good film, he turns the camera over to his prospect and suggests that the balance be photographed during the week end. If the camera is brought in early Monday morning he tells the prospect he will be able to call late Monday afternoon and see the pictures. Thus the return of the camera is assured and a final sales presentation made under ideal conditions.

Leads are obtained by Mr. Hanley through personal letters sent to a list of about 3,000. European trips are a fertile stimulant of sales, and he keeps in close touch with steamship offices.

Film sales are encouraged by the Hanley Photo Shop through tie-ups with current events. The opening of the baseball season, visits of important dignitaries to Kansas City, and school graduations all help to sell film. A home made picture story is a great booster. The average customer uses about 15 rolls of film a year, Hanley finds. By constantly suggesting new ideas to the customer and directing his activities with the camera, regular visits to the store are insured and a gradual building up of other business instigated. Both Hanley and Bass carry radio, Bass doing about one-third of his volume on radio.

Present-day home motion pictures offer two things—activity and profit during summer months, and the close, personal confidence of the finest customer list in the city. And who knows but what such customers may need sound as well as eye entertainment.

But—No Sale!

(Continued from page 64)

and ingenious aliases were at once revealed.

This recording by address brought out another interesting fact. From the first it seemed as though the listing of repossessions would result in valuable information due to our belief that the persons from whom sets had been repossessed would be radio-conscious and desire a radio by some means or other and that they would turn to free demonstrations as a method of attaining this desire. However, at the end of three months checking, only four parties who were of poor credit rating had requested demonstrations under their correct name.

What then was becoming of these persons from whom radios had been taken for lack of payment? Could it be that they were sensible enough to know that a radio could not be afforded, and were content to get along without radio entertainment?

Checkmates Trickery

Evidently our hunch had gone wrong. Three weeks later, however, when the address file was completed, the following fact was brought to light: apparently a number of these persons with poor credit realized that they were listed at the local Credit Bureau and that the demonstration would in all probability be refused if the dealer checked closely. Consequently, like the confirmed joy-rider assuming a name, they also resorted to acquiring another name, often changing only one letter such as Borley to Torley or Morley. There were numerous cases of this revealed by the address file, proving that

radio repossessions are a valuable recording when handled correctly. Incidentally the tenacity with which these financially incompetent people seek to gain radio entertainment goes to prove also just how strong the desire for a radio is, once a person has become initiated to its pleasures.

Many times it is asked if we believe the 2,500 names on file represent that many joy-riders. Positively no. Some are sincere in their intention to buy. When a name with one, two or even three demonstrations against it is recorded by us, we do not attempt to black-list the party, unless there comes a special report from the dealer. When the party is listed as having had the same model and make of set on several occasions we urge caution. It may be considered legitimate for a customer to try out two or three sets of different makes before deciding to buy. Some dealers have even telephoned us that the customer, after going the rounds, has returned to them and that they have succeeded in closing the sale.

Even though the party is not considered a joy-rider, any information on file is given the dealer requesting same. In knowing what make of set was in and the duration of its demonstration, the dealer can better formulate his sales attack and build it on the merchandise he is selling. Consequently it can be seen that this record serves two purposes—first, it curtails joy-riding, and second, it aids the dealer in approaching a prospect abandoned by previous dealers.

ATWATER KENT RADIO



Keep your eyes on
August 1

EVERY year the real story of radio starts when the Atwater Kent line is announced.

This year the announcement day is August 1.

August 1! Radio's Golden Voice!
Again—watch Atwater Kent!

The RADIO with the GOLDEN VOICE

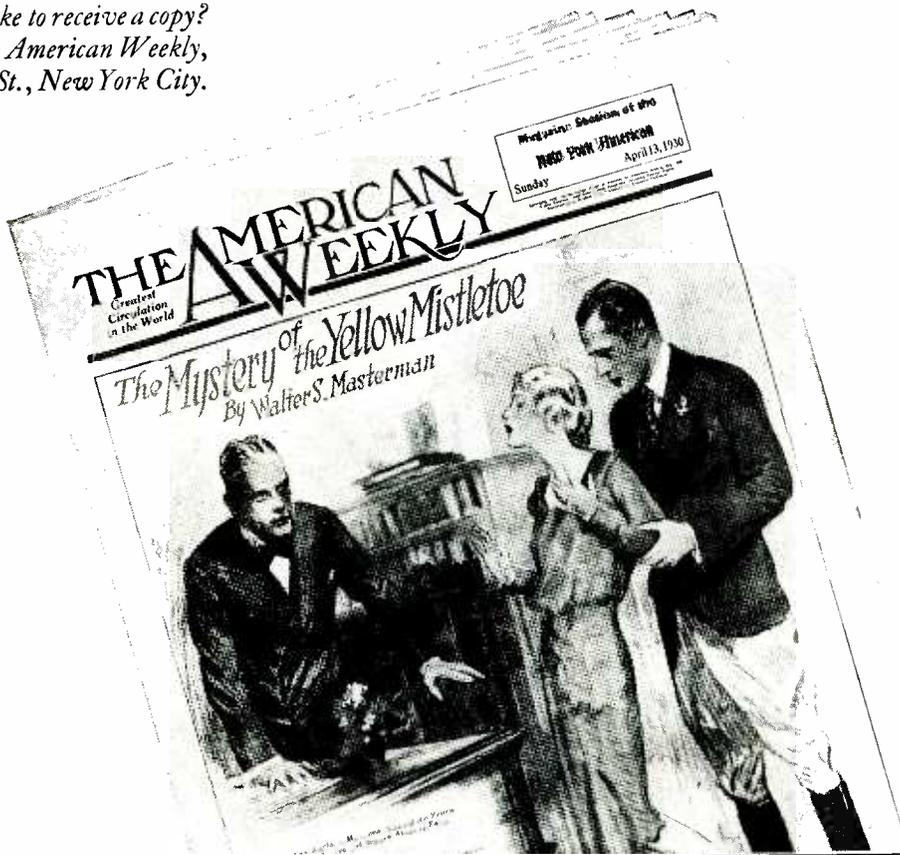


ATWATER KENT MANUFACTURING COMPANY

A. ATWATER KENT, *President*

4733 WISSAHICKON AVENUE • PHILADELPHIA, PA.

Would you like to receive a copy?
Write to The American Weekly,
9 East 40th St., New York City.



You'd pick the LEADER!

IF a manufacturer told you he would pay for an advertisement in one of your local papers, you'd naturally pick the publication which reached the greatest number of possible customers.

When a manufacturer tells you he is advertising in The American Weekly, he's offering you a similar proposition in magazine adver-

tising. For The American Weekly has *twice as much circulation*—nearly 6,000,000 copies every Sunday—as any other publication on earth.

Take advantage of its influence with your customers.

Stock the product to be advertised, display it on your counters, shelves and in your windows. Then get set for a husky re-order!

What is The American Weekly?

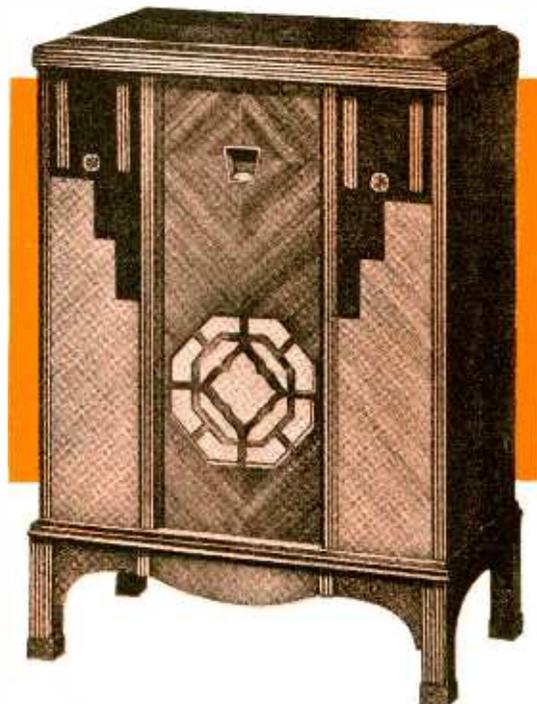
The American Weekly is the magazine distributed through seventeen great Sunday newspapers from seventeen principal American cities. It concentrates and dominates in 536 of America's 812 towns and cities of 10,000 population and over.

IN EACH OF 185 CITIES IT REACHES ONE OUT OF EVERY TWO FAMILIES
IN 132 MORE CITIES, IT REACHES 40 TO 50%
IN AN ADDITIONAL 102 CITIES, IT REACHES 30 TO 40%
IN ANOTHER 117 CITIES, IT REACHES 20 TO 30%

—but that's not all. Nearly 2,000,000 additional families in thousands of other communities regularly buy The American Weekly—making the unprecedented national total of nearly 6,000,000 families who read The American Weekly.

Sentinel

DOLLAR FOR DOLLAR
TONE FOR TONE



WAS THE HIT OF THE SHOW!



**Model 8—List Price \$99.50
(less tubes)**

The greatest dollar for dollar value in radio. An unusually sensitive selective eight tube screen grid set, four screen grids, one 227, and two 245's in push-pull. Cabinet of beautiful two-tone walnut of an enduring practical design. Full Dynamic Speaker.

Prices slightly higher west of the Rockies and in Canada.

Model 11—List Price \$130 (less tubes)

The most popular model we have ever shown. A distinct favorite at the R. M. A. Show. All leading developments in screen grid radio. Seven tubes. Three screen grid, one acting as power detector, and two in two stages of tuned radio frequency.

Amplification and resistance coupled. Two 245's in push-pull, one 180 rectifier. Electro Dynamic Speaker. Cabinet of burl and butt walnut, designed to a period, with modernistic effects. Panels of matched walnut. High polished finish. This beautiful instrument has a strikingly rich character all its own, and is priced right for your volume business.

HOW easy it is to say that your line was "the hit of the show". Probably we won't be alone in so doing, as there were other manufacturers who made much more noise and possibly attracted more wide-spread attention to their name. But . . . from the common-sense standpoint of real business attention and buying action, we do claim distinction!

Twenty-four of the twenty-six actual Distributor prospects, who made contact with us at the R. M. A. Convention, are now Sentinel Distributors. Each of the Jobbers appointed represents a substantial experienced radio organization, an important active figure in the territory covered. What better testimony can we put before you! These Distributors bought the Sentinel line because they saw merit in the product . . . because they knew their Dealers could sell it profitably . . . because they recognized the stability and resources of our company, established over years of actual experience . . . because we offered them a definite plan, with national advertising, dealer cooperation, etc. . . . and because we did not make a lot of wild promises, but rather gave them the facts truthfully and sincerely!

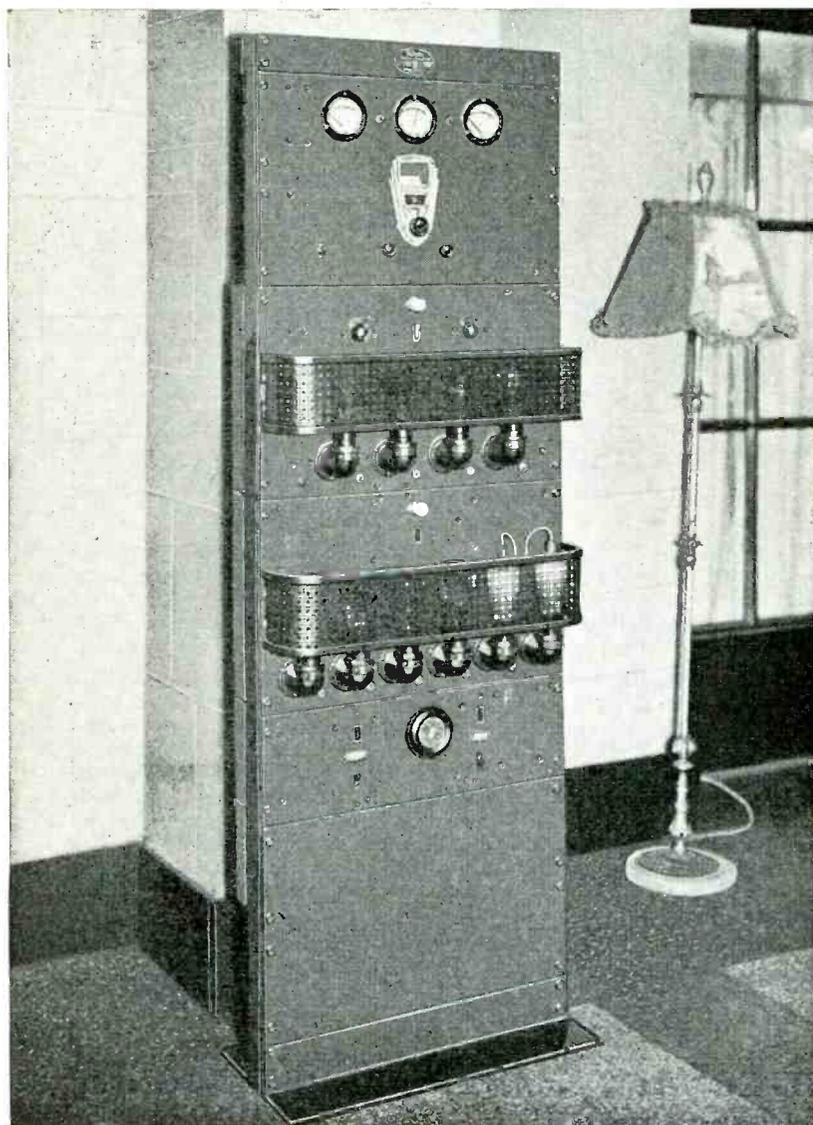
Dealers, who have not as yet seen the line, will find it profitable to do so. We will gladly refer you to your local Jobber if you have not heard from him. There are a few open territories for live established Distributors . . . applications will be acted upon instantly. This is a Sentinel year! Ride with a winner! Experience and resources count in radio!

UNITED AIR CLEANER CORPORATION
9705 COTTAGE GROVE AVE. CHICAGO, ILLINOIS



There is an INCREASING DEMAND for sound distribution systems

... AND A VERY DESIRABLE PROFIT FOR MEN WHO KNOW HOW TO INSTALL THEM



TO the men or organizations who possess a knowledge of sound amplification and who have the requisite sales ability, financial responsibility and engineering facilities, the sales, installation and servicing of sound distribution systems offers a very distinct and profitable opportunity. There is an ever-widening market in every community for the installation of sound distribution systems in—

- | | |
|---------------------|------------------|
| Apartment Buildings | Playgrounds |
| Amusement Parks | Public Parks |
| Airports | Race Tracks |
| Base Ball Parks | Railroad Depots |
| Camps | Restaurants |
| Churches | Riding Academies |
| Circuses | Sanitariums |
| Civic Centers | Skating Rinks |
| Convention Halls | Schools |
| Dance Halls | Sporting Arenas |
| Factories | Stadiums |
| Gymnasiums | Swimming Pools |
| Hospitals | Yacht Clubs |
| Hotels | |

These installations will require the use of amplifiers . . . Webster Amplifiers, the product of an institution specializing in the manufacture of delicate and precise electrical apparatus for nearly a quarter of a century, are compact, neatly designed and finely built. They will form the basis of highly efficient sound distribution systems.

WEBSTER ELECTRIC CO.

Established 1909

RACINE

WISCONSIN

Someone in your community is going to sell and install these systems. To the man whose installations include Webster Amplifiers will come the cream of the business, for these fine units are built painstakingly and perform flawlessly. You can be this man. Write us as to your facilities and capabilities and we will send you complete descriptive literature regarding Webster Amplifiers and the Company behind them.

MAGNAVOX DYNAMIC SPEAKERS

UNFETTERED • REPRODUCTION

PROTECT THE THING YOU SELL: PERFORMANCE

When all's said and done, the public has but one test for the receiver or combination you sell—"How does it perform?"

That test will be more rigid than ever in 1931.

The dealer who sells a receiver equipped with a Magnavox Dynamic Speaker faces that test with confidence. He knows that a discriminating public will hear all the fineness of the receiver—true—clear—undistorted—unfettered.

He knows, too, that the name Magnavox means something definite to his customers—that it means speaker leadership maintained through 19 years—research that means tomorrow's engineering standards achieved today. He realizes—and uses—a real selling advantage.



THE MAGNAVOX COMPANY ESTABLISHED 1911

Factory and Sales East of the Rockies:
CHICAGO, ILLINOIS

Sales Office: 1315 S. Michigan Ave.

Factory and Pacific Sales:
OAKLAND, CALIFORNIA



AGAIN ACCLAIMED

Another **RMA** show!

conceivable
Makes every test on any Radio Set-

"SUPREME" FEATURES

The SUPREME oscillation test gives the only, easily made, dependable test on tubes; tubes tested under radio frequency dynamic operating conditions.

Tests all types of tubes, including screen-grid and overhead heater and pentode types.

