

Radio Retailing

The Business Magazine of the Radio Industry

A McGraw-Hill Publication

JANUARY, 1930

THE SENSATIONAL NEWS

you have been waiting for!
Read the details on pages 9, 10, 11, and 12



UNBALANCED RADIO



BALANCED PHILCO



BALANCED-UNIT RADIO

NOW—TURN TO PAGES 9, 10, 11, and 12 in this issue

Profit by the Law of Natural Selection!

For eighty-seven years this company has successfully weathered every business storm...many of them far more threatening to business than the recent stock market decline, because they were accompanied by generally unsound economic conditions which do not exist today.

During the last two decades of its history, this company has specialized in the making of *musical instruments*, so true in tone, so pleasing to look upon, that they have rightfully been chosen by the most discriminating.

As a result, the name Brunswick on a cabinet...whether it be Radio, Panatrobe, or both in one...has come to mean to the American public the ultimate in craftsmanship.

▲ ▲ ▲

You have heard of the Law of Natural Selection. It is nature's way of choosing the finest and best, and eliminating those that are poorly equipped to cope with life's tasks.

Today the Law of Natural Selection...or a law mighty similar...is working overtime in the radio industry.

...And greatly to the benefit of Brunswick dealers!

▲ ▲ ▲

As never before in the history of our great industry, it is to the interest of every dealer, as he enters 1930, to make sure that the company he represents is powerfully entrenched, enjoys the full confidence of the American public, and is prepared by experience, equipment and ideals, to deliver a value so extraordinary that it will command selection, regardless of the ablest competition in the field.

On this basis Brunswick invites the consideration of every dealer not now enjoying a Brunswick franchise and desiring to reap full benefit from the present while building for the future...the consideration of every dealer who is seriously determined to win from 1930 its full measure of prosperity.

(Signed) **B. E. Bensinger**, *President*
The Brunswick-Balke-Collender Co.



“Advertising Should Go Ahead”

declares

Dr. Julius Klein

Assistant Secretary of Commerce

“Advertising should go ahead with all of its characteristic force. There may well be some scrutiny to determine whether wasteful practices have crept into that field... But considered as a whole, it is one of the most potent of business accelerators... It keeps business moving, and inspires confidence.

“For countless firms, advertising has created that intangible, but priceless business attribute which we know as ‘good will.’ It is worth millions. You will find it rated that way every time there’s a merger.

“The message must strike the public consciousness unremittingly. The effect is cumulative. Any abrupt hiatus may be disastrous—because the memory of the public, unfortunately, is short.

“So many producers are beseeching the attention of the people nowadays, through advertising, that if any one of them decreases his appropriation materially his product may tend to disappear from view.”

Radio Retailing

The Business Magazine of the Radio Industry

O. H. CALDWELL, Editor

January
1930

Vol. 11—No. 1

RAY V. SUTLIFF, Managing Editor
HENRY W. BAUKAT, Associate Editor
S. J. RYAN, Merchandising Counsellor
M. E. HERRING, Publishing Director

HARRY PHILLIPS, Art Director
T. H. PURINTON, Assistant Editor
C. GRUNSKY, San Francisco
P. WOOTON, Washington

CONTENTS

Copyright, 1930, by McGraw-Hill Publishing Company, Inc.

A DECADE OF MIGHTY PROGRESS	21
Editorial. <i>By Ray Sutliff</i>	
PRELIMINARY REVIEW OF 1929 SALES FIGURES	22
Despite recent disturbances, we topped '28 by 16 per cent.	
NEW PROGRAM FEATURES—BETTER RECEPTION COMING	24
Why listener interest will increase this year. <i>By O. H. Caldwell.</i>	
WHAT'S AHEAD!	26
Technical developments and trends for the next twelve months. <i>By Henry Baukat</i>	
RADIO RETAILING'S BUSINESS AVERAGES	27
Selling costs, servicing and trade-in practices reviewed.	
THE PATENT SITUATION	28
Its status to date and future outlook. <i>By LeRoi Williams</i>	
RINGING UP SALES ON DOORBELLS	30
Putting a new twist on a time-tried method.	
THE RADIO TUBE AT WORK IN INDUSTRY	32
Announcing “Electronics,” a new McGraw-Hill publication.	
THAT FIRST IMPRESSION	34
A practical idea for improving the demonstration. <i>By Frederick J. Kahn</i>	
DOWN THROUGH THE AGES	37
A window with unusual attention value.	
2,010 SET SALES IN 960 HOURS	38
How a lighting company campaigns radio.	
THE FARMER MUST HAVE RADIO	40
Because of the worth of programs now available. <i>By Morse Salisbury</i>	
PACING YOUR PROSPECTS	42
How to open and close the sales talk. <i>By Alan Streeter</i>	
SALES IDEAS	44
Applicable boildowns for busy dealers.	
FROM JANUARY TO JUNE	46
Leading activities for the first half of the year.	
TO HELP DEALERS MERCHANDISE BROADCASTING	52
Types of broadcasting tie-in material available.	
YOUR HAND ON THE THROTTLE	53
The dealer should supervise credits. <i>By B. T. U'ren</i>	
NEW HEART FOR TELEVISION	54
A possible solution of the scanning disc limitations.	
Departments	
Editorials	48
Service	54
New Products	56
Dealer Sales Aids	64
News of the Industry	58
Distributor Activities	62
As One Manufacturer to Another	63