Affords a mutual conductance test of tubes.

Tests both plates of '80 type full-wave rectifier tubes.

All tubes tested independent of radio.

Locates unbalanced transformer secondaries.

Reads either positive or negative cathode bias.

Furnishes modulated signal for testing, synchronizing, neutralizing, etc.

Provides means for aligning of condensers by Thermocouple meter or A-C meter. Neutralizing with tubes used in the set; only accurate method.

Tests gain of audio amplifiers.

Provides D - C continuity tests without batteries.

Indicates resistances, without the use of batteries, in four ranges. .1 to 25 ohms, 10 to 200 ohms, 150 to 30,000 ohms (calibration curve furnished), 5000 ohms to 5 megohms.

High resistance continuity for checking voltage dividers, insulation leakages, bypass and filter condenser leakages, bias resistors, grid leaks, etc.

Low resistance continuity for checking rosin joints, shorted variable condensers (without disconnecting R-F Coil), center tapped filament resistors, etc.

Three precision meters; one four-scale D-C voltmeter, 0/750/250/100/10 volts, resistance 1000 ohms per volt. One four-scale A-C voltmeter 0/750/150/16/4 volts. One three - scale mill-ammeter 0/125/25 mils. 0/2 1/2 amps.

External connections to all apparatus.

Universal analyzer plug.

Screen-grid and pentode socket analysis.

Makes all analysis readings. Provides simultaneous plate current and plate voltage readings and the customary readings of A-C and D-C filament voltage, grid voltage, cathode bias, screen-grid voltage, pentode voltage, line voltage, etc.

Measures capacity of condensers from .1 mfd. to 9. mfd.

Tests trickle charger by meter.

Bridges open stages of audio for testing. Contains 500,000-ohm variable resistor 30-ohm rheostat and .001 mfd., .002 mfd. and 1 mfd. condensers for testing.

The laboratory test panel is equipped with a variable condenser for controlling the frequency of the oscillator.

Pentode Testing and Analysis.

Servicing Auto Receivers.

Provides many other tests, readings and functions.

"Supreme BY COMPARISON"

IN competitive display before the critics of the radio industry Model 400-B SUPREME DIAGNOMETER has again been acclaimed "Supreme by Comparison"—without a rival in its field!

Amazingly complete in its testing facilities—providing analysis of Pentode, Screen Grid and Auto Receivers in addition to its countless circuit combinations—Model 400-B is undisputably the marvel of the radio servicing industry. Endorsed and recommended by practically every servicing authority.

Wherever and whenever comparisons are made the SUPREME DIAGNOMETER is unanimously selected, because:

1. Its unique design is outstanding—a guarantee against obsolescence.
2. Its rugged construction prevents break-down—insuring accurate operation at all times.
3. It is the one service instrument capable of making every necessary test—none other so complete.
4. It pays for itself in a few months—faster and more accurate servicing means greater profits.
5. It provides maximum efficiency with utmost simplicity—pictorial diagrams of every test supplied with each instrument.
6. It creates satisfied customers—provides a laboratory method for the solution of every servicing problem.
7. It provides the greatest amount of test equipment in the least possible space at the lowest cost per service unit—the service units in the SUPREME DIAGNOMETER if purchased separately would cost many times its price.

SUPREME
Testing Instruments
"SUPREME BY COMPARISON"

"SUPREME"

Another triumph!!

MAKE your Service Department outstanding — Modernize with the SUPREME DIAGNOMETER and watch your profits grow!

Dealers Net Price, F.O.B. Greenwood, Miss. **\$139.50**
Size 7½x12½x16½.

Also available in smaller case for the radio man who does not care to carry spare parts, tubes, etc., in the same unit.



SUPREME TUBE CHECKER

MODEL 17



Dealers' Net Price, F.O.B. Greenwood, Miss. Size **\$21.75**
3½x7½x5½. Shipping weight 4¾ lbs.

"SUPREME" economy, "SUPREME" investment value, comparable in quality to counter tube checkers selling for twice its low price. Much more simple to operate. TESTS ALL TYPES OF TUBES INCLUDING SCREEN GRID AND PENTODE.

And Now!
A REVOLUTIONARY SET ANALYZER



25
Testing Instruments in **1**
All Readings on One Meter
Only One Meter to Read

SUPREME SET ANALYZER MODEL 90

Dealers' Net Price, F. O. B. Greenwood, Miss. Size 4¼x9¼x11¼, Shipping weight 6 lbs.

\$78.50

Extremely simple to operate and exceedingly complete in its testing functions Model 90 SUPREME SET ANALYZER combines the ingenuity of Supreme design and construction with a single meter of remarkable qualities.

It provides 29 possible analytical readings

It furnishes A.C. and D.C. Voltage and Current readings on ONE METER

Voltage readings up to 900 volts

Current readings to 300 Milliamperes

Resistance 1000 Ohms per volt A.C. or D.C.

External pin jack connections

High and low resistance measurements

Polarity indication

Pentode Testing—Auto Receiver Testing

IT DOES MORE THAN ANY THREE OR FOUR METER Set Analyzer on the Market

QUICKER, SIMPLER and with a higher degree of accuracy—plus the advantage of ONLY ONE METER TO READ!

"SUPREME BY COMPARISON"

SUPREME INSTRUMENTS CORP.
371 Supreme Bldg.
Greenwood, Miss.

Please ship SUPREME TEST INSTRUMENT as checked below

- Model 400-B DIAGNOMETER Net Cash \$139.50
- Time Payment Plan—\$33.50 Cash and 8 monthly payments of \$15.00 each.
- Model 90 Set Analyzer Net Cash only \$78.50
- Model 17 Tube Checker Net Cash \$21.75

All Prices are F.O.B. Greenwood, Miss. No Dealers Discount.

Date Shipment desired

Signed

Firm name

Street Address

City

State

State

State

Please give three or more bank or trade references and names of distributors from whom most purchases are made.

Most good distributors carry the complete line of SUPREME INSTRUMENTS in stock, including the Model 50 Tube Tester, Model 10 Ohm-meter. If yours cannot supply you, use order coupon to right.

SUPREME INSTRUMENTS CORPORATION

GREENWOOD, MISS.

Distributors in all principal cities

Service Depots in New York, Philadelphia, Pittsburgh, Chicago, Kansas City, Seattle, Toronto, San Francisco

ANOTHER DEMONSTRATION

The TENTH within a year!

One of the largest radio manufacturing companies in the country, with complete national distribution (through diversified outlets) recently wrote to all their dealers asking what publication served them best. Following is the way they voted (consumer papers omitted):

Result:

RADIO RETAILING	241
Electrical Merchandising (Only 40% of its circulation among Radio Dealers)	50
A Talking Machine and Radio Publication	50
A Radio Trade Publication	46
Another Radio Trade Publication	45
A second Talking Machine and Radio Publication	29
A second Electrical Publication	24
A third Talking Machine and Radio Publication	21
A third Electrical Publication	21
A fourth Electrical Publication	17

Radio Retailing

ABC A McGraw-Hill Publication ABP

Tenth Avenue at 36th Street New York

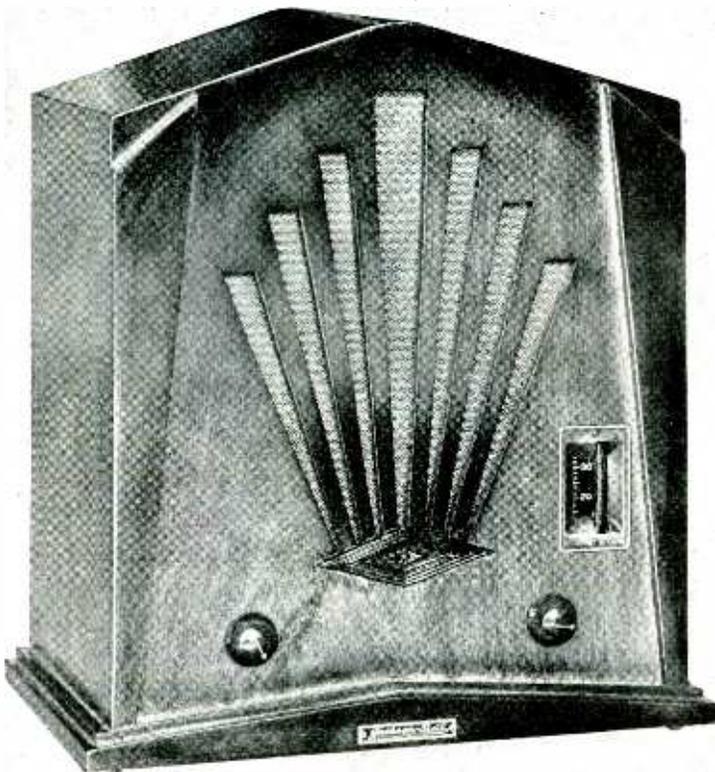
A Proven Profit Opportunity...RIGHT NOW

*An Immediate Opportunity for Profit
Proven by Dealer Successes
All Over The Country*

The Jackson-Bell "Midget" all-electric set illustrated below has an established place in the sales plans of many successful dealers all over the United States. It will open new markets for you as well. Here's a *new* opportunity to resell your old customers who can afford to buy and a lot of other possibilities for new sales.

Every customer who has purchased a larger set from you is a known prospect for a Jackson-Bell "Midget" set. Sell them an additional set for the den, bedroom, children's or maid's room. Midgets are also particularly timely for use in summer cabins, country homes, or mountain lodge. Wherever a compact, easily moved set is required.

Here's a real chance to use a new and timely product to help you build sales volume and profit during the dull season. Equally opportune for all year selling.



\$ 59.50

List Price

complete with tubes

Wire or write us for attractive dealer proposition and name of nearest jobber.

New and improved JACKSON-BELL Model "60" All-Electric Receiver

Licensed Under RCA, Hazeltine and LaTour Patents

Screen-Grid Circuit,
Electro-Dynamic Speaker,

Push-Pull Amplification,
7 A.C. Tubes

Shielded Steel Chassis

JACKSON-BELL COMPANY

1682 W. Washington Boulevard
Los Angeles, California

*Manufacturers of All-Electric
Radios Since 1926*

Jackson-Bell Company
1682 W. Washington Blvd.,
Los Angeles, California.

Please send me information on Jackson-Bell "Midget" all-electric radios and dealer merchandising plans.

Name.....

Company.....

Address.....



SILVER-MARSHALL

RADIO EXTRAORDINARY

Thank You, General Saltzman— It's Been Done—And Here It Is!

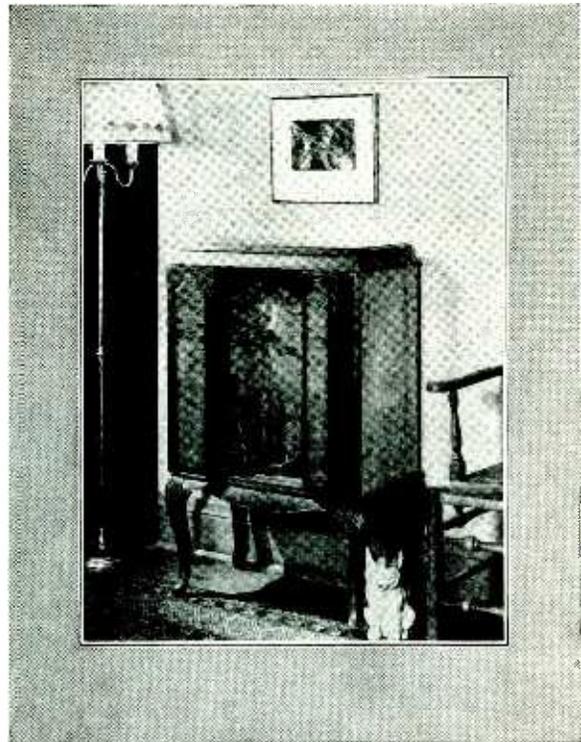
"The point I am making is that the type of set which you produce and the people use, has an effect on the structure of the broadcasting system set up by the Radio Commission... If the channel carrying the high-powered station and the channel carrying the low-powered stations are adjacent, very often it occurs that when you listen to one of the low-powered stations you hear a high-powered station... The remedy is sets of higher selectivity, and if this can be done without damaging the quality of reproduction, it ought to be given serious consideration."

— From address before R. M. A. Convention by Major Gen. Chas. McK. Saltzman, Chairman, Federal Radio Commission, June 4, 1930.

"The real purpose of having an extra-good radio nowadays is not to see how many stations you can get in an evening, but to be able to take your choice from among the largest number of programs. More Programs—Crystal Clear—that has been the aim of SILVER-MARSHALL engineers this season."

— From the new SILVER-MARSHALL Retail Sales Manual.

SILVER-MARSHALL is most happy to see the endorsement of the highest federal authority given to a conclusion reached many months ago by S-M engineers—and on which the new SILVER-MARSHALL receivers were designed. SILVER-MARSHALL respectfully offers, to the Federal Radio Commission and to the entire industry, as the answer to the present drastic requirement of more selectivity without distortion of tone quality—so clearly enunciated by General Saltzman . . .



The Silver-Marshall Queen Anne Nine

— a radio built squarely to the aim of "MORE PROGRAMS—CRYSTAL CLEAR"—and housed in the most beautiful cabinet of the year. The Queen Anne Nine, with 4 screen-grid tubes, SILVER-MARSHALL Overtone Control (perfected form of the Overtone Switch introduced by S-M one year ago), automatic volume control, and every other important feature of the year, lists at \$185. Other new SILVER-MARSHALL radios, of equal dollar-for-dollar value, \$135 to \$225 (uniform throughout continental U.S.A.).

SILVER-MARSHALL complete console receivers are sold only through exclusive distributors to franchised dealers. SILVER-MARSHALL advertising appropriations—amounting to more dollars per set than on any other make we know of—are spent in local media—and devoted to sending customers into SILVER dealers' stores. Ask your distributor for startling new SILVER story.

it
sells

four others were on
trial—the customer
purchased the
SILVER!

"I do not hesitate to say that the SILVER has made some wonderful reception demonstrations, and the customers whom I have sold are well pleased. I might also add that I made a demonstration in a home where four other popular receivers were on trial. I did not know at the time I was making the appointment for the demonstration that all of these other sets were there on trial. Nevertheless the customer purchased the SILVER."

— From a Southern dealer
(Name on request)

and it
stays

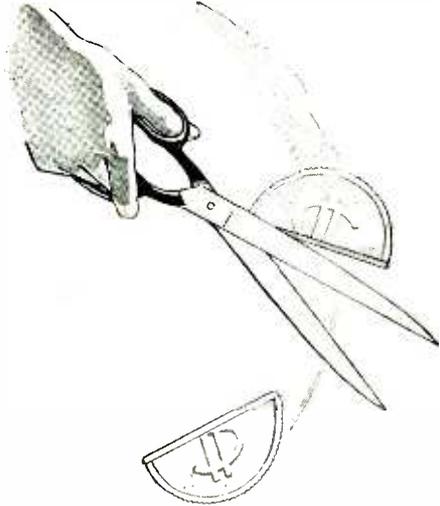
"Lightning burnt off
the aerial"—but the
SILVER RADIO
stood up!

"I do not know whether this will concern you or not—I thought maybe you would like to know what your SILVER RADIO will stand... I have a model 60, and Thursday night it got a real heavy bolt of lightning; to my surprise, the next night on testing out the parts, I found nothing burned out except the switch, one screen-grid tube fuse, and the little coil between aerial and ground. The aerial, however, was burned off about every two or three feet. Pretty good radio, I would say, to stand what it did!"

— F. W. Dowser
3230 Ontario Ave.,
Niagara Falls, N. Y.

SILVER-MARSHALL, INCORPORATED
6421 West 65th Street
Chicago, U. S. A.

No. 1 in the SERIES of REASONS WHY you should SELL TUNG-SOL TUBES



STOP

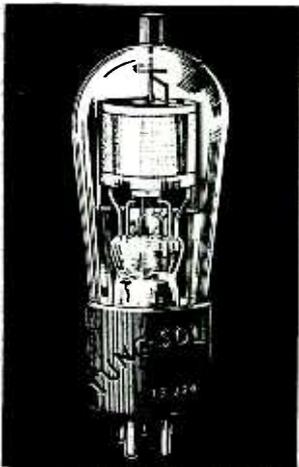
CUTTING A SLICE

from your **PROFIT DOLLAR**

How many times have you been through this: Customer calls on phone: the radio you just sold him won't work. You, or a service man, rush over, and find nothing the matter but a "bad tube" . . . insignificant, but the customer is sore, and you've cut a big slice from your profit dollar.

TUNG-SOL tubes embody four major features that bring faultless reception to even a mediocre receiving set:

- 1** They are humless, operating smoothly and silently over all tonal ranges.
- 2** They are the fastest heating tubes on the market, active in 6 seconds, not 30.
- 3** They are non-microphonic, pleasantly free from crackling, howls or spluttering.
- 4** They are scientifically matched; lest one weak tube rob you of 100% enjoyment.



THAT story repeats itself a hundred times a year . . . service for which you get nothing but which dulls the enthusiasm of your customer for your products, and which cuts deeply into your profits at every call. ¶ If 80% of all radio failure is due directly to tubes then 80% of all service charges can be traced to tube failure. ¶ And that's where your profit dollar goes. ¶ One of the most important features of Tung-Sol tubes is their ability to eliminate this annoying and expensive service charge from your books. ¶ Every Tung-Sol tube that leaves our factory is as inherently perfect as the most advanced service, the most intricate machinery, and the most skilled workmen can possibly make it. They embody improvements in design that reduce the possibility of failure. They are watched through every step of manufacture for the slightest flaw. They are tested and re-tested against a standard of performance far higher than ordinary home service could ever demand. And finally, and most important, they are minutely matched, one to the other, that each Tung-Sol shall deliver exactly what is claimed. ¶ To equip every radio with Tung-Sols will be to insure yourself against loss in the profit dollar. Tung-Sol precision makes dealer profits. It costs us more: but it costs you less.

TUNG-SOL

RADIO TUBES

LICENSED UNDER PATENTS OF THE RADIO CORPORATION OF AMERICA

MANUFACTURED BY TUNG-SOL RADIO TUBES, INCORPORATED, NEWARK, N. J.

with district sales divisions in principal cities

ONLY PERFECT TUBES GIVE FAULTLESS RECEPTION



SPRAGUE *Electrolytic* CONDENSER *In a NEW Display Case*

THE Sprague electrolytic condenser is so far superior, mechanically and electrically, to everything else in its field—that it's only natural it should be merchandised in a vastly superior way.

Here's the new Sprague carton—a standardized package of six standardized 8 MFD units, convenient to display, easy to handle, profitable to sell. Each unit individually mounted in a screw socket. Adaptable for use singly, or in any multiple. Priced at \$2.50 each. And paying you a net profit that makes the Sprague electrolytic condenser one of the best pieces of merchandise in the radio line.

Some of the most aggressive jobbers and dealers in the country right now are making big money stocking and pushing the Sprague line.

SPRAGUE SPECIALTIES CO.
QUINCY (Boston) MASS.
Manufacturers also of the famous
SPRAGUE PAPER CONDENSERS



This three-color card in the window and the colorful Sprague container on the counter mean swift, steady, clean, profitable business.



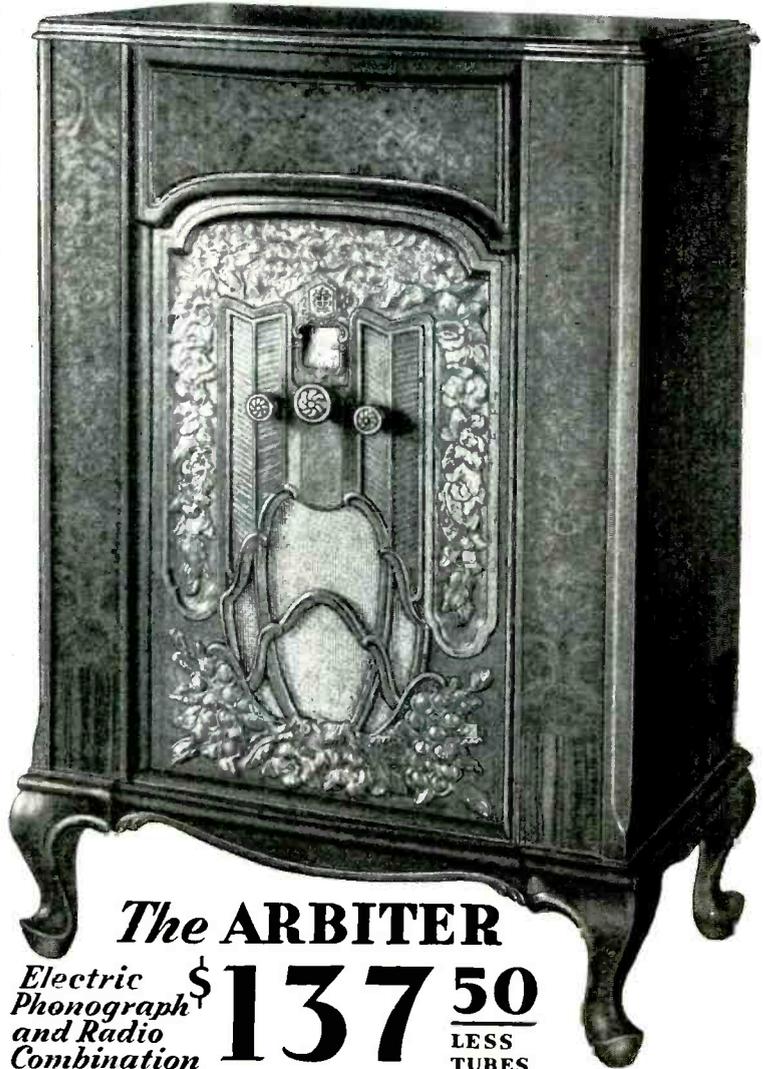
Crosley Brings *NEW* Beauty, Originality, Individuality and Distinction to Radio Cabinet Design and Construction

The Sensation at Atlantic City

The NEW Crosley radio receiving sets are NEW in every respect. *New* chassis, *new* power speakers, *new* cabinet designs, *new* cabinet construction, *new* low prices for the big values offered and the super-performance delivered. Eye-filling beauty, startling originality, distinct individuality, outstanding performance, amazingly low prices—these describe the NEW Crosley sets to the extent that it is possible for words to do so. Actually to see the marvelously designed and executed cabinets, to feel the supreme sensitivity and selectivity of the sets, to hear the astonishingly true tone of the speakers, is the only way to gain a full appreciation of these truly exquisite and gorgeous new radio receiving sets. Neither mechanically nor from the standpoint of appearance is there the slightest ear-mark of anything that has gone before.

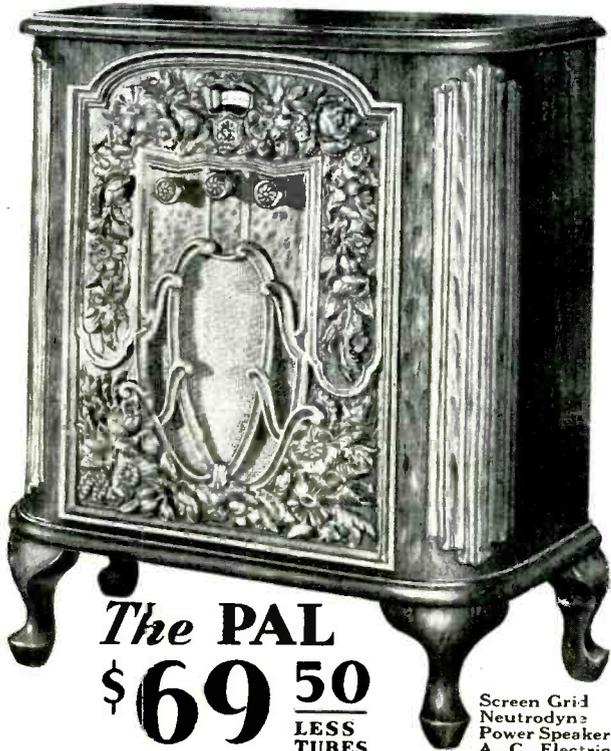
As an example of the beauty, value, originality and distinction of the NEW Crosley line, look at The CROSLY ARBITER shown to the right. An electric phonograph and radio combination at only \$137.50! A highly sensitive and selective Screen Grid, Neutrodyne, power speaker, A. C. electric receiving set housed in a delightfully designed and executed cabinet—plus—an electric phonograph and pick-up. Never before has such an outstanding value been offered in radio. The beauty of the cabinet is self-evident. The latest type Crosley moving coil dynamic speaker is used. The *automatic volume control* maintains a uniform volume all over the dial. The tubes required are: Three Screen Grid type -24, one type -27, two type -45, and one rectifier tube type, -80. Dimensions: Only 35" high, 23½" wide, 14¾" deep.

An Amazing NEW Electric Phonograph and Radio Combination Sensationally Low Priced



The ARBITER

Electric Phonograph and Radio Combination \$ **137** ⁵⁰ LESS TUBES



The PAL
\$ **69** ⁵⁰ LESS TUBES

Screen Grid
Neutrodyne
Power Speaker
A. C. Electric

The NEW CROSLY PAL, illustrated at the left, is another indication of the wonderful eye and money-value to be found in the new Crosley receiving sets. This magnificently beautiful cabinet is only 25½" high yet it houses the Crosley NEW Companionship Series radio receiving set and the newest type Crosley electro-magnetic power speaker. The front and sides are of the exclusive new Crosley Repwood giving all of the most intricate details of a costly original wood carving. The whole cabinet is finished in the finest of dull walnut effects. The set itself is highly sensitive and selective due to the use of three Screen Grid tubes. The tubes required are: Three Screen Grid tubes type -24, one type -45, one type -80 rectifier tube. At the amazingly low price at which it is offered, The CROSLY PAL will be one of the most sensational sellers the radio world has ever seen. Dimensions: 25½" high, 21" wide, 10½" deep. Get in touch with your Crosley distributor today!

THE CROSLY RADIO CORPORATION
POWEL CROSLY, Jr., President Home of "the Nation's Station"—WLW
CINCINNATI, OHIO

YOU'RE THERE WITH A CROSLY

CROSLY RADIO



"RADIO" and "Ray-O-Vac" are inseparable in the American mind. Ray-O-Vac Radio Tubes and Ray-O-Vac Radio Batteries make any radio better. National advertising is telling the Ray-O-Vac story to millions . . . so don't be bashful about keeping your Ray-O-Vac products well displayed for your customers to see . . . and *buy*.

FRENCH BATTERY COMPANY
MADISON, WISCONSIN

General Sales Office: 20 North Wacker Drive, Chicago, Ill.

Autoradio Batteries

Aircraft Radio Batteries

Home Radio Batteries

RAY-O-VAC

"A", "B", and "C" Radio Batteries, Ignition, Telephone, Lantern, and Flashlight Batteries; Rotomatic and Standard Flashlights; Licensed Radio Tubes

When you pick your radio line for fall . . .

*Think
what these facts
mean!*

The public is awake to values – wise to tricks

IT was tough last winter for the manufacturer and dealer who had nothing to offer but gadgets and tricks. Tough for radios built without the necessary combination of research and experience. Tough for the dealer left in mid-season with little or no advertising support.

Think back a year. Remember the glowing promises based on "tricks"? – on trick tuning – trick names – trick "allowances" – trick "controls"? Remember the sudden withdrawal of advertising support when the public refused to bite? Remember the "dumping," with dealers usually holding the bag? Remember that over 7,000 dealers were forced to close their doors during the season?

Then, remember too, that Majestic advertising continued without a break! Majestic dealers sold radios! Almost one-third of all the A. C. radio business in the entire country went to Majestic dealers!

These dealers stayed in business – got their profits – paid no penalty for manufacturers' mistakes.

This fall, a few surviving manufacturers and a few new ones are no wiser than last year. The tricks that flopped then are offered again on "new" models – new lines. You are invited to hold the bag again. Think – before you choose your line for fall.

Majestic will continue to offer performance instead of promises. Tone instead of tricks. Research instead of rhapsodies. Every Majestic will be the best radio that modern science can design. Majestic improvements will be necessary, sound, proved improvements. Sales will be maintained through powerful, continuous advertising. Discounts will be attractive. Business will be good.

Majestic is the line to choose for sure, continuous profits. Make your arrangements now. Keep in touch with your Majestic distributor.

GRIGSBY - GRUNOW COMPANY, CHICAGO, U. S. A.

Majestic
RADIO

Licensed under patents and applications of R. C. A. and R. F. L., Hazeltine and La Tour, by Lektiphone, Lowell & Dunmore and Hogan License Associates.

World's Largest Manufacturers of Complete Radio Receivers



Cabinet by Musical
Products Dist. Co., Inc.,
New York

RADIO RECEIVERS SOLD FOR THEIR BEAUTY —ARE JUDGED FOR THEIR PERFORMANCE

The designing genius of a Sheraton or a Hepplewhite—the interpretive skill of the finest craftsmen in wood and metal, could only produce a beautiful radio cabinet. It requires engineering genius to produce a radio receiver.

Cabinet beauty may sell a receiver, but it is the performance quality built into it by the engineer that keeps it sold—and makes or mars reputation. It is his genius that has developed the salability of the modern receiver. He is the one who has caused

Bakelite Insulations to become the standard for radio receivers and accessories.

It pays the dealer to look beyond external beauty and demonstration performance when selecting radio receivers. Look into the question of insulation—and if it is "Bakelite" your customers are insured against depreciated performance through impaired insulation. Bakelite Insulations are proof against age, service and climatic or temperature variations. Write for Booklet 39, "Bakelite In Radio."

BAKELITE CORPORATION, 247 Park Avenue, New York.

CHICAGO OFFICE, 635 W. 22nd Street

BAKELITE CORPORATION OF CANADA, LIMITED, 163 Dufferin Street, Toronto, Ontario

BAKELITE

REGISTERED U. S. PAT. OFF.

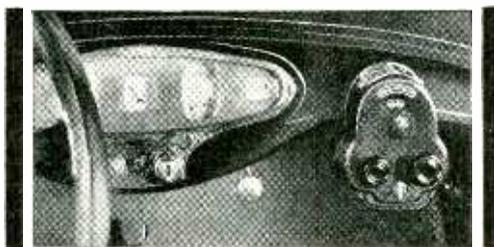


The registered Trade Mark and Symbol shown may be used only on products made from materials manufactured by Bakelite Corporation. Under the caption "Bakelite" is the numerical sign for infinity, or unlimited quantity. It symbolizes that infinite number of present and future uses of Bakelite Corporation's products.

THE MATERIAL OF A THOUSAND USES

BOSCH MOTOR CAR RADIO

THE famous Bosch Radio for the home now has a counterpart in Bosch Motor Car Radio. This newest Bosch Radio model has ALL the superiority quality features



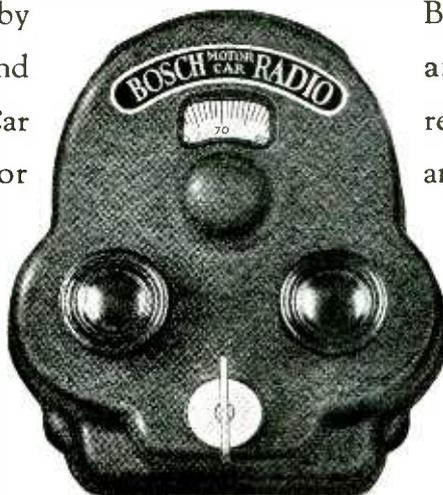
The tuning control unit is compact with illuminated dial, volume control, station selector and switch lock. It is installed without mutilation of panel.

and all the advantages of Bosch Radio for the home. It is a screen-grid tube receiver—four are used with one power tube. Built by engineers expert in both Radio and Automotive fields, Bosch Motor Car Radio is designed for the Motor Car. It requires minimum space; it has a cone type speaker, is completely housed and is simple to install. The single dial tuning control is placed on the instrument board without mutilation of panel or interference with

instruments. No need to disturb upholstery. Bosch Motor Car Radio answers a very pertinent demand—it sells on demonstration because of its superior per-

formance. Bosch Radio is complete with Receiver, Station Selector, Five Tubes, Special B Batteries, Battery Box, Cone Speaker, Antenna and all required shielded cables, ready to install. Price \$140. Western and Canadian prices slightly higher.

It will pay you to have the full story of Bosch Motor Car Radio—mail the coupon.



INSTALLED WITHOUT MUTILATION OF PANEL... NO ANTENNA IN CAR BODY... CONE SPEAKER WELL PITCHED ABOVE VIBRATION AND RUMBLE OF CAR... PRECISION BUILT BY BOSCH AUTOMOTIVE AND RADIO ENGINEERS... SINGLE TUNING CONTROL—SINGLE RADIO UNIT

COUPON ²

American Bosch Magneto Corp.
Springfield, Mass.
Please send me details of Bosch Motor Car Radio.

Name.....
Firm.....
Address.....
.....

Bosch Radio is licensed under patents and applications of R. C. A., R. F. L. and Lektrophone

AMERICAN BOSCH MAGNETO CORPORATION **SPRINGFIELD, MASS.**
Branches: New York Chicago Detroit San Francisco



MODEL 73—Semi-high-boy, authentic Tudor design, built of rare woods. New 70-line Zenith screen-grid chassis. Genuine Automatic tuning. 9 tubes, with rectification. \$265 less tubes. **MODEL 74**—Same design with remote Automatic control. \$315 less tubes. Other Zeniths \$185 to \$2500.