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

JAMES H. MCGRAW, Chairman of the Board
MALCOLM MUIR, President
JAMES H. MCGRAW, JR., Vice-Pres. and Treas.
EDWARD J. MEEREN, Vice-President

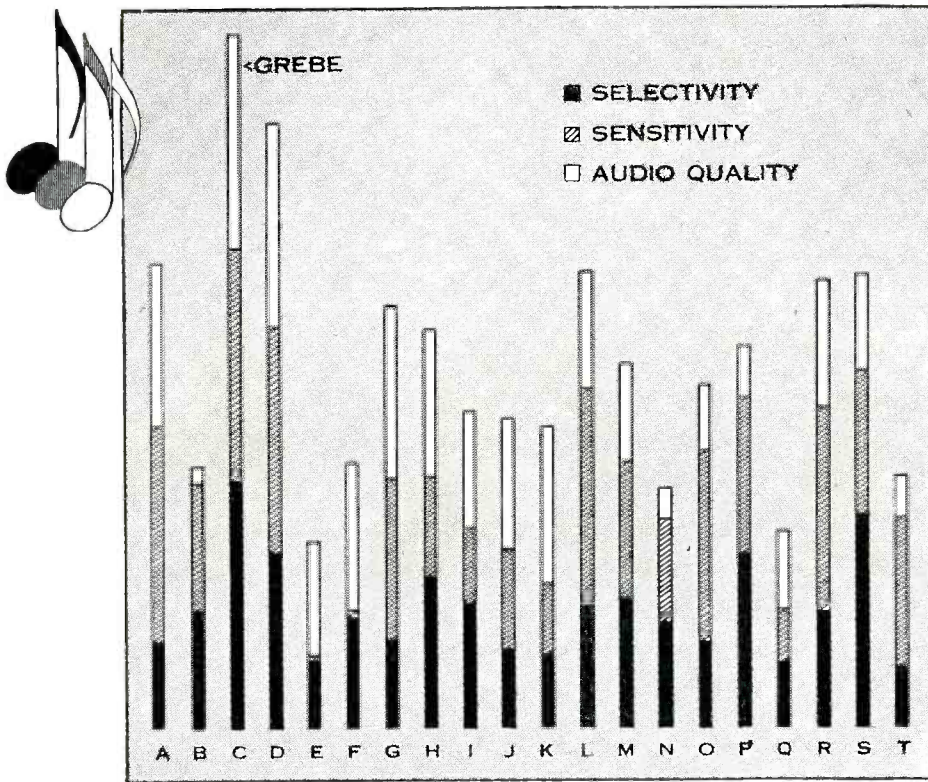
MASON BRITTON, Vice-President
EDGAR KOBAK, Vice-President
HAROLD W. MCGRAW, Vice-President
H. C. PARMELEE, Editorial Director
C. H. THOMPSON, Secretary

Cable Address: “Machinist, N. Y.”

NEW YORK District Office, 285 Madison Ave.
WASHINGTON, National Press Building
CHICAGO, 520 North Michigan Ave.
PHILADELPHIA, 1600 Arch Street
CLEVELAND, Guardian Building
ST. LOUIS, Bell Telephone Building

SAN FRANCISCO, 883 Mission Street
BOSTON, 1427 Stalter Bldg.
GREENVILLE, S. C., 1301 Woodside Bldg.
DETROIT, 4-257 General Motors Bldg.
LOS ANGELES, 632 Chamber of Com. Bldg.
LONDON, 6 Boulevard St., London, E. C. 4

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



Cynic turns fan

TABLE the superlatives when he comes in; don't bear down with sales talk; this hardened cynic wants *evidence*. And on this chart he finds the facts that show him exactly what to expect of the Grebe—clear-cut comparisons that shatter his shell. Now let him listen to the set that is *newer* than screen grid and watch him turn fan.

He is critical but his demands are not unreasonable when put to the Grebe. This set satisfies them with plenty to spare for it is at least a *year ahead of the field*. Show him how sharply the Grebe separates one station from

another. Thrill him by reaching out for weak, distant broadcasts. Close the sale with the lifelike tone that enables him to identify every instrument, every voice.