*WESTERN U. S. PRICES
SLIGHTLY HIGHER*

MORE THAN EVER BEFORE

the public
is finding

IT'S EASY TO SENSE THE SUPERIORITY OF A ZENITH

Zenith dealers
are finding

IT'S EASY TO SELL THE SUPERIORITY OF A ZENITH

have you seen

THE NEW ZENITH
70 LINE?

ZENITH RADIO



ZENITH RADIO CORPORATION • CHICAGO, ILL.

AUDIOLA

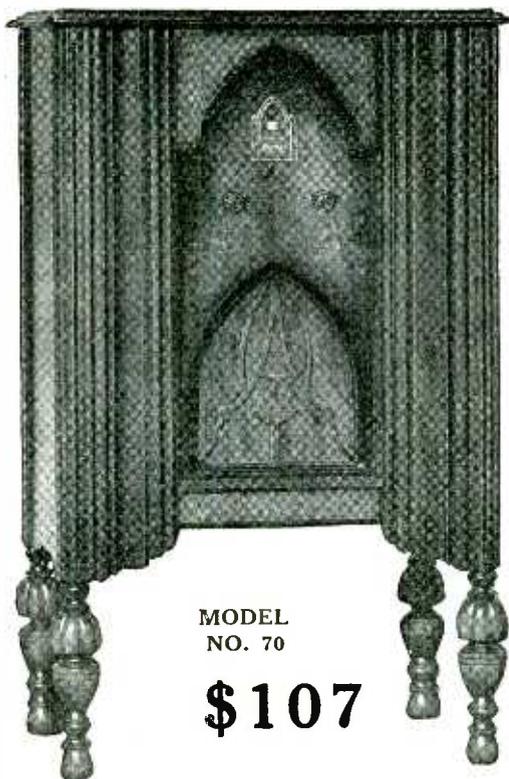
7 Reasons Why the 1931

AUDIOLA

KNOWN FOR ITS TONE

Will Be a Sure Leader for You

1. New four tuned circuit—triple screen grid.
2. Full size electro dynamic speaker, carefully baffled.
3. Highly selective, very sensitive, and absolutely no hum whatsoever.
4. Wonderfully deep, rich tones and clear speech.
5. Translucent dial, calibrated in kilocycles.
6. Handsome modernized Gothic design cabinets with Cathedral grille effect.
7. Sold only through established distributors on exclusive territory principle for your protection.



MODEL NO. 70

\$107

An impressive achievement in radio—AUDIOLA is comparable to the very finest made.

MODEL NO. 60

\$ 97

AUDIOLA will be a real profit maker for dealers. Write for our liberal discount plan.

Fine Quality At Low Cost. A Thoroughbred in Beauty and Performance



MODEL NO. 80

\$119

The new 1931 AUDIOLA represents a value far above its moderate price.

AUDIOLA RADIO COMPANY

430 SOUTH GREEN ST.

CHICAGO, ILL.

RADIO MANUFACTURERS FOR EIGHT YEARS

12 striking improvements in the new MASTER PHONOVOX show why Pacent leadership continues

12 months of research have perfected 12 striking improvements which insure continued Pacent leadership.

12 improvements that give you 12 separate and distinct talking points. 12 talking points that will help you get more business on the Master Phonovox and get it easier!

Every note, every shading of tone in voice or instrument that's in the record, is vividly emphasized by the Master Phonovox. It is America's finest pick-up. It makes *any* phonograph a modern, 1930-model instrument.



MODEL 107

\$15⁰⁰

complete

*Slightly higher
West of the Rockies
and in Canada*

12 reasons why Pacent dominates the field:

1. Improved frequency characteristics through scientific placement of weight.
2. Greater range of reproduction — more bass — more highs!
3. Low center of gravity — better record tracking. Lateral play of armature exceeds lateral cut of record grooves.
4. Built-in volume control.
5. Built-in radio-record change-over switch — go from one to the other in an instant.
6. Full swing back head for easy needle changing.
7. Special Cobalt magnets.
8. Pole pieces specially milled, heat treated and precision ground.
9. All parts in the Master Phonovox precision adjusted to insure a new degree of pickup performance.
10. Correct needle pressure applied through scientific design of head.
11. Ball-bearing swivel tone-arm.
12. Beautiful, modernistic, embossed golden bronze finish.

Get all the facts! Write for literature!

PACENT ELECTRIC CO., Inc., 91 Seventh Ave., New York, N. Y.

Pioneers in Radio Electric & Reproduction for Over Twenty Years

Manufacturing Licensee for Great Britain and Ireland: Igranic Electric Co., Ltd., Bedford, England;
Licensee for Canada: White Radio Limited, Hamilton, Ontario

Another established leader in the accessory field **PACENT ELECTRIC PICKUP BOOSTER**

HUNDREDS of owners of certain popular model radio receivers have found that their sets give admirable radio reproduction but do not give the desired volume from records played electrically. These receivers need only the addition of a booster stage to give wonderful volume and quality from phonograph records when played electrically through the audio system.

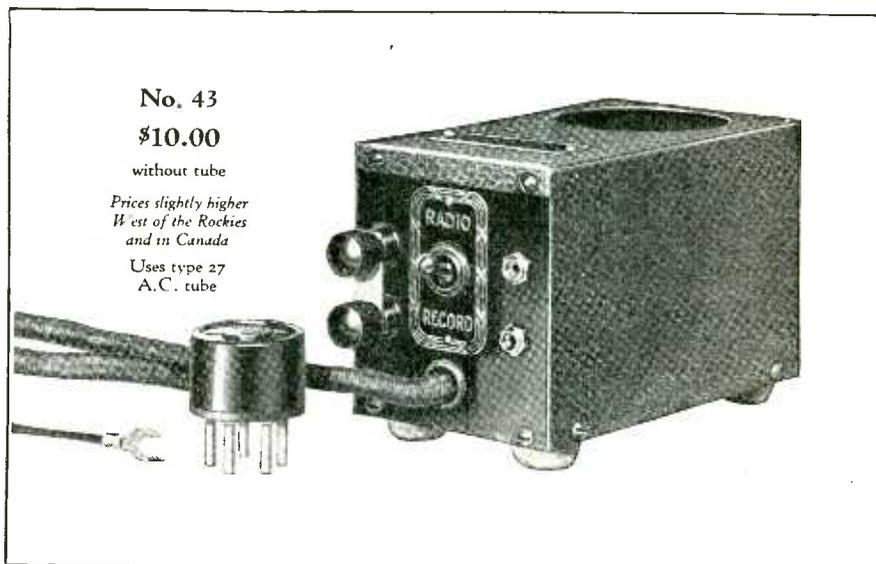
In the Electric Pickup Booster, Pacent again contributes to the advancement of pickup performance. Here is a compact, inexpensive unit for use with radio sets having a power detector and one stage of audio that gives a tremendous boost to pickup volume without the slightest trace of distortion.

The Pacent Electric Pickup Booster can be connected by anyone in two minutes. No circuit or connection changes needed — and once connected, no changes in going from radio to record. Just throw the change-over switch!

Made especially for use with these sets:

BOSCH SPARTON PHILCO
MAJESTIC RADIOLA
and other sets having only one stage of audio

The Booster is worth while with ANY radio set. It multiplies the volume and is equal to adding one more stage of audio. Perfect for large halls, amusement parks, anywhere unusual volume is needed.



No. 43

\$10.00

without tube

*Prices slightly higher
West of the Rockies
and in Canada*

Uses type 27
A.C. tube

**Provides full volume from records
played through sets having only
one audio stage**

PACENT PHONO-RADIO CHASSIS

Equipped with the new 107 Phonovox. Complete with Pacent motor, connection cords, needle cups, etc.

No. 301K List Price, \$50.00

PACENT ELECTRIC PHONOGRAPH MOTOR

Squirrel cage, silent induction type for 110 volt, 50 or 60 cycle A. C.

No. 140 List Price, \$25.00

Manufacturers' prices on request

**WRITE FOR
LITERATURE**

We have some interesting literature on Pacent products. Send for it and be fully posted on this highly profitable line. A penciled note on a post card will do.

PACENT ELECTRIC CO., Inc., 91 Seventh Ave., New York, N. Y.

Pioneers in Radio Electric & Reproduction for over Twenty Years

Manufacturing Licensee for Great Britain and Ireland: Igranic Electric Co., Ltd., Bedford, England;

Licensee for Canada: White Radio Limited, Hamilton, Ontario



We Are Building an Institution in Radio

HERE at the General Motors Radio Corporation we have laid the foundation of a permanent, progressive business—and on this groundwork we are already raising the structure of an institution with ideals and ambitions quite different from those the radio industry has known. The men who represent us—our dealers—have met requirements which establish them, beyond doubt, as trustworthy, reputable merchants. Our product is distinctive in its design, in its appearance and in the way it performs. It reflects, we believe, the extraordinary value that our resources and our experience and our manufacturing abilities help us to create. We want the radio-buyer to prefer this product . . . and to base his preference as much on his confidence in the dealer who sells it and in us who make it, as on his appraisal of the product itself.

The General Motors Radio Corporation has entered the radio field providing more for the radio-buyer than had previously been offered. Some of the ablest engineers in the radio industry have designed a chassis capable of truly exceptional performance. The Tone Selector provides actual mastery of tone, with the turn of a knob. General Motors' vast experience in precision methods has created, at a moderate price, a product of exceptionally high quality—and one that is dependable and lasting.

The same consideration for the buyer is evident in our policy regarding cabinets. In appearance, the models of the new General Motors Radio are admirable adaptations of authentic period furniture. And in order that they may be considered as permanent possessions—like any example of fine cabinetwork—

we shall design any future chassis or speaker so that it may be installed in these present cabinets, and our owners can always enjoy the latest thing in radio at the lowest possible cost.

We have developed these fine instruments . . . established a reputable, responsible organization of exclusive dealers . . . instituted national service . . . pledged ourselves to progressive manufacturing policies and conservative business principles—all, that there may be in radio the same assurance of value, of permanence and of fair-dealing that "Product of General Motors" has come to mean in other fields.

We ask you to judge the sincerity of our purpose and the value of our franchise by the closest investigation. Inquiry by wire or letter will bring complete information.

GENERAL MOTORS RADIO CORPORATION, DAYTON, OHIO



The Capehart Exhibit at the R.M.A. Trade Show, Atlantic City, June, 1930.

What's NEW for 1930?

Thousands of dealers attended the R.M.A. Trade Show at Atlantic City with one question uppermost in their minds: "What's *new* for 1930?"

The Capehart exhibit brought home to these dealers the *one really new* opportunity for profits in the music industry. Capehart music for home and business—a new giant industry in the music field, a rich market waiting to be sold, an opportunity for *real profits* to music dealers.

Investigate this NEW field!

The Capehart exhibit at the trade show gave many dealers their first picture of the rich market for Capehart music. In the complete Capehart line they saw models for hotels, restaurants and confectioneries, models for parks and auditoriums, exquisite cabinets for the home. They realized for the first time the big opportunity for profits which lay in Capehart music. Are you closing your eyes to this new giant in the music field? *Investigate!*

Mail Coupon for Free Book

We'll gladly mail you, without obligation, a book telling the complete Capehart story—the market, the product, the franchise and *evidence* of the profits Capehart dealers have made. Send for it.

Capehart

AMPERION
ORCHESTROPE

THE CAPEHART CORPORATION, FORT WAYNE, INDIANA



*Plays Records on
Both Sides Continuously
No Restacking
Priceless Tone*

**The Capehart Corporation
Dept. B 485, Fort Wayne, Ind.**

Please mail, without obligation, your dealer's portfolio telling full details of the Capehart Dealer's Franchise and descriptions of the full Capehart line.

Name

Address

City State.....

The Business Paper

and

the Open Mind

"SHOW me a business that has ceased to think" says John Moody, famous economist and investment advisor, "and I'll show you a firm that is on the down grade. Show me a concern where ideas are no longer welcome and I'll show you one that is getting ready to die of dry rot. Show me a company that has cut itself off from the stimulation of other men's thought and other men's knowledge and I will show you a firm whose days are numbered."

And on the other hand, wherever you find a healthy, progressive corporation you will find the open mind. You will sense an alertness to know and use the experience of others. Almost inevitably you will discover that executives regularly and systematically read the business papers of their own and related fields. Indeed, it is a fact, striking in the frequency of its recurrence, that outstanding firms make a policy of requiring executives to follow business papers for new ideas, new facts, new developments. From such a policy springs the perennial resourcefulness that brings success.

The business press of today does more than any other single factor to keep business on its toes. Leading thought, improving methods, continually adding to the available store of exact working information, the business press performs a very real service to the Nation.

To that service the business paper of today owes its influence with business men. To that influence it owes its position as a strong, independent organization; commanding a sound, paid circulation; courting no favors; truckling to no influence; earning its advertising revenue because it is the kind of publication in which advertising is both read and believed.

This publication is a member of the Associated Business Papers, Inc. . . . a cooperative, non-profit organization of leading publications in the industrial, professional and merchandising fields, mutually pledged to uphold the highest editorial, journalistic and advertising standards.

THE ASSOCIATED BUSINESS PAPERS, INC.
TWO-NINETY-FIVE MADISON AVENUE · NEW YORK CITY



John Moody is among the best known of economists and financial advisors. As a writer on business subjects he is scarcely less well known than as President of Moody's Investors' Service, investment counsel to many great financial interests. A keen analyst of businesses as investments, few men have better opportunity to evaluate progressive management as a factor in success, or to observe the outstanding part played by technical, industrial and merchandising papers in the development of modern business.



THIS SYMBOL identifies an ABP paper . . . It stands for honest, known, paid circulation; straight-forward business methods, and editorial standards that insure reader interest . . . These are the factors that make a valuable advertising medium.

HOWMANSHIP *is part of* SALESMANSHIP

★
*and what a show you can
put on with the new Fadas*

PROTECTED Tone might well be the slogan of the new Fadas. Unable to improve the close-to-perfection of Fada's famous tone, we have surrounded it this year with devices that guard it against static, and fading, and interference...and that make its sure reception more effortless than ever before in radio history.

Doing so, we have provided Fada dealers with an instrument that puts on a startling performance before a prospect...and satisfies the instinct for showmanship that lies deep in every good salesman.

Enter Mrs. Prospect, roving eye caught at once by the distinguished appearance of the new Fadas. Warned by their rare beauty, she lends a favorable ear to the demonstration you now put on. You turn the dial, and tune in station after station from near and far, announced by name in the lighted window of the Flashograph. Each station performs at the same agreeable volume, without touching the volume control. There is no suggestion of fading; nor any outrageous blast of deafening sound as strong station follows weak.

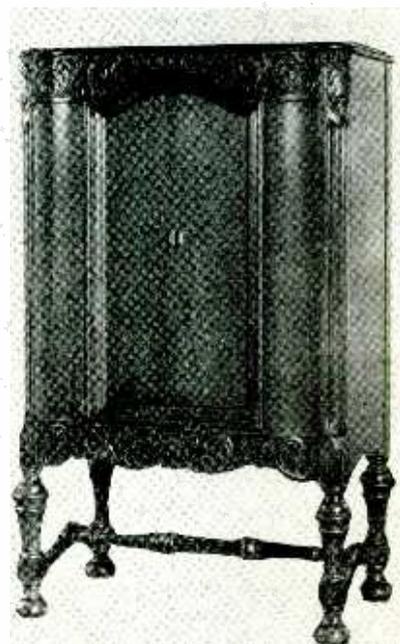
With a flip of the noise filter switch, you pounce upon and subdue a wave of static that threatens to spoil the show. And meanwhile, the utterly lovely, completely satisfying Fada tone has been charming her ears, protected and made more easily receivable than ever before by ingenious Fada circuits always and automatically on the job.

Selling is partly showmanship; demonstration is the crisis of a sale. Fada dealers will find the new Fadas the most responsive, most versatile, most dramatic radios of the year...with sale following demonstration almost as night the day.

Ask us about a Fada franchise. Invite us to tell you the whole Fada story of product and plans. By all the signs...and there are plenty...this is smashingly a Fada year.

F. A. D. ANDREA, INC., LONG ISLAND CITY, N. Y.
Same Prices West of the Rockies. Slightly Higher in Canada and for Export.

*All sets illustrated are
A. C. electric, available
for either 25 or 60 cycle
operation on 90-120
volt lines. 25 cycle
slightly higher in price.*



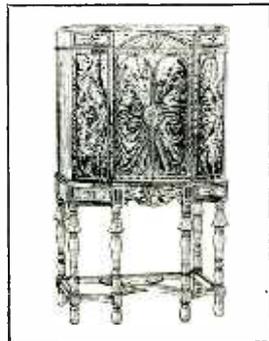
★ The New Fada 44—Sliding Door Lowboy, \$188 without tubes

ONLY THE NEW FADAS HAVE ALL THESE FEATURES

- ★ FLASHOGRAPH
- ★ AUTOMATIC VOLUME CONTROL
- ★ NOISE FILTER
- ★ PRE-SELECTOR TUNING
- ★ TWO-ELEMENT DETECTOR
- ★ LOCAL DISTANCE SWITCH
- ★ HUMLESS OPERATION
- ★ REMOTE CONTROL SHAFT
- ★ PHONOGRAPH CONNECTION
- ★ NINE TUBES, 3 SCREEN GRID



★ The New Fada 12—Open Face Lowboy, \$159 without tubes



★ The Fada 16—Highboy, \$228 without tubes

OTHER NEW FADA MODELS

- ★ The New Fada 31—Highboy, \$218 without tubes
- ★ The New Fada 17—Radio-Phonograph Combination, \$328 without tubes

FADA Radio

1920—SINCE BROADCASTING BEGAN—1930

Philco dealers employ Flexlume combination electrics — colorful neon to attract attention, highly legible raised glass letters to make clear the message—day and night.

Create PRESTIGE



to Increase PROFITS

FAMILIARIZE more of the public with your name, location and service . . . the WHO, WHERE and WHAT of your business. Indelibly impress this three-fold message on passersby; broadcast it to those afar . . . CONTINUOUSLY—by day as well as by night . . . using a Flexlume electric display, the ideal medium to create familiarity, prestige and patronage. Brilliant and continuously operative, Flexlume electrics are designed to attract favorable attention.

More than 100,000 Flexlumes are helping to increase profits for individual businesses. You, too, will find greater advertising value . . . greater sales-producing power in the new Flexlume combination electrics—utilizing brilliant neon colors for sure attraction, in combination with beautiful raised glass letters (illuminated from within) for long-distance reading . . . or with flashing exposed lamps for spectacular effects of light in motion.

'Phone "FLEXLUME" in your city. Take up with our representative your electrical advertising needs; or write us to submit, entirely without obligation, suggestions and color sketches of a display to fit your exact requirements. We will tell you how you can enjoy the benefits of electrical advertising on a monthly-payment plan or rental basis. FLEXLUME CORPORATION, 1049 Military Road, Buffalo, N. Y.



NEON TUBE . . .
RAISED GLASS
LETTER . . . EXPOSED
LAMP or COMBINATIONS

SALES AND
SERVICE OFFICES
IN CHIEF CITIES OF
U. S. AND CANADA

TELL YOUR CUSTOMERS! HOW NEW B-H RECTIFYING TUBES

IMPROVE
RECEPTION



*Carton or four
Eveready Ray-
theon B-H Tubes.*

EVEREADY RAYTHEON B-H

MILLIONS of "B" eliminator units have been sold in the last few years. Giving satisfaction, making friends, for those who sold them.

Few dealers realize the extent of the replacement market in their communities. Have you thoroughly combed your community?

New Eveready Raytheon B-H Tubes give a vast improvement in reception. Suggest them to customers who are using "B" eliminators.

They come in handy cartons of four tubes. Always have at least one carton on hand!

* * *

The Eveready Hour, radio's oldest commercial feature, is broadcast every Tuesday evening at nine (New York time) from WEAJ over a nation-wide N. B. C. network of 30 stations.

NATIONAL CARBON COMPANY, INC.

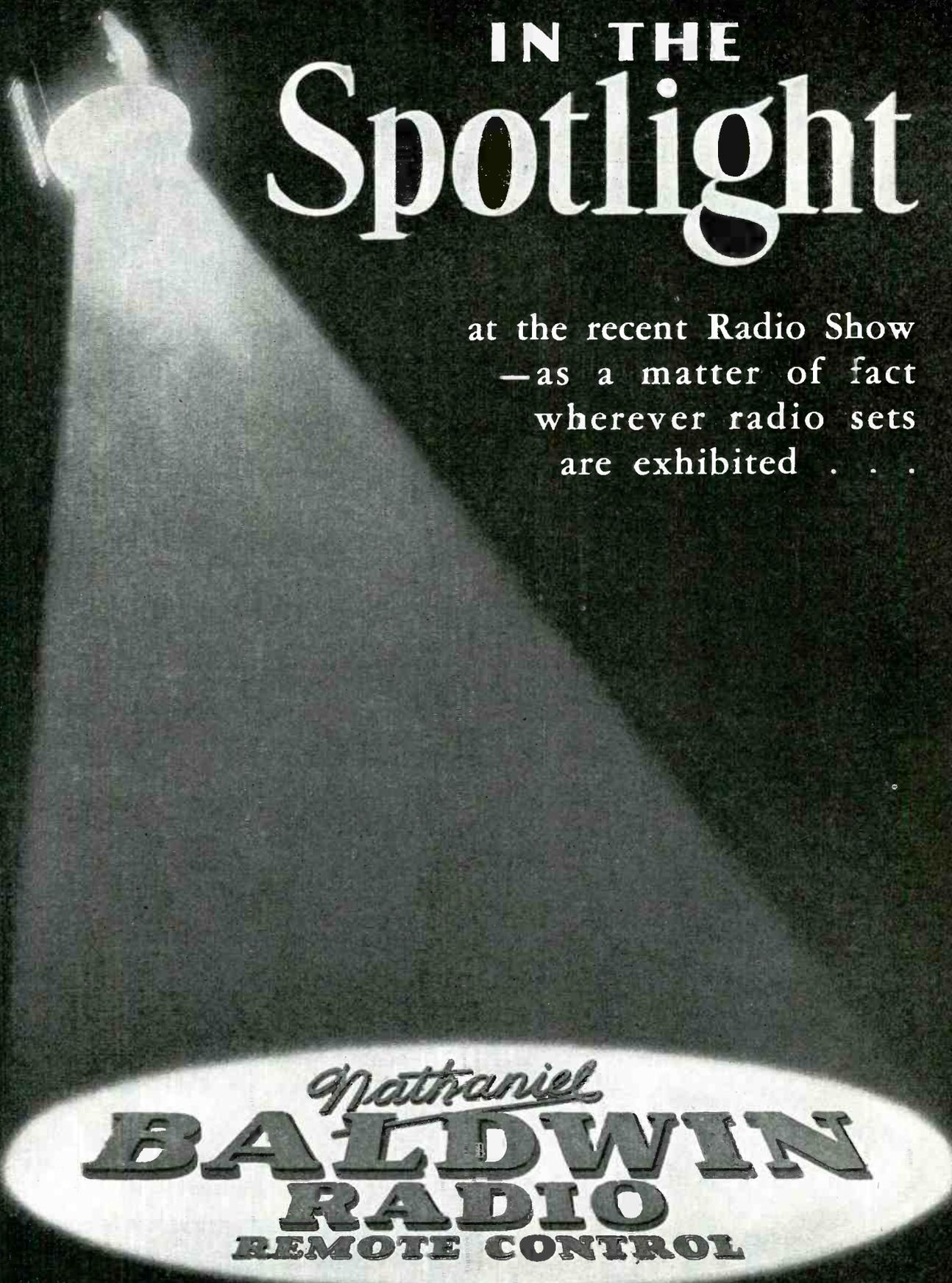
General Offices: New York, N. Y.

Branches: Chicago Kansas City
New York San Francisco

Unit of Union Carbide  and Carbon Corporation



Trade-marks



IN THE
Spotlight

at the recent Radio Show
—as a matter of fact
wherever radio sets
are exhibited . . .

Nathaniel
BALDWIN
RADIO
REMOTE CONTROL

Nathaniel Baldwin Incorporated, 1501 S. Michigan Ave., Chicago

ABOUT CABINETS

What would it mean to you to buy your cabinets from a company with an unbroken record for strict adherence to specifications, correct engineering, meticulous workmanship and prompt, safe delivery?

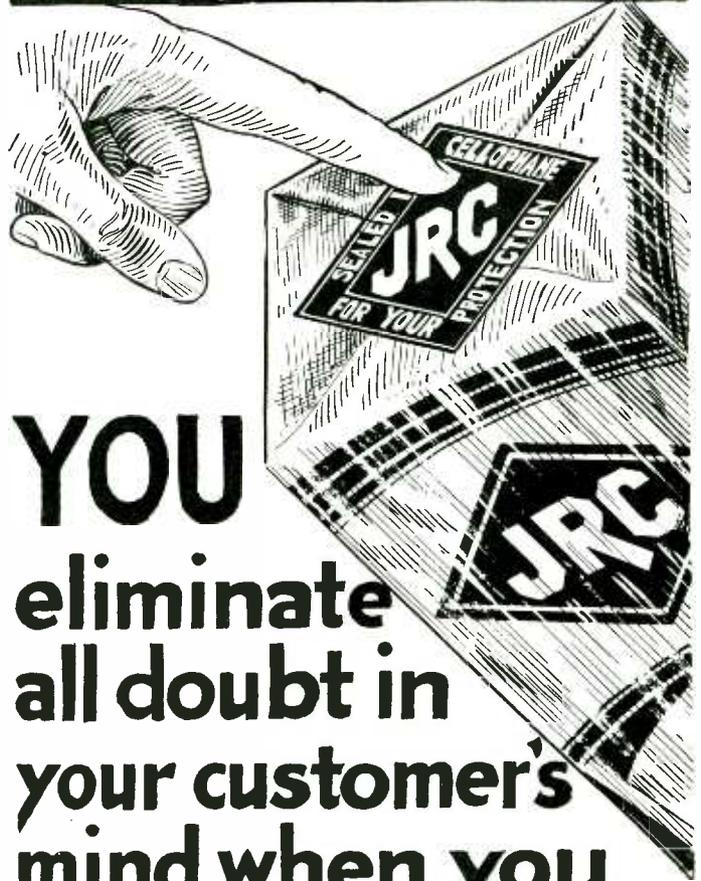
An informal talk with **ADLER-ROYAL**

will convince you that you can still buy cabinet work that reflects the conscientious scruples of master workmen and at prices that will prove their real economy in your balance sheet.

ADLER MFG. CO., Incorporated
LOUISVILLE, KY.

DEPENDABLE CABINETS NEED COST NO MORE

CONFIDENCE



YOU eliminate all doubt in your customer's mind when you sell **JRC** Tubes sealed in Cellophane

You'll be surprised at the continuous turnover. The sealed-in satisfaction has a customer-appeal that is irresistible.

JRC Tubes are unequalled in performance—unmatchable in durability—JRC Tubes are their own best salesmen.

JRC Tubes under any test immediately prove their superiority.



JOHNSONBURG RADIO CORPORATION
JOHNSONBURG, PENNA.

Chicago Office
New York City Office

28 E. Jackson Blvd.
55 W. 42nd Street

This is the Auto Radio Battery

That's Selling

NOW!

BRIGHT STAR



3095-AR
Auto Radio Battery

Special constructed
to withstand shock.

Terminals and con-
nections will not
break apart.

Battery absolutely
moisture proof.



A Battery You Can Recommend For This Service

This Special 3095-AR Bright Star Auto Radio Battery will improve the reception of any Auto Radio Set. Powerful, silent, long lived, they increase range and volume.

The use of a special protective composition in their construction makes them *absolutely moisture proof* and impervious to the handicap of hot weather.

The surprising power and long life inherent in all Bright Star batteries is maintained by scientific manufacture—the central feature of which is the original Bright Star "Bag Type" cell construction.

Bright Star batteries have *earned* their reputation —"Supreme in Every Test."

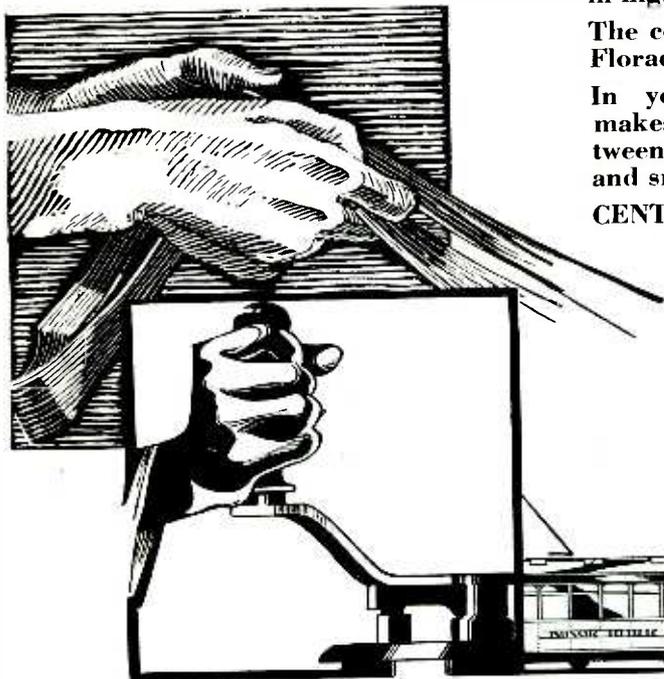
This Special 3095-AR Bright Star Auto Radio Battery will deliver the service required by your trade. Now is the time to cash in on the lively demand for this type battery. Get in touch with your jobber; IT COSTS NO MORE than you are now paying for our regular 3095. When ordering Auto Radio Batteries, specify No. 3095-AR.

BRIGHT STAR BATTERY CO., INC.

Main Office and Factory—HOBOKEN, N. J.
Branches—CHICAGO, ILL., SAN FRANCISCO, CALIF.

TWENTY-ONE YEARS BUILDING THE QUALITY LINE

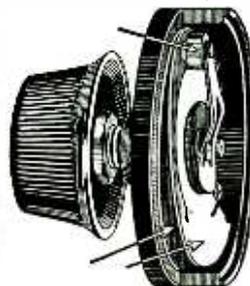
"Whoa! FLORADORA"



... and being a good ol' mare she threw herself in high whenever traffic became halfway profitable. The controller box on the modern street car puts Floradora to shame.

In your radio the control makes all the difference between raucous, crackly noises and smooth, velvety reception.

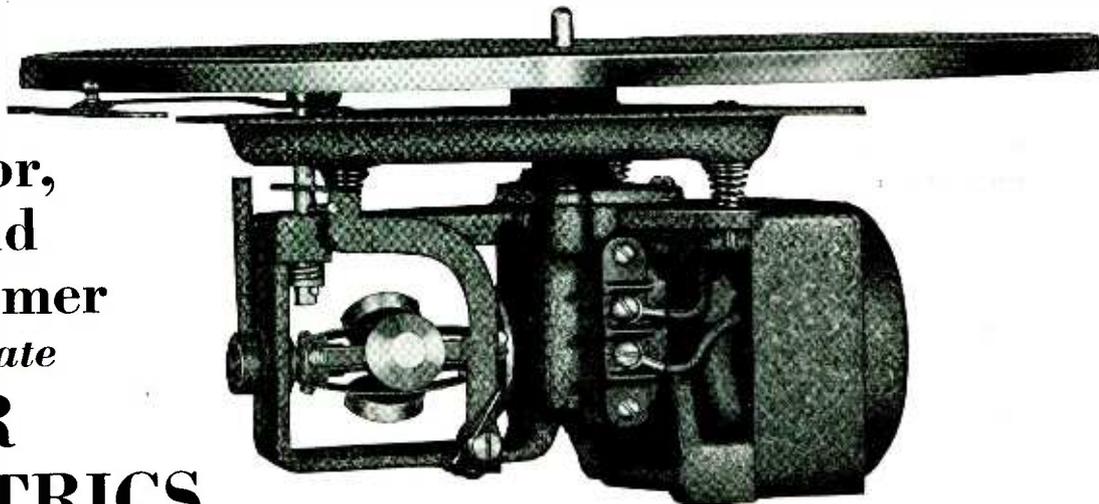
CENTRALAB performance explains why you will find these volume controls in millions of modern sets.



Centralab

CENTRAL RADIO LABORATORIES
Dept. 140-D 20 Keefe Ave.
Milwaukee, Wis.

Write Dept. 140-D for free booklet "Volume Controls, Voltage Controls, their uses."



Distributor,
Dealer and
Consumer
can appreciate
**FLYER
ELECTRICS**

To every customer for Radio-Phonograph Combinations, the Flyer Electric Phonograph Motor is more than just an apparently good motor.

It is the product of a factory where superior phonograph motors and light electrical apparatus have both been successfully produced in large volume for a long time. Over 5,000,000 Flyer Phonograph Motors with spring power made and sold in 15 years. Similar success in electrical manufacturing for over a quarter century. By the same organization and plant.