Then, after he has signed on the dotted line, be sure you deliver on time. You know how it is with this type of buyer; once you have sold him, you cannot get the set to his home quickly enough!

There is extra profit in the Grebe franchise. In addition to getting normal business, it sells those who would not otherwise be ready for another year.

Alfred H. Grebe—"In the new folder being distributed to the public by our dealers we prove the uniformly high quality of this new set in every important characteristic of radio reception. We support the statement that Grebe prices will not be reduced with the pledge that Grebe *quality* will not be reduced. To franchise-holders this means that *profits* will not be reduced—that every sale will continue to yield a worth-while return."

Grebe radio

SUPER-SYNCHROPHASE



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

Extending Our Service to
Leading Set Manufacturers.
. . . for **1930**

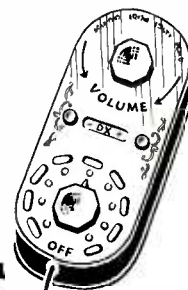
UTAH

Announces

Remote Control

and a Startling

**NEW
DYNAMIC
SPEAKER**



Not one—but two startling achievements! Again Utah proves leadership, stepping to the front with perfected remote control and a new dynamic speaker amazing in its tonal quality.

Our engineers are now ready to show these new products to manufacturers of radio receiving sets.

Write for details, specifications, etc.

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

THIS IS A GOLD SEAL SEASON!

IN THE NEW 1930 SETS

Gold Seal

RADIO TUBES

"The Big 4 in Radio"



increase the tonal values and give radio set owners all they listen for.

The Secret of Big Sales lies in Gold Seal

Get All Price Range and Discount Policy Information. We'll Wire It If You Say So. Send Today.

A TUBE FOR EVERY SET AND EVERY SOCKET
Immediate delivery guaranteed

GOLD SEAL ELECTRICAL CO., Inc., 250 PARK AVENUE, NEW YORK

Are you
MERCHANTISING
TO MAKE MONEY



..... or just
"WAREHOUSING"
for MANUFACTURERS

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

WESTERN UNION

NEWCOMB CARLTON, PRESIDENT

J. C. WILLEVER, FIRST VICE-PRESIDENT

Form 1201 S

SIGNS

DL = Day Letter
NM = Night Message
NL = Night Letter
LCO = Deferred Cable
CLT = Cable Letter
WLT = Week-End Letter

The filing time as shown in the date line on full-rate telegrams and day letters, and the time of receipt at destination as shown on all messages, is STANDARD TIME.

RHA 1 63 7 EXTRA NL=ROCHESTER NY NOV 10
 TO AUTHORIZED STROMBERG-CARLSON DEALERS=
 WE AGAIN RESTATE OUR POLICY WHICH IS NOT TO REDUCE LIST
 PRICES OF OUR RECEIVING SETS HOWEVER WE FIND IT NECESSARY
 TO ADVANCE THE PRICE OF THE NUMBER SIX FORTY TWO RECEIVER
 TO TWO HUNDRED FIFTY NINE DOLLARS EFFECTIVE NOVEMBER TWENTY
 FOURTH STOP ON AND AFTER THAT DATE ALL NEWSPAPER
 ADVERTISING WILL CARRY THIS INCREASED PRICE=-

GEORGE A SCOVILLE VICE PRESIDENT

STROMBERG-CARLSON TELEPHONE MANUFACTURING CO.

Stromberg-Carlson guarantees not to reduce list prices, because:

1. You lose money whenever you can't collect the last installment on a time payment sale. This is one reason why Stromberg-Carlson protects list prices—so your time payment customers will not have price cuts as an excuse to quit paying you.
2. You lose recommended sales whenever any customer relinquishes his pride of ownership after a manufacturer advertises his set one day way below what was paid for it the day before. Stromberg-Carlson avoids this situation, because it is not forced to reduce prices.
3. You lose profits when compelled to rebate

on closed sales for cash or deferred payment. What "protection of inventory on hand" you get to offset price drops, never fully balances losses on collections or rebates.

4. You lose sales territory when manufacturers are compelled to franchise more dealers in the hope of moving an over-production which always ends in widespread dumping.