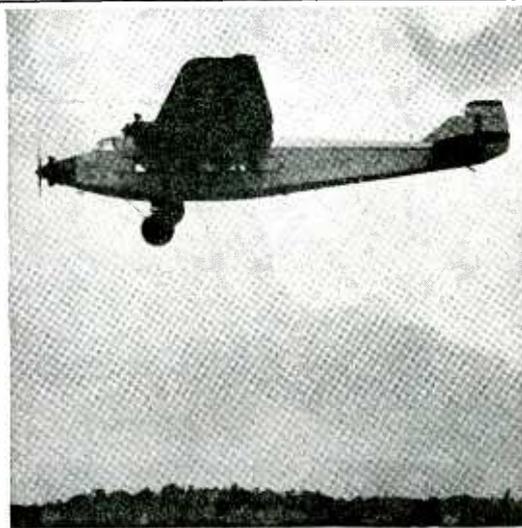
The Flyer Electric's perfection of coordination, balanced efficiency, and all-round superior merit, are largely the result of this very great and fortunately unified *balanced* experience.

Every customer can understand and appreciate these important advantages. We should be glad to tell you—and demonstrate—the actual working superiorities of the two Flyer Electric Phonograph Motors.

The new Blue Flyer Electric Phonograph Motor, specially designed for Radio-Phonographs. Operates on all voltages and frequencies, with ample power for heaviest pick-ups on all records. Silent spiral-cut fiber gears; long over-size bearings. Open construction, completely ventilated—no overheating in closed case or cabinet. Automatic stop equipment is optional. *Responsibly Guaranteed.*

The GENERAL INDUSTRIES CO.
3043 Taylor Street, Elyria, Ohio

S T E A D Y



A

safe quality in
these hectic days

High
Spots!

— steadiness in volume, no fading. Automatic volume control keeps the sound — level, uniform—and it brings in stations without blasting, without whispers. An extraordinarily valuable Browning-Drake feature, then four screen-grid tubes, power-detection, push-pull audio, equalized band-pass filter, automatic call-letter tuning, extraordinary dynamic speaker, remote control on some models. The most exquisite cabinets ever made. Send for full descriptive matter and details on the Browning-Drake franchise.

When business begins to look up steadiness in a manufacturer counts for even more than when it looks down. Level heads make level leadership. And level leadership is careful to avoid the snares that beckon to manufacturers and dealers in the incessant drive for business.

The dealer who ties up with the level-headed Browning-Drake franchise drops the gamble out of the future, plays safe and reinforces himself with *that steadiness* that builds sound, lasting business and generous, genuine profits.

This has been the Browning-Drake policy and Browning-Drake dealer experience since radio was in swaddling clothes.

Write for Booklet "R.R."

BROWNING-DRAKE CORPORATION
224 Calvary Street, Waltham, Mass.

A pioneer manufacturer of quality radio apparatus

BROWNING-DRAKE SCREEN-GRID RADIO

MORE THAN 1,500,000 PEOPLE LISTEN-IN ON BROWNING-DRAKE SETS

Uo think of
TRANSFORMERS
 is to think of
THORDARSON

**TRANSFORMER
 SPECIALISTS**
Since 1895 « «

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- Microphone Transformers . . .
- Line to Tube, Tube to Line, Line to Line
- Mixing Transformers ● Coupling Trans-
formers ● Filter Chokes
- Audio Transformers ● Impedance
Matching Transformers ● Power
Compacts
- Speaker Coupling Transformers
- Complete Amplifiers

Catalog of new Replacement Power and Audio
Transformers will be sent upon request

Thordarson Electric Mfg. Co.
 Huron, Kingsbury and Larrabee Streets, Chicago, Ill.



\$12 NET

Counter
Tube Tester . . . gives
you a complete check
of every tube, quickly

You will want this tube tester on your counter to quickly and accurately check every tube you buy and sell. Connects to A.C. line supply. No bad tubes get by—it gives all the important readings for a complete test; Eight sockets take care of every type tube; Screen Grid, Pentode, Rectifier and other tubes in general use.

Comes complete, ready to use, in an attractive baked enamel seamless steel case; rugged, accurate, compact, indispensable.

Order yours today.

This meter takes the guesswork out of tube testing—gives complete information on the tubes you buy and sell and returns. Send for Readrite Catalog describing these and other Readrite Meters.

Order from your jobber. If sent direct remittance must accompany order

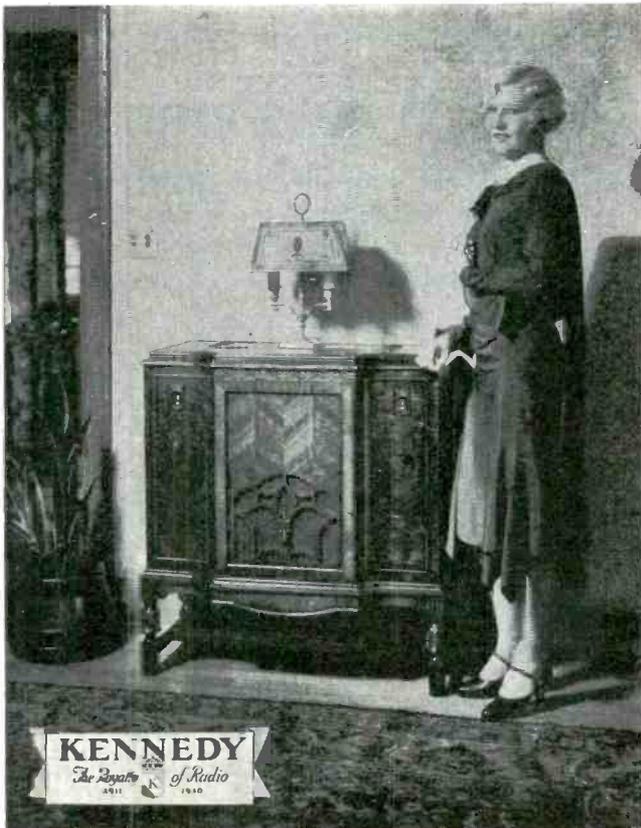
The READRITE Meter Works
 Established 1904
 6 College Ave., Bluffton, Ohio



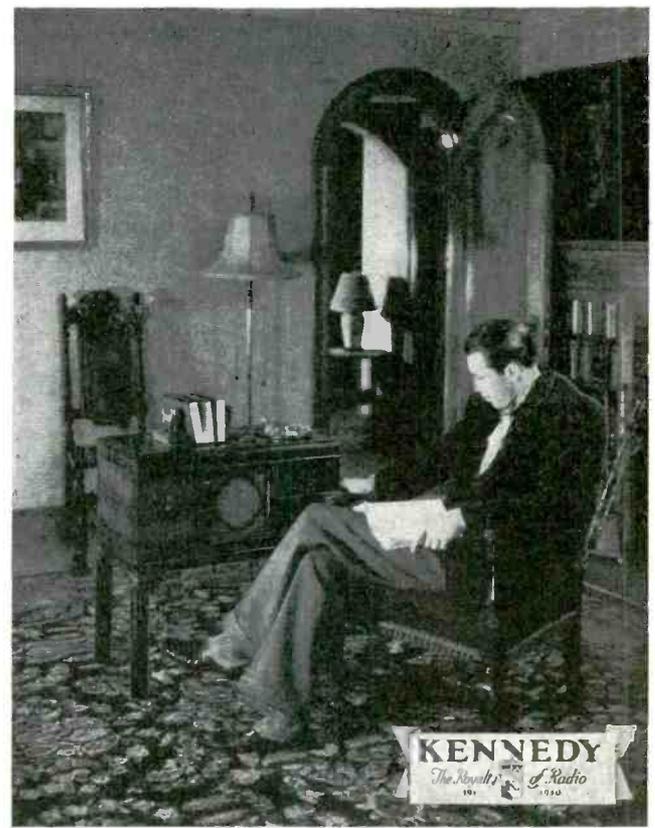
Royal Model 726. De Luxe Highboy. Straight radio, \$229; radio with remote control, \$285; radio with automatic phonograph, \$390; all prices less tubes.



Royal Model 526. Open-face Highboy. Furnished in straight radio only, with tip-jacks and switch for phonograph pick-up. \$169, less tubes.



Royal Model 826. Special Console. With long wave, \$199; long and short wave, \$252; long wave and phonograph, \$242; long wave and automatic phonograph, \$304; all prices less tubes.



Royal Model 426. Arm Chair Model. Furnished in straight radio only, with tip-jacks and switch for phonograph pick-up. \$159, less tubes.

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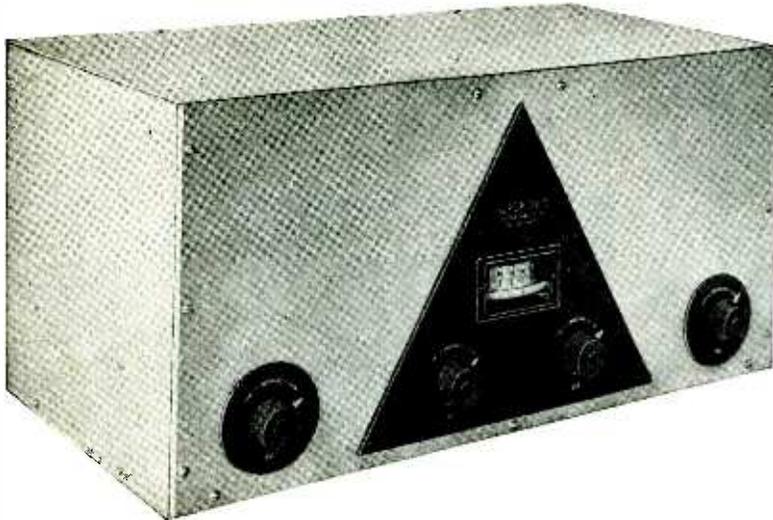
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All Models have SELECTONE Control, Double Volume Control, Automatic Line Voltage Regulator.



**England...Siam...
Africa...
each an inch
away!**

The Norden-Hauck Short Wave Super DX-5 annihilates distance and brings stations thousands of miles away right to your door—clearly—distinctly—via short waves.

Think of the fascination that comes with tuning in on England—South America — Africa — Australia — Holland!

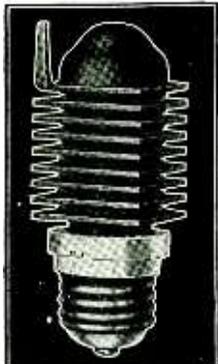
That's the thing you can sell—ROMANCE of RADIO. *BUT* sell it while it's new! You can do it easily and profitably with Norden-Hauck Super DX-5. Write or wire for details.



SHORT WAVE
SUPER DX-5
RADIO RECEIVER



NORDEN-HAUCK, Inc., Engineers
MARINE BLDG., PHILADELPHIA, PA.



**B-L
RECTIFIERS**
DRY....NOISELESS
Durable....Compact

Type C, B-L Rectifying units are single-wave charger bulbs. Furnished with Edison screw base. Pin or side contact.

B-L Rectifiers furnish smooth, unfailing power to electrical apparatus and equipment requiring low voltage rectification, such as chargers and

"A" power units. They are ideal for replacing electrolytic rectifiers or liquid elements—they increase the charging rate of old chargers and eliminate constant care and addition of water and danger of spilled acid.

Your stock is not complete unless you include B-L Rectifiers. Information and illustrated literature will be sent you upon request. It will pay you to investigate this money-making line. Write today.

THE B-L ELECTRIC MANUFACTURING CO.
ST. LOUIS, MO.

B-L laboratory can serve you wherever rectification is involved. Our engineers are at your service. Give us the voltage and amperage desired and other details necessary and our engineers will be glad to make specific recommendations.



ACME WIRE PRODUCTS

Parvult Filter and By-Pass Condensers,
Coils—Magnet Wire Wound,
Varnished Insulations

Magnet Wire - - - All Insulations

All products made to Recognized Commercial Standards, including those of:

National Electric Mfrs. Assn.
Radio Manufacturers' Assn.
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For more than 25 years manufacturers and suppliers to the largest and most discriminating users.

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NEW HAVEN, CONN.

Branch Offices

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52 Vanderbilt Ave.

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842 N. Michigan Ave.

Cleveland
Guardian Bldg.

Condensers-Resistances Transformers



Test Them With RCT

Poorly insulated and otherwise defective condensers may be detected at once by means of the type RCT "King" Radio Condenser Tester. Measures capacities from 1/10 to 8 Microfarads.

Also operates as an ohmmeter to measure resistances from 150 to 30,000 ohms — as a radio transformer tester and as a continuity tester.

Transformer—250 milli capacity. Tube socket for type 281 tube permits use of 500 volts D.C. as well as 500 volts A.C.

Net price \$17.50—without cover \$15—send for our booklet describing our complete line of instruments.

"KING"
INSTRUMENTS
THE ELECTRIC
HEAT CONTROL Co.
CLEVELAND, O.

An Engineering Achievement that opens A NEW PATH of PROFITS in A.C. Accessories ---



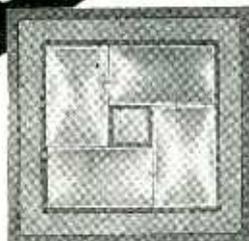
The
NEW

CORDONIC
CONDENSER TYPE (TAPESTRY)
EXTENSION WALL SPEAKERS

DEALERS will find the new CORDONIC Condenser Type Extension Speaker the most important, practical and profitable A.C. Accessory developed in recent radio history. Supplied in one, two, four and six plate sizes, complete with rosettes, hanging cords, switches and a wide selection of distinctive, art tapestry designs, the new CORDONIC instantly appeals to every radio owner and enhances the sales value of any standard receiver.

The new CORDONIC Condenser principle of sound amplification ushers in a new standard of speaker performance, and combines remarkable simplicity of construction with ease of installation. The speaker is practically indestructible and has only one moving part. There are no coils to burn out or parts to get out of adjustment. For special applications they may be constructed in such manner as to favor either high or low frequencies. They are supplied with an automatic universal adapter for use with any standard receiver.

The electrical efficiency is very high as the CORDONIC Condenser Speaker represents the most direct conversion of electrical energy into sound. It operates without the use of magnets, coils, or paper cones; it commands new volume and brilliance, and makes possible a length of service life hitherto unheard of in speakers of any type. By all means investigate the unique and unprecedented profit opportunities awaiting you in this most modern and most versatile of all A. C. accessories. Write for details today.



CORDONIC Extension Speakers Are Supplied in One, Two, Four and Six Plate Sizes.

Above is a standard four plate CORDONIC speaker assembly. The ideal plate size: (6 1/2 x 11-in. thickness) with 1/2-in. overall thickness makes possible a wide variety of extension wall speaker designs. Any number of these speakers can be connected and operated automatically with any radio set, regardless of tubes used.

MANUFACTURERS—learn how CORDONIC Condenser Speaker plates can enhance the value and salability of any receiver. Detailed information will be supplied upon request.

CORDONIC
MANUFACTURING CORP.
HOLLAND, MICHIGAN.

SELL A.C. RADIOS IN D.C. DISTRICTS

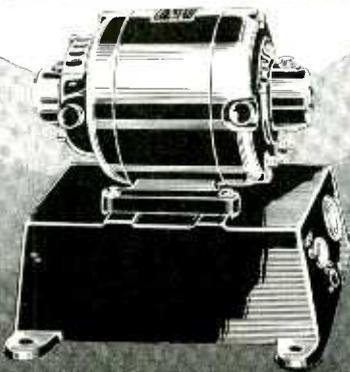
Changing D.C. to A.C.—providing current as good as though the power were derived from an A.C. line—Janette Rotary Converters with an exclusive Janette Filter eliminate all ripple and hum generally found in ordinary converters.

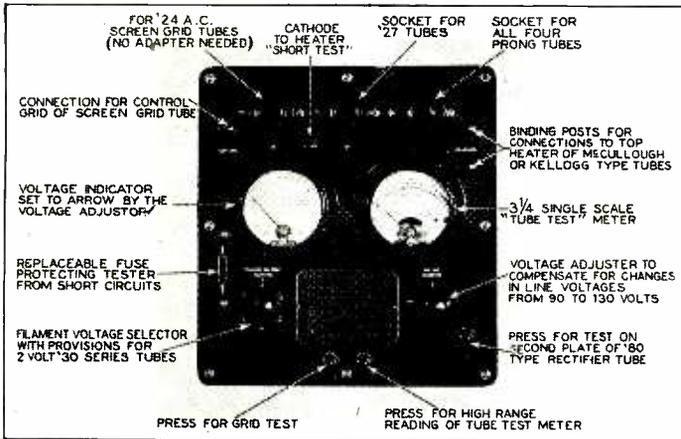
Thousands of Janette Rotary Converter installations all over the world prove beyond all doubt that the problem of how to operate A.C. radios on direct current has been definitely solved. Standard converters available for 32, 115 and 230 volts D.C.

Write for Bulletin 729-C

JANETTE MANUFACTURING CO.

550 West Monroe St., Chicago
Singer Bldg., 149 Broadway, New York
Real Estate Trust Bldg., Philadelphia





What Price ~ ~ ~ TUBE CHECKERS?

What Value ~ ~ ~ Consumer Confidence?

If you are a manufacturer of radio tubes you doubtless employ the best obtainable instruments to check the quality and uniformity of your product. For engineering developments, research, patents and promotional activities you are prepared to spend an appreciable amount of money to advance your standing with the trade and consumer.