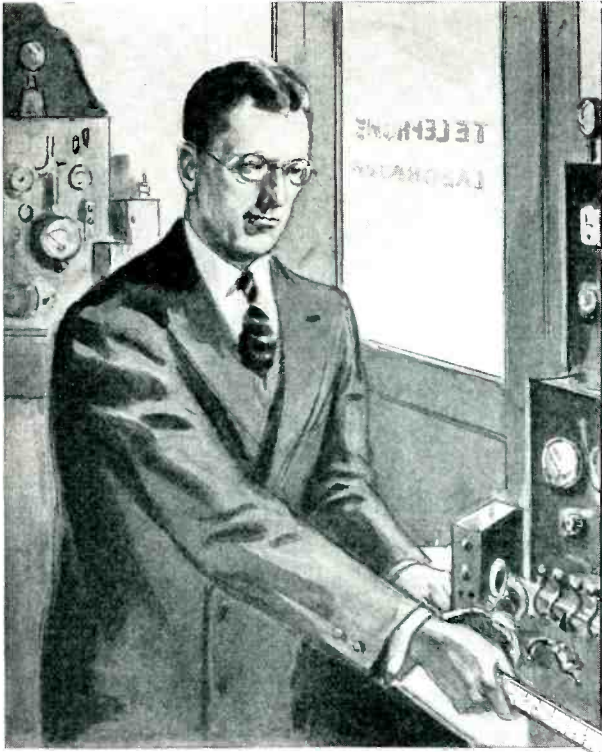
5. You lose every time you fail to concentrate your efforts only on such lines of merchandise as have proved, by a record of several years, their steadfast adherence to sound, yet conservative principles of merchandising.

Stromberg-Carlson dealers know the advantages of being backed by intelligent and consistent policies. Never before in radio merchandising history has the need for this been so apparent!

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

Stromberg-Carlson

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



THIS new No. 654 Stromberg-Carlson Radio-Phonograph combination offers final proof that telephone engineering remains, as always, the leading force in advancing the science of sound reproduction.

For radio reception, this instrument is unsurpassed in tonal quality. It incorporates all the latest developments of Triple Screen Grid Radio Frequency amplification, plus Linear Power Detection for utmost tonal beauty from modern highly modulated broadcasting. There is an extra-size Electro-Dynamic Speaker of the type for which all Stromberg-Carlsons are famous.

For record reproduction, the new No. 654 provides, for the first time, the same tonal excellence heretofore obtainable only from Stromberg-Carlson Radio. Unusual strength and richness are obtained through utilization of the Audio System and Electro-Dynamic Speaker of the Receiver. The result is a brilliance which was not thought possible in phonographic rendition even a few short months ago!

Stromberg-Carlson dealers are going to create countless new prospects and customers through the remarkably convincing demonstrations now possible either with records or radio, because of this new No. 654 Combination. It will also prove an impetus to record sales, because of the enhanced quality it lends to their performance.

Write for complete details of the two new additions—the No. 654 and No. 652—which make the Stromberg-Carlson line unequalled for completeness.

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

A New-Modernized Radio-Phonograph

Telephone Engineers add
Radio's Tonal Excellence
to Record Reproduction



NEW RADIO-PHONOGRAPH COMBINATION

No. 654 Stromberg-Carlson Radio-Phonograph. Employs three UY-224 Screen Grid, one UY-227, one UX-245 and one UX-280 Radiotrons. Power and linear detection. Extra-size Electro-Dynamic Speaker. Phonograph turntable, rotated by silent electric motor. Automatic phonograph switch. Finished in matched walnut. Dimensions: Height, 36½ inches; Width, 27½ inches; Depth, 17½ inches. Price, East of Rockies, without tubes \$369.00

Stromberg-Carlson

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

A
New Console
Low—Compact—

Completes the
Stromberg - Carlson
Line of Receivers



NEW LOW CONSOLE — Extra-Size Electro-Dynamic Speaker
No. 652 Stromberg-Carlson. Employs three UY-224 Screen Grid, one UY-227, one UX-245 and one UX-280 Radiotrons. Power and linear detection. Each radio stage and the detector stage totally shielded, individually and over-all. Finished in walnut with heavy Baroque supporting legs. Dimensions: Height, 42 inches; Width, 24½ inches; Depth, 15 inches. Price, East of Rockies, without tubes \$239.00

THE design of this new No. 652 Console was influenced by the phenomenal acceptance of the No. 642 Stromberg-Carlson. Its size and style make it particularly suitable for the newer apartments and homes of today, with their smaller rooms.

With this new console added to the Nos. 641, 642, and 846, Stromberg-Carlson dealers will be able to meet every decorative—and *radio*—demand of the public, at the most attractive range of prices.

Despite its compactness, the new No. 652 embodies the complete, perfected Stromberg-Carlson Triple Screen Grid Radio Frequency system with all its marvelous pick-up and selectivity. It has Power Detection so essential to utmost beauty of tone from modern high modulated broadcasting. Also, there is the famous Stromberg-Carlson Audio System with its unusual brilliance of tone, vast power and broad range of undistorted volume—coupled to an extra-size Electro-Dynamic Speaker.

In its exquisitely moulded and modeled walnut cabinet, so distinctively decorated, this new console fits perfectly into the Stromberg-Carlson line. Discriminating women purchasers will covet the No. 652 because of its unusual beauty, justifying the slogan: "There is nothing finer than a Stromberg-Carlson".

Listen to the Coast-to-Coast Broadcast of the Stromberg-Carlson Orchestra, over the National Broadcasting Company's Blue Network and Associated Stations.

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

Stromberg-Carlson

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

To the Radio Distributors and Dealers of America..

¶ The selling of radio receiving sets has developed into a battle of superior merchandising methods and a better application of highly specialized selling effort. It is necessary, therefore, not only to have a good set to sell, but to use the best practical methods in merchandising and selling.

¶ Behind the built-in quality of Kennedy—a receiving set of established leadership, embracing a knowledge of radio engineering and experience since 1911—there is a vital “plus” value. This “plus” value is the outstanding program of action compelling cooperation for dealers and distributors developed by the Kennedy Corporation. Every cog in the wheel of this program is based upon the practical experience of men who have achieved success in radio and industry.

¶ Into every Kennedy set is built quality—performance that is second to none. Into the Kennedy sales and merchandising program, are built certain advantageous features never before offered by other radio manufacturers. Using this plan, the Kennedy dealer and distributor can build his business upon a foundation so firm that it will weather all storms and allow him to reap the profits he has a right to expect.

¶ Investigate!

Colin B. Kennedy Corporation

SOUTH BEND

INDIANA

The Royalty  *of Radio*

1911—Pioneers

in Radio—1930

Here's the News!

PHILCO'S NEW

Radio Development!

**a Marvelous New
Screen Grid Chassis**

**in a Rich, Artistic, New
Console Cabinet**

No. 76 and Retailing for

Only **\$112** **less tubes**

With Genuine Electro-Dynamic Speaker

Think of what this means to the radio dealer! In volume, in profits and in customer satisfaction. A new and most remarkable Screen Grid Radio—giving a quality of performance in tone, power, distance and selectivity excelled only by Philco's super set—the Screen Grid PLUS.

Yes, here is a radio receiver—this Philco 76—with such powers of performance that it will amaze you regardless of your radio experience. And it actually retails in a rich, new, handsome, Console Cabinet for only \$112.

**Here Are the Big Selling
Points of This New 76 Model**

1. Seven-tube chassis of new design to bring out *all* the supreme advantages of the Screen Grid tube.
2. Three (3) Screen Grid tubes and one of the Screen Grid tubes is used as a detector tube, which almost doubles amplification. Four condensers, tuning four circuits, in the famous Philco pressed steel armored construction that achieves extreme selectivity—hair-line tuning to cut through and separate strong local stations. Two 245 power tubes push-pull.
3. Enormous, astonishing power—power that brings in a host of far-
4. And the volume—simply tremendous. More than will ever be used in any home. Furthermore, without distortion.
5. This new Philco makes daylight reception available for the first time in difficult localities, and greatly increases the selection of evening programs everywhere.
6. And tone—only when you hear it will you fully appreciate the clear, rich, undistorted tone of this new Philco. Only through Philco's exclusive *Balanced-Unit* construction is such tone possible.

away stations. Just the thing for isolated communities.



**This is the New Screen Grid
Model 76—\$112 less tubes**

A Wonderful Addition to the Great Philco Line

The new 76 model is shown above housed in a superbly beautiful Console Cabinet of genuine Butt Walnut and Bird's-eye Maple, beautifully grained and exquisitely finished by expert cabinet makers.

This Console is one of the most handsome and desirable cabinets ever turned out—a production from the studios of America's leading furniture designers. Its compact size makes it especially attractive for the modern living room, and its beautiful lines make it a distinct drawing card in the store. This Console model is equipped with the standard Philco genuine Electro-Dynamic Speaker.

**A complete line which meets that
ever-growing demand for amazing
performance, and at a price.**

**A strong, fresh, stable line with
nothing obsolete.**

Turn to the following pages

Get the full story of ALL Philco Models

Prices slightly higher, Rocky Mountains and West

A Complete Line Ever Growing Demand And at

A Strong, Fresh, Stable Line With Nothing Obsolete!

Today the buying public wants the best in radio performance—the purest, clearest quality of tone, enormous far-reaching power and sharp selectivity. The radio today that satisfies and stays sold must be radio of first quality, of dependable, flawless performance. And finally, the public wants that quality of radio at a most reasonable and attractive price.

Philco realized this trend more than a year ago. And that is why 1929 was decidedly a Philco year. *That is why 1930 will also be a Philco year.* Philco dealers will receive merchandise always fresh and up to date—quality radio priced properly to begin with and with those prices maintained. Deliveries will be prompt. Merchandise when you want it. No over-production. No over-stocking, and with nothing suddenly becoming obsolete.

Protect Your Radio Future

No doubt you have been watching the trend in the radio business—the rapidly growing value of the Philco franchise. You can easily see that the day is not far distant when Philco dealer franchises will be scarce and hard to get. The tendency today is for the dealer to concentrate on one line of radio—to *identify himself firmly with the manufacturer having the greatest and surest future.* Concentration gives the dealer maximum discounts, protects him against obsolete merchandise, greatly increases his turnover and his profits. It makes his own future position in the industry sound and secure.