If you are a dealer you stand between manufacturer and consumer, responsible to both for the sale of tubes which measure up to published claims of performance.

Where so many interests are dependent on thorough tube inspection at the time of sale, it is advisable for the manufacturer to recommend or provide—and for the dealer to use—a counter tube checker which will assure absolute reliability of test results.

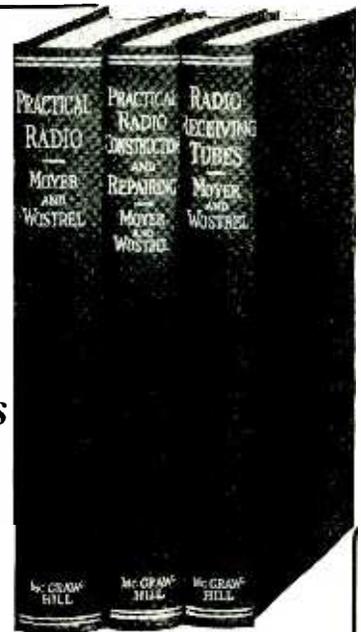
WESTON MODEL 555 COUNTER TUBE CHECKER

This is a most advanced design, made to meet the fullest dealer requirements. It is a rapid, accurate and thoroughly scientific instrument. Costing somewhat more than many devices of similar purpose, the WESTON TUBE CHECKER will, however, pay for itself many times over in the superior service and protection it affords. Investigate. Write for descriptive literature or ask your instrument supply house to submit demonstration sample.



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Three
Books
that
will
Triple
Your
Opportunities
in the
Radio
Industry—



A modern and practical library that covers the building, repairing and servicing of radio receiving sets—
It serves alike the needs of the amateur and the commercial dealer and serviceman—

Radio Construction Library

Three volumes, 993 pages, 561 illustrations, 6x9.

By **JAMES A. MOYER**, Director of University Extension, Massachusetts Department of Education, and **JOHN F. WOSTREL**, instructor in Radio Engineering and Supervising in Charge of Industrial Subjects, Massachusetts Department of Education.

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10 DAYS' FREE EXAMINATION—SMALL MONTHLY PAYMENTS

Examining these books free for ten days. You will find them invaluable as a home study course and as a reference in the daily radio problems which you meet in your business. Simply fill in the coupon and the books will be sent to you postage prepaid; there is nothing to pay if they do not prove satisfactory. At the end of ten days send us only one dollar and then two dollars a month until the price of seven dollars has been paid. If at the end of the examination period the books are not satisfactory return them to us—No red tape—No agents.

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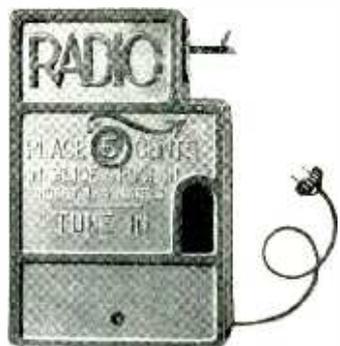
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Home Address

City and State

Name of Company

Occupation R.R. 7-30



**Slusser
Coin-Radio
Attachment**

**..... turns Listeners
into big, new profits**

Here is a new source of profit for the radio dealer—the Slusser Coin-Radio attachment—quickly applied to any radio.

Every public place is a prospect—wherever people congregate to listen—the Slusser makes a radio profitable.

It's automatic—requires no wiring—plugs into any outlet. Operates only when a nickel is inserted—a nickel plays for six minutes. A number of nickels may be inserted at once giving continuous operation. Cash in on it—write today for prices, discounts and complete description.

**FRANK E. PIERMAN, Manufacturer
OTTAWA, OHIO**



**MAKE the BACK DOOR
of BUSINESS —
the FRONT DOOR
of PROFIT!**

Increase your profits by increasing the efficiency of your Service Department.

A well-equipped service man can maintain periodical contacts with set owners; analyze their sets; test their tubes and recommend the purchase of the proper replacements necessary to the efficient operation of the sets.

DayRad Radio Testing Instruments are engineered to cover all service needs for bench or portable operations. For accuracy, simplicity, speed in operation, economy and completeness, DayRad is becoming more and more the exclusive testing equipment for dealers and service men throughout America.

Write for Complete Catalog.

**THE
RADIO PRODUCTS CO.**

Write Department "R"

5th and Norwood

Dayton, Ohio

**PROFITS
THAT COME FROM
REPEAT BUSINESS**

The cost of the first sale to a customer is the highest. Repeat business brings with it lower costs and greater profits.

Dealers who build up substantial service business, do so by proving the permanence and goodness of their work for the customer.

There is satisfaction and profit in service work well done. Good work and good materials go together. Permanent, lasting repair jobs are possible only when good materials are used.

The employment of puncture proof filter condensers in B-Eliminator and Power-Pack repairs assures you that the customer's satisfaction with your work will not be destroyed by the failure of the condenser in service.

Mershon (Puncture Proof) Electrolytic Filter Condensers eliminate once for all time the danger of returns due to voltage breakdown.

Not only are they, themselves, immune from damage, but they protect against voltage surges their associate equipment as well.

THEIR FIRST COST IS LOW.

THEIR USEFUL LIFE IS UNLIMITED. They actually improve with use.

THEY ADD PROTECTION TO THE POWER CONVERTER, by absorbing Voltage Surges.

THEY INCREASE THE FILTERING EFFECTIVENESS OF THE B-SUPPLY, because of the larger capacity they offer.

ALL IN ALL, THE MERSHON CONDENSER OFFERS YOU AN ACCESSORY FOR YOUR SERVICE SHOP THAT WILL INCREASE YOUR BUSINESS AND CUT YOUR SERVICE COSTS.

The Mershon Electrolytic Condenser is not a new, untried product. Although just this year made available for general distribution, it has been manufactured for nine years.

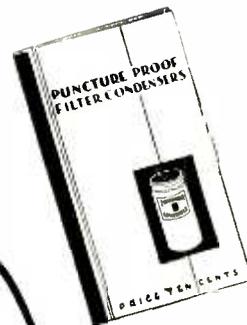
More than 3,000,000 of them are in use today, incorporated in the receivers of a long list of prominent radio manufacturers.

The Mershon Condenser (its value in the filter circuits of manufactured radio receivers proven by actual experience) is a profitable item for you.

This handy, pocket-size booklet explains the principles and construction of the Mershon Condenser, illustrates its newest developments, and shows its most effective uses. Your Service Manager should have one.

A complimentary copy will be sent you on request.

Use the convenient coupon.



Mershon Electrolytic Condensers are manufactured exclusively by

**THE
AMRAD CORPORATION**

290 College Avenue

Medford Hillside, Massachusetts

The
Amrad Corporation
290 College Avenue
Medford Hillside, Mass.

Please send me a complimentary copy of your booklet "Puncture Proof Filter Condensers."

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REPLACEMENT TRANSFORMERS, CONDENSERS RESISTANCES

Replace with MAYO. "They're Guaranteed"



CONDENSERS FOR		
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MAJESTIC A.....	\$7.50	\$3.75
Kodel (3 condensers).....	10.00	5.00
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Knapp (uses 3 this type)...	4.00	2.00 ea.
Elkon (replacement).....	4.00	2.00
Fada (ABC).....	4.00	2.00 ea.
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	List	Net
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Zenith.....	7.00	3.50
Atwater Kent No. 37.....	10.00	5.00
Majestic Set (1928).....	10.00	5.00

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	List	Net
Majestic B.....	\$5.00	\$2.50
Majestic A.....	9.00	4.50
Zenith, Mohawk, Stewart Warner and all packs made by Majestic.....	9.00	4.50
Atwater Kent.....	8.00	4.00

Send for Catalog for Complete List

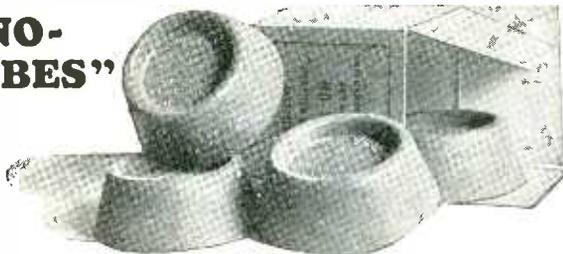
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RESISTANCES
A Complete Line of Wire Wound Resistances

Write for new catalogue sheets

MAYO LABORATORIES, Inc.
281 East 137th St., New York City

"NO-VIBES"



Cash In---Volume and Long Profits

Dealers everywhere report big volume sales on NO-VIBES, the sponge rubber cushions that absorb shock and vibration. Under the legs of a radio cabinet they improve tone quality and reception—reduce the noise of electric refrigerators and oil burners. Cash in—send for discounts—price \$1.00 per set.

District Sales Office Excel Radio Tubes
The DALITZ MFG. CO., 570 Erie Bldg., Cleveland, Ohio

100% Shadowgraphed Inspected

DYNAMOTONE NEEDLES

Approved by
Electrical Research Products Inc.
for use with

MADE BY
W.H. BAGSHAW, CO.
LOWELL, MASS.
U.S.A.

Now you can give them music worthy of the BEST instruments . . . and make more MONEY! Don't be without this great sales aid! Samples on request!

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- sales letters and correspondence
- radio broadcast programs
- slogans, trade names, trade marks
- address labels, tags, pasters
- catalogues, booklets, folders
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The Advertising Handbook

By S. ROLAND HALL

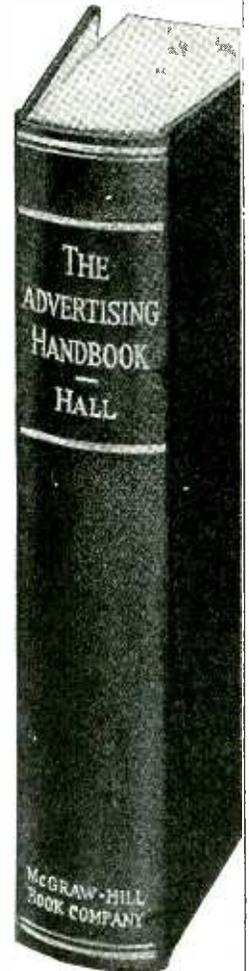
Advertising Counselor; formerly Advertising Manager, Alpha Portland Cement Co., and Victor Talking Machine Co.; formerly Director, International Correspondence Schools of Advertising Salesmanship.

HERE is a complete source of proven data for the man who buys, writes or sells advertising service. For eight years this book has been the standard work in its field. The new second edition, just off the press, has been enlarged by nearly fifty per cent. It now covers the most up-to-date methods of advertising—methods which are being used by large and small organizations everywhere. The plans advocated are those which have actually paid results.

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The new edition devotes an important section to radio broadcast programs as a method of advertising. Practical information on preparing an interesting program and making effective use of this medium are described.

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Flexible Binding
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(Books sent on approval to retail purchasers in the U. S. and Canada only.)

R.R. 7-30

BYRD USED A COMPASS!

Flying high over the uncharted mountains and seas of the treacherous Antarctic, Commander Byrd relied on his compass to guide him back to his base and safety. What has Byrd to do with selling radios?

In radio selling today, dealers are looking for Byrd's compass. They want a reliable guide to point the way to bigger profits, lower costs and better business.

Radio Retailing, is the compass of the Radio Trades. Each month thousands of dealers rely on its reports and articles to bring them the current news and new ideas so vital to business success.

In each monthly issue of *Radio Retailing* there are recounted the actual experiences of radio dealers in every section of the country. What they did, the plan they used to increase their sales is explained in detail. The idea that helped Smith & Co. sell 200 sets during April is certain to have something in it that will help you.

Are you going to fly blind through the balance of the 1930 business year? Not when you can have this valuable merchandising service sent to you each month at a cost of only 17 cents. Sign and mail the order blank below and insure yourself getting a full year's service to *Radio Retailing*.

RADIO RETAILING

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Please enter my subscription to *Radio Retailing* for one year at \$2 two years at \$3 .

(Foreign Postage, \$1 extra for each year)

Name

Street

City State

Company Title

If your remittance is not inclosed, we will bill you.

RR 1-2

ACCURATE SEAMLESS NICKEL TUBING...

When you want it!

No matter what your requirements are, Summerill can provide Seamless Nickel Tubing of unvarying quality backed by an experience of 30 years in the Art.

Manufacturers of quick-heating tubes are proving daily the advantages of Summerill Tubing. Write for samples.

THE SUMMERILL TUBING COMPANY
Founded in 1899
BRIDGEPORT, PA. (Philadelphia District)

WASMUTH-GOODRICH COMPANY



Fine Radio Cabinets
fashioned by
Master Craftsmen

103 Park Ave., New York
Peru, Indiana

KATO KONVERTERS SELL A.C. RADIOS IN A NEW FIELD



Every day brings hundreds of inquiries from 32-volt D.C. Light Plant owners. Inquiries stimulated by consistent farm paper advertising. Inquiries from folks hungry for better radio reception which they know they can have with an A. C. Radio operated by the efficient Kato Konverter.

Because of the Kato Konverter, 750,000 Light Plant owners are new prospects for A. C. sets. Take your double share of profits from this new field by selling an A. C. Radio and a Kato Konverter to the same customer.

[Order from your jobber
or write to
Department "R"]

KATO ENGINEERING CO.
Mankato, Minnesota



RADIO WIRE PRODUCTS

Antenna Wire Lead-in Wires
Antenna Kits Hook-up Wires
Antenna Accessories Annunciator Wire
Lightning Arresters Cables

WRITE FOR CATALOG AND PRICES

CORNISH WIRE COMPANY
28 CHURCH ST., NEW YORK CITY

Makers of the famous

BRAIDITE HOOK-UP WIRE

SEARCHLIGHT SECTION

EMPLOYMENT and BUSINESS OPPORTUNITIES—SURPLUS STOCKS—DISCONTINUED MODELS

UNDISPLAYED—RATE PER WORD:

Positions Wanted, 5 cents a word, *minimum* \$1.00 an insertion, payable in advance.
Positions Vacant and all other classifications, 10 cents a word, *minimum charge* \$2.00.
Proposals, 40 cents a line an insertion.

INFORMATION:

Box Numbers in care of any of our offices count 10 words additional in undisplayed ads.
Discount of 10% if one payment is made in advance for four consecutive insertions of undisplayed ads (not including proposals).

DISPLAYED—RATE PER INCH

1 inch \$7.50
 2 to 3 inches..... 7.25 an inch
 4 to 7 inches..... 7.00 an inch
Rates for larger spaces, or yearly rates, on request.
 An *advertising inch* is measured vertically on one column, 3 columns—30 inches—to a page. Radio Retailing

POSITIONS WANTED

YOUNG man with four years experience in radio sales and service wants position with manufacturer of radio or sound equipment. High school and electrical trade school graduate. Now working with large retail organization, but work is too confining. Have car and will go anywhere. Will consider foreign work. Wilfred Sechrest, East Washington Street, High Point, North Carolina.

MANUFACTURER'S REPRESENTATIVES

"Screen Grid" Chassis—A.C. and D.C.—of unsurpassed quality and operating efficiency which are sold mostly under "private brand" label, is the product. If your following buy chassis and demand quality first (most of them will this coming season) and you are open for a chassis line, write us stating territory covered. Advertiser is responsible manufacturer of long standing and demand responsibility in their representatives. Address

Chassis Division

PREMIER ELECTRIC COMPANY
 Grace & Ravenswood, Chicago

REPLACEMENT PARTS FOR FREED-EISEMANN, FRESHMAN, EARL AND FREED SETS

Power transformers for replacement in (B) eliminators using 280 Rectifier tube, \$.98.
 Freshman Model G60S power supplies, \$6.95.
 Freshman Model N1 power supplies, \$7.50.
 Carbon Pigtail Resistors, 1% accurate, 500-375 - 2000 - 10,000 - 15,000 - 18,000 - 20,000 - 25,000 - 70,000 - 50,000 - 100,000 - 250,000 ohms, \$1.00 doz.
 Hart & Hegeman Toggle switches, \$1.50 doz. (long and short shafts).
 Audio Transformers for Replacement, \$.18 each.
 12—Freed-Sisemann Model 300 Dynamic Speakers for use with Model 85 set, \$4.75.
 1-MFD. Condensers in case, 600 volt test, \$.30.
 2-MFD. Condensers in cases, 600 volt test, \$.15.

Send for special service parts bulletin. We will answer all questions relating to above sets.

Freed Radio Sales Service
 16 Hudson St., New York City, N. Y.

KEEP POSTED ON PRICES

S. S. Jobbing House

156 W. 26th Street
 New York City, N. Y.

Without obligation add my name to your list so that I get your Radio and Electrical Merchandising Bargains regularly.

Name

Street

City State

SPECIAL NOTICE:

TO THE RADIO INDUSTRY

Advertising in connection with legitimate offers of surplus stocks and discontinued models of radio merchandise is acceptable in this section of "Radio Retailing."