Philco, realizing these facts, is giving the Philco dealer an opportunity to concentrate by offering him a complete line of radio to suit every taste and pocketbook, *and at most liberal discounts.*

Summing Up the Philco Policy

Philco is determined always to build radio receivers that not merely equal but that absolutely outperform all competition regardless of price. Philco radio is built to high quality standards, and not down to a pre-determined price. Whether or not you are a Philco dealer, you will acknowledge that Philco Balanced-Unit Radio has the reputation everywhere for fine performance.

Finally, our policy is always to price Philco Radio at figures not only fair and just, but exceedingly attractive, and then to give all Philco dealers proper protection and co-operation.

Safe, Sane Furniture Plan

Philco will continue its highly successful furniture policy. *Philco radio will be sold only in Philco cabinets.* This policy enables the public to identify Philco when they see it, and places all Philco dealers upon an equal basis. No need for the Philco dealer to stock up with a variety of furniture cabinets some of which may become a dead loss.

Turn to the Next Page



New Screen Grid
CONSOLE
No. 76

\$ **112.00**
less tubes

This charming Console Cabinet contains the splendid, new 76 Screen Grid Chassis and retails for \$112 without tubes.

As we told you on the first page of this announcement, no screen grid value like it has ever been offered before. Its splendid design makes possible the use of a screen grid tube as a detector. This alone doubles amplification and provides a super-abundance of power. Another feature is the double-tuned input circuit, which completely eliminates cross-talk and reduces static and other interference noises.

The famous Neutrodyne-Plus eight-tube chassis with built-in aerial is also available in this new Console cabinet at only \$112 less tubes.

PHILCO
Balanced-Unit
RADIO

Prices slightly higher, Rocky Mountains and West

Which Meets that for Amazing Performance A Price!

For 1930—Three Great Chassis Marvelous Radio Values!

Yes, for 1930 we offer three remarkable Philco radios—values that will set new standards in the industry. Two amazing new Screen Grid Radios, in addition to the famous Neutrodyne-Plus 8-tube chassis.

The New Screen Grid Plus—No. 95

A nine-tube Screen Grid Plus set with built-in aerial and Automatic Volume Control; clear, flawless tone and the very maximum of power. A radio for people whose needs are unusual, or the many "fans" who want super-performance.

The enormous power of this set brings in distant stations even in daytime, and the Automatic Volume Control counteracts fading and holds the volume of these distant stations almost constant. This Automatic Volume Control is indispensable to radio owners at a distance from strong broadcasting. The double-tuned input circuit sharpens selectivity amazingly and reduces static and other interference noise.

New 7-Tube Screen Grid—No. 76

Described on the preceding pages. And certain to be acclaimed by the buying public as the greatest radio ever offered at anywhere near the price. We want you to examine this remarkable new 76 Screen Grid chassis at your earliest opportunity.

Popular Neutrodyne-Plus—No. 87

For people who want a powerful but moderately priced receiver with built-in aerial, this famous 8-tube set is continued. And in addition it is offered in the smaller Console Cabinet at a most attractive price.



Distinguished Highboy cabinet, latest style half doors, beautiful butt walnut side panels, and matched Oriental walnut on doors. Inside panel of bird's eye maple and handsome tapestry.

Screen Grid—New Model 76 . . . \$139.50
Neutrodyne-Plus—Model 87 . . . 149.50
Screen Grid Plus—New Model 95 . . . 169.50



Handsome, luxurious Highboy DeLuxe cabinet, sliding doors on metal runners. Elegantly finished in burled walnut, framed and overlaid with costly imported woods. Tapestry instead of ordinary speaker grill.

Screen Grid—New Model 76 . . . \$195.00
Neutrodyne-Plus—Model 87 . . . 205.00
Screen Grid Plus—New Model 95 . . . 225.00



**New
Screen Grid
LOWBOY
No. 76**

\$ 119 ⁵⁰
less tubes

Here is the very popular Philco Lowboy containing the new 76 Screen Grid Chassis and retailing for only \$119.50 less tubes. This attractive Lowboy is made of genuine American walnut with artistic panels of Oriental wood and bird's-eye maple. It is equipped with genuine Philco Electro-Dynamic Speaker and Acoustic Equalizers.

**With Screen Grid Plus—Model 95
\$149.50**

**With Neutrodyne-Plus—Model 87
\$129.50**

PHILCO
**Balanced-Unit
RADIO**

Full Advertising Story

Prices slightly higher, Rocky Mountains and West

Beginning At Once!

Nation-Wide Advertising

Read This Great Advertising Program

1. Full pages and double spreads in the great magazines reaching millions of the radio buying public, *The Saturday Evening Post*, *Time* and *Collier's*.
2. Coast to coast broadcasting of the famous Philco Hour with new features to make it the outstanding radio entertainment and radio advertising on the air. A return engagement of Leopold Stokowski and the Philadelphia Symphony Orchestra.
3. Nation-wide newspaper publicity of gripping interest that will reach millions; prepared by the most expert writers.
4. Big eye-selling outdoor banners for Philco dealer announcements. Window display! 24-sheet posters! Neon sign! Dealer ads; selling plans; Sales and Service Manuals.

Carload Shipments on Way to Jobber

Right now, while you are reading this Philco message, the first carload shipments of Philco's new models are already on their way to Philco jobbers in every section of the United States. Not one day is being lost to start this year of 1930 in splendid fashion.

You can get delivery now. You can start the New Year with an immediate volume of business. You know what it means to get the jump on the other fellow, to be the first to show new models. Get in touch with the Philco jobber without delay.

Right now, this month, while you are reading this announcement, big, smashing advertisements are appearing all over the country.

These advertisements are telling the people in your territory—your customers and possible customers, the entire radio buying public—all about the new Philco Models and the great Philco achievement in bringing the finest type of radio within the reach of all at prices from \$67.00 up.

Beginning January 9th, the new Philco Radio Hour, over the Columbia Chain, every Thursday night at 10 o'clock Eastern Standard Time, will reach millions through 46 big stations, telling them week after week of the fine quality, wonderful tone and unequalled reception of Philco Balanced-Unit Radio.

Philco will repeat this year its outstanding broadcast achievement in putting on the air Leopold Stokowski, the world's outstanding conducting genius, leading the great Philadelphia Symphony Orchestra. Beyond question this is the greatest broadcasting feature on the air today.

If you are a Philco dealer, get in touch with your jobber at once. Be ready to take full advantage of this month's Philco advertising. Get the merchandise on hand. Get your announcement banner ready. Get your share of this big buying swing to Philco.

Send Coupon Now

Whether or not you are a Philco dealer, send this coupon for full details. We will tell you frankly if it is still possible for you to get the Philco franchise in your locality. We want the best dealers in each community, and then we will continue to protect those dealers and co-operate with them.

PHILCO
REG. U.S. PAT. OFF.
Philadelphia, Penna.

PHILCO

Ontario and C Streets,
Philadelphia, Pa.

GENTLEMEN:

Please send me at once complete information regarding the new Philco Models together with details on the Philco dealer franchise and sales and advertising plans.

Name _____

Address _____

City _____ State _____



The *Electro-Chromatic* PICK-UP

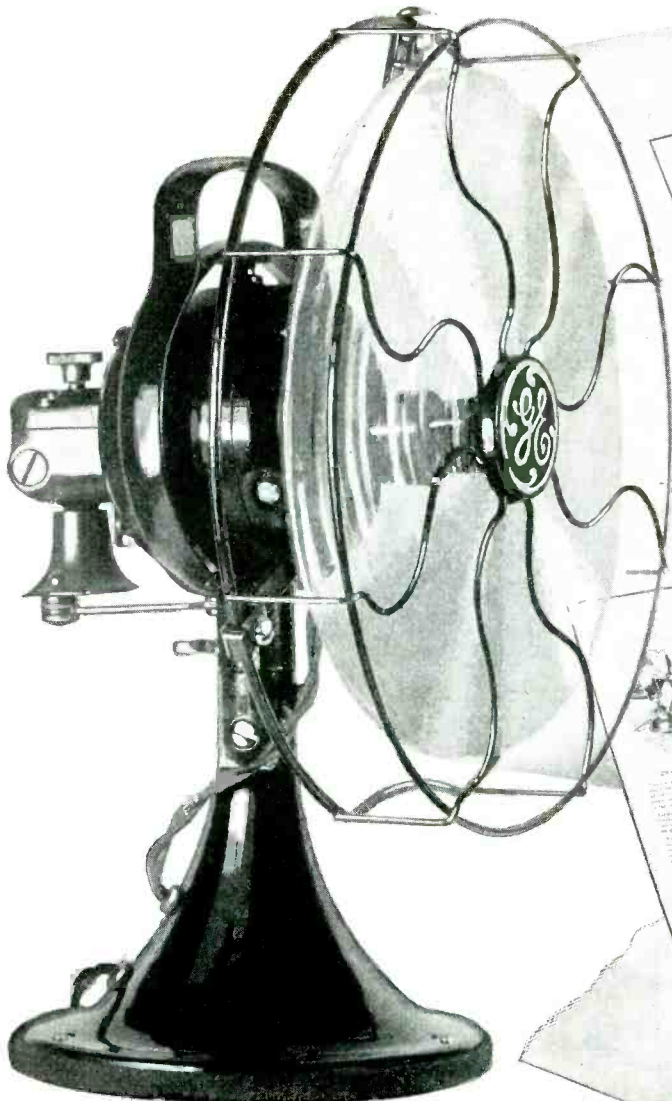
As the new year starts, the pick-up situation is tremendously clarified. After more than a year of experiment and comparison, the radio-music world has narrowed down in its choice to the one super-sensitive instrument capable of reproducing EVERYTHING in any musical or vocal composi-