Extreme care will be exercised by the publishers to prevent the use of advertising in the Searchlight Section to encourage price cutting on current models of merchandise or equipment. Nor will advertising which invites violation of the dealer's contract with the manufacturer be acceptable.

All merchandise offered in the Searchlight Section must be accurately and fully described and must be available on order.

Radio Bargains

Battery Sets, Model 35 Atwater Kent, easily converted into automobile radio sets, only \$16.85 ea.
 Cone Speakers encased in Baffle Box used for automobile speakers. Gives wonderful volume and tone, only \$5.50 ea.
 Genuine \$27.50, 3-tube Amplifiers only \$4.50 ea. R.C.A. 18 A.C. Sets only \$29.50 ea. R.C.A. 100-A Loud Speakers only \$10 ea.

Merchandise listed above guaranteed to be Brand New except Model 35, slightly used. If unsatisfactory, money refunded.

Order by money order or check
 Supply Limited

LAMAR RADIO SHOP

Dept. C-2, Lamar, S. C.

"Opportunity" Advertising:
 Think
"SEARCHLIGHT"
 First!

Poor Aladdin . . .

The best service at Aladdin's command was rubbing a lamp and WISHING for what he wanted while YOU have the "Searchlight" at your disposal to FIND what you want!

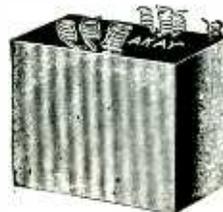
May we serve you?

"BAL-RAD" REPLACEMENT BLOCKS

All Brand New and Fully Guaranteed—Products of an Old Reliable Manufacturer

A replacement block for Majestic eliminators, guaranteed for a period of one year. The condensers in this block are all composed of high voltage condensers, and you can be assured that once this block is installed it will last indefinitely.

Net \$2.95 each

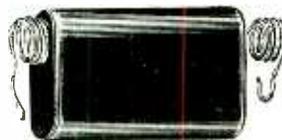


(For Atwater Kent Electric Set, Model No. 37) This unit contains the proper chokes and high voltage condensers. All flexible wire colored leads identical to the original. Fully guaranteed.

Net \$4.95 each

The "BAL-RAD"

HV VOLTAGE UNCASED SURGE-PROOF—For General Repair and Power-Pack Work



One MFD. 600 Working Volts. Each \$0.30
 Two MFD. 600 Working Volts. Each .40
 Four MFD. 600 Working Volts Each .60
 One-half MFD. 300 Working Volts. . . Each .25

This "Bal-Rad" Condenser is the result of many suggestions from service men throughout the country. It is small and compact, impregnated in pitch with long flexible leads to facilitate making connections quickly. Can be placed outside of pack. We guarantee these condensers for 100% free replacement. Dealers and service men should carry a few dozen in stock.

TERMS:—

20% with order, balance C. O. D. 2% discount allowed for full remittance with order only.

Mail Orders To:

Send for Our Latest Bargain Catalog

BALTIMORE RADIO CO.

47-A MURRAY STREET, NEW YORK, N. Y.



SERVICE MEN Increase your profits by paying less for these standard replacement parts.



RADIOLA



Our Cat. No.	R.C.A. Part No.	Description	Sets Used in	List	OUR PRICE
1301	8335	Power Transformer, 110V. 60 cy.	17, 18	\$12.90	53.25
1302	8333	Filter Condenser Block	33, 51	7.40	1.50
1303	8336	Double Filter Choke Coll.		10.05	1.70
1304	Similar to 5667	2-Stage Audio Transformer Pack (Made by Kolster)	All except 60-62	6.75	1.50
1305	8289	Filter Condenser Block	17	19.20	5.95
1306	8472	Power Transformer	44, 46	12.90	4.95
1307	8346	Filter Condenser Block	60, 62	16.50	5.95
1308	5666	Audio Transformer	17-18	5.40	.65
1309	5996	Tapped By-pass Condenser	All	3.00	.35
1310	.....	Buffer Condenser 002-4-002	All	1.00	.12
1311	.....	Neutralizing Condenser, Detector Trimmer and RF Compensator	except	1.20	.30
1312	2518	G. E. Rotary Line Switch	60 and 62	1.10	.20
1313	5091	Variable Volume Control		1.95	.45

ZENITH

Our Cat. No.	Zenith Part No.	Description	For Set Nos.	OUR PRICE	Our Cat. No.	Zenith Part No.	Description	For Set Nos.	OUR PRICE
1314	ZE3	"A" Power Supply for sets using 199 tubes.	.....	\$6.50	1322	ZE18 ZE18N	Same as ZE12 with a 110 V. AC output for a phonograph motor.	35PX 35APX 37A	\$9.00
1315	ZE4	"B" Power Supply using Raytheon BH tube (companion to the ZE3).	.....	6.50	1323	ZE19	Power Supply for DC sets using 227, 224 and 4-171-A in parallel push-pull.	563	8.00
1316	ZE7	Filter unit supplying 1 1/2, 2 1/2 and 7 1/2 Volts. Supplies filament voltage for 281, 210 and 250 tubes, also B voltage.	39 39A 40A	9.00	1324	ZE20	Power Amplifier for ZE19 using 4-171A in parallel push-pull.	563	8.00
1317	ZE5 & SPW	Filter Condensers, Chokes and Voltage Divider for the above	.....	4.00	1325	9521	AC Booster or Step-up Transformer used where line voltage is below 100 Volts. 95-sec. 110. Output 40 watts Thordarson No. 2053	27	1.75
1318	ZE10	A B C Power Supply for 227, 224 and 171A tubes, also 2-245 tubes F1 series and 280 rectifier. Dynamic field supply	33, 34, 35, 35A	9.00	1326	9522	Same as 9521 for 85 Volt AC, primary Thordarson No. 2055.	65	1.75
1319	ZE11	Same as ZE10 except that it uses 7 1/2 V. power tubes (2 6-250) and 2-281 Rectifiers.	.....	9.00	1327	9518	Triple 30 Henry Chokes—40 mills each giving total of 120 mills. In series. Can be used in any power supply.	ZE4	3.50
1320	ZE12	Same as ZE11 except with an additional 1 1/2 volt tap	.....	9.00	1328	9520	Double Choke, 15 Henries each, 1/2 amp 1000 Volts AC. test	171C	2.00
1321	ZE14	Same as ZE11 for 25 cycle current.	352P- 352PW	10.00	1329	9517	Step-up Transformer, supplying 640 Volts, center tapped at 40 mills and 5 Volts at 1/2 amp. for 280 tube	ZE4	2.00
					1330	9516	"B" Eliminator Step-up Transformer 360 Volts, with center tap	ZE3	2.00

EDISON

Cat. No.	Description	OUR PRICE
1334	Audio Transformer	\$0.85
1335	Input Push-pull Transformer 3/1 for 171A, 245 or 250	.95
1336	Power Transformer for 227, 224, 245, and 280 tubes. Also 1200 V. C.T. at 150 mills	2.75

VICTOR

Cat. No.	Description	OUR PRICE
1331	Audio Transformer with Voice Coil	\$0.95
1332	Push-pull Audio Transformer, per pr.	2.50
1333	Power Transformer for 226, 224, 227, 245, 171A, and 280 tubes, also 800 Volts C.T. at 150 mills	2.75

We are headquarters for replacement parts for all standard receivers, eliminators and speakers, and carry thousands of parts in stock. Write us for "hard to get" parts.

SEND FOR THIS

Now! Radio Bargain News



If you are not one of the 20,000 dealers on our mailing list, write in now.

Federated Purchaser
16 HUDSON ST., NEW YORK CITY



A.C. MODEL 724
D.C. MODEL 727

You Can't Go Wrong

WITH THE NEW 1931



A.C. or D.C. CHASSIS

These Features Make It Superior

1. Specially designed selected control tuning.
2. Highly efficient push pull amplification.
3. Triple screen grid tubes.
4. Humless filter circuit.
5. Novel non-glare metal drum dial.
6. Completely shielded R.F. Assembly.
7. Special bridge circuit compensated antenna, which provides for any length of aerial from 35 feet upwards.
8. Power plus Pierce-Airo receiver employs a minimum amount of tubes, which gives maximum efficiency for entire broadcast wave band. The tubes utilized are as follows: three—224; one—227; two—245; one—280.
9. Automatic phonograph attachment is included for use with phonograph pick-up.
10. A heavy duty sturdy power plant that is built to deliver a constant dependable current supply, even under adverse conditions. Absolute trouble-free operation is assured.

It's Triple Screen Grid.

It Has Power Plus.

It Fits All Standard Consoles.

It's Backed by 7 Years' Experience.

It's Absolutely Guaranteed.

It Pays You a Bigger Profit.

Write or wire today for complete specifications, prices and sample chassis for test in your store.

PIERCE-AIRO, Inc., 113R Fourth Ave., New York City

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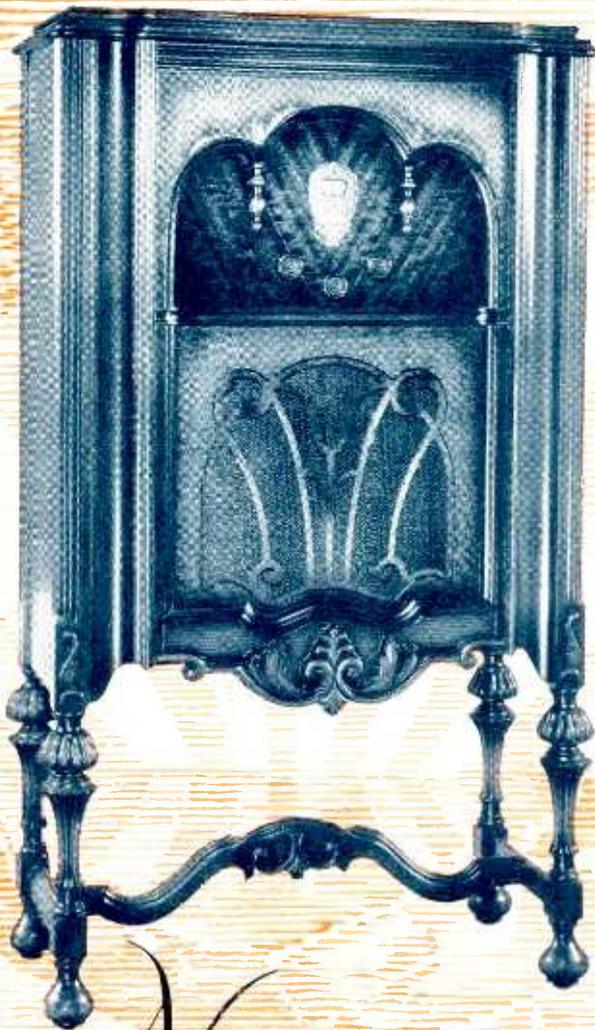
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Here it is



The New **GULBRANSEN** *Champion*

Make a PROFIT with Radio during 1930!

The Gulbransen "Champion"—radio's most outstanding value—combines all the qualities of GOOD radio in one *Supreme* model.

One model, one dominant sales talk, one simple inventory, one discount, one price and one gloriously challenging value makes the "Champion" the unanimous choice of radio dealers looking for a real profit radio line for 1930.

Specifications: Tone Control—four gang condenser—push-pull—a new Stadium type, Lektophone licensed, dynamic speaker—eight tubes—3-224s; 2-227s; 2-245s; 1-280. Licensed by RCA-Hazeltine-Meissner. Full size cabinet—48 inches high—of rare beauty.

Write or wire for complete details regarding the Gulbransen proposition. GULBRANSEN COMPANY, 3232 West Chicago Avenue, Chicago.

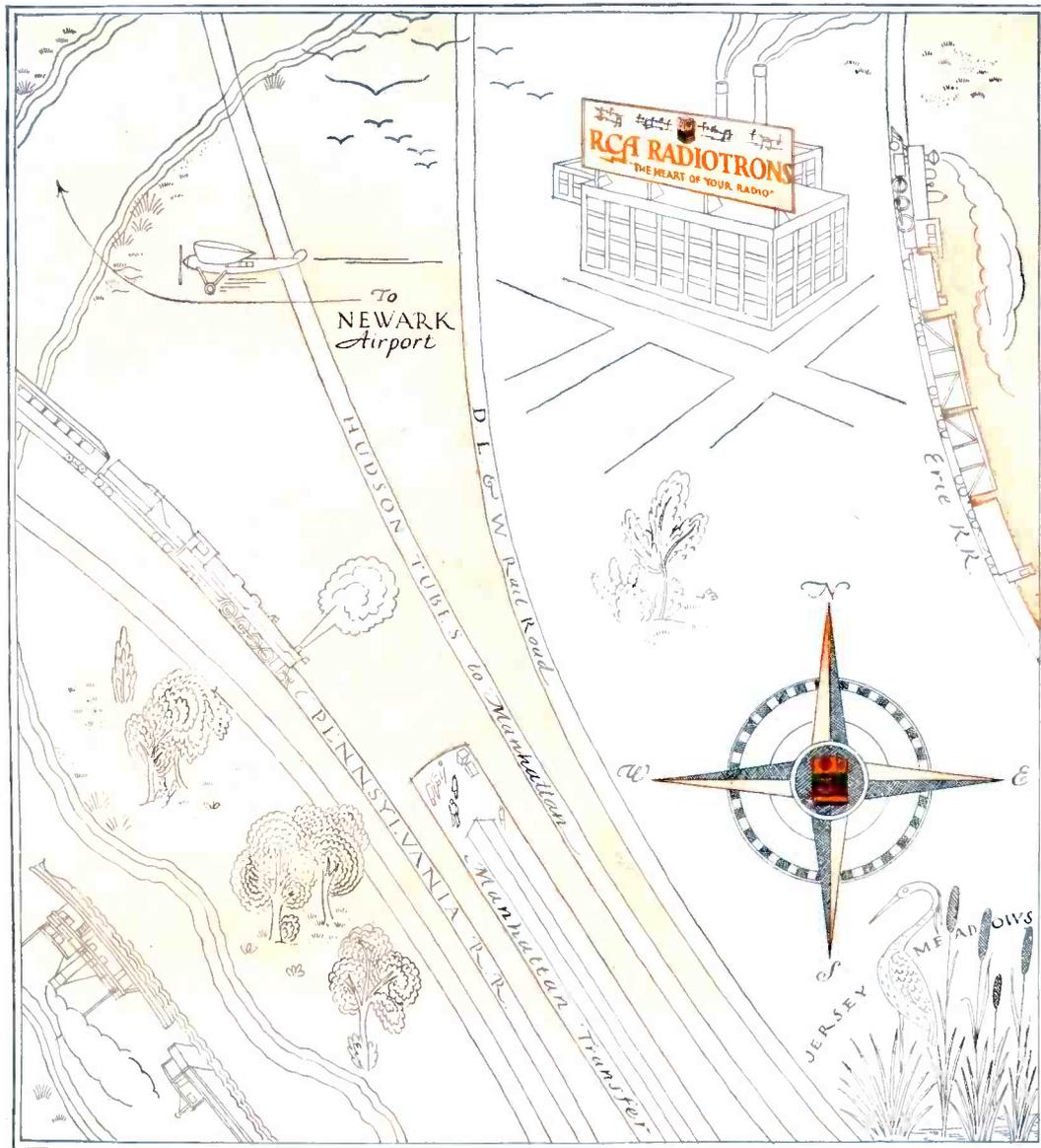
\$130

Licensed by
RCA—
Hazeltine—
Meissner

MAKERS OF FINE MUSICAL INSTRUMENTS FOR THE HOME FOR A QUARTER OF A CENTURY

EDW C RIPP L
1522 EAST ST
HONEST A

EYE MUSIC! *The Sign with a "Theme Song"* Seen by Over 140,000,000 People



IN keeping with its endeavor to impress the nation with the fact that RCA Radiotrons are the supreme quality tubes, the RCA Radiotron Company has erected this new electric sign at Harrison, N. J. . . . the largest area porcelain letter sign in the world. Its Theme Song graphically presents the opening bars of "Hail to the Chief," and the complete sign, in approximately 15 seconds, tells the story of RCA Radiotrons.

FACTS . . . that mean sales . . . about the RCA Radiotron sign

Six railroads pass the RCA Radiotron Company's front door; the Pennsylvania, D. L. & W., Lehigh Valley, Erie, Jersey Central and Hudson Tubes.

Main highways feeding the great Holland Tunnel are on both sides. Air Traffic to and from the Newark Airport hums above.

This sign is 150 feet long and 50 feet high from the roof of the main plant and executive offices in Harrison, N. J. It uses 4,000 MAZDA lamps, giving a connected load of 134,975 watts.

RCA RADIOTRON COMPANY, INC., HARRISON, N. J.

RCA Radiotrons

THE HEART OF YOUR RADIO SET