tion. The ELECTRO-CHROMATIC Pick-up,—the standard by which others are judged and valued,—made 1929 its own particular year . . . by interpreting NATURALLY . . . by reproducing all those fine chromatic shades and colortones which form the essence of real music.

The AUDAK COMPANY, 565 Fifth Avenue, New York

"Creators of High Grade Electrical and Acoustical Apparatus Since 1915"

In Canada—The Canadian National Carbon Co., Ltd., Toronto



The General Electric 10-inch Oscillating Fan retails at \$17.00, for A. C. or D. C. Current.
The average life of a General Electric Fan is about twenty years.



G-E Fan

The Big FAN PUSH is on!

General Electric crashes through this year with the most extensive fan advertising campaign ever scheduled. Page ads in four colors appear in Liberty, Collier's and Saturday Evening Post.

General Electric Company,
Merchandise Dept., Section V-601,
Bridgeport, Conn.
Send me details of G-E Fan Plan for 1930.
Name _____
Street _____
City _____ State _____

MERCHANDISE DEPARTMENT · GENERAL ELECTRIC COMPANY · BRIDGEPORT, CONNECTICUT

 **GENERAL**  **ELECTRIC**
MERCHANDISE PRODUCTS



Campaign for 1930

—assures greater sales for G-E Fan Dealers

The theme in the G-E fan advertising this season appeals to the big market "just around the corner" from your store—offices, hotels, stores, restaurants and homes. And throughout the year a *billion* copies of G-E ads, plus the G-E radio hour, carry the G-E name and monogram to all your prospects . . . building prestige that makes easier sales.

The G-E fan program this year offers more than ever before. In addition to national advertising, a bang-up assortment of sales helps enables G-E Fan dealers actually to bring prospects into their stores. The completeness of the line provides a fan for every prospect. The familiar G-E monogram on every one is a sales clincher. Whether or not you got your share of the 1929 fan business, now is the time to sign a G-E Fan contract for 1930.

This dealer's sign appears in all General Electric fan ads this year.



It makes your store a prominent fan outlet during the fan season.

Get our 1930 Fan Proposition before you sign your fan contract

MERCHANDISE DEPARTMENT · GENERAL ELECTRIC COMPANY · BRIDGEPORT, CONNECTICUT

The NEW



SUNLAMP

The G-E Sunlamp, announced last November, met with instant public acceptance. It is a popular and profitable sales specialty.

You too, can get a portion of this new business. Now is the time to act, while winter is here in full blast. Ask the General Electric Merchandise Distributor, from whom you buy, about this winter sales leader and profit builder.

RETAILS FOR **\$69.50**
at the factory

"SAFE AS THE SUN
—AND HEALTHFUL."



GENERAL  ELECTRIC 
MERCHANDISE PRODUCTS

Now D by ARCT

*There's an Arcturus
Tube for Every
Radio Set*

- 127—Detector-Amplifier
- 124—A.C. Screen Grid
- 126—Amplifier
- 145—Power Amplifier
- 150—Power Amplifier
- 071—Power Amplifier
- 180—Full Wave Rectifier
- 181—Half Wave Rectifier
- 012-A—Power Amplifier
- Detector-Amplifier
- 101-A—Detector-Amplifier
- 099—Detector-Amplifier
- 122—D-C Screen Grid
- 071-A—Power Amplifier

**GIVING ARCTURUS DEALERS
A COMPLETE LINE OF TUBES
FOR EVERY POPULAR RADIO
RECEIVING SET**

GET YOUR ORDER IN TODAY

**ARCTURUS
RADIO TUBE COMPANY
NEWARK, NEW JERSEY**



ARCT

LONG RADIO

A-C Tubes TURUS

YOU know what the name Arcturus means on an A-C tube. *Quick action, clear tone, long life.* This kind of service has made Arcturus Tubes famous throughout the radio industry...a symbol of dependable tube performance wherever A-C sets are made, used or sold. ☞ Now we offer Arcturus *Direct Current* tubes, built to the same high standards that made possible Arcturus' A-C superiority...giving dealers complete Arcturus equipment for any popular radio set. ☞ Thousands of Arcturus dealers know that Arcturus *proved performance* has helped them increase their set and tube sales. Stock and sell the *entire* Arcturus line.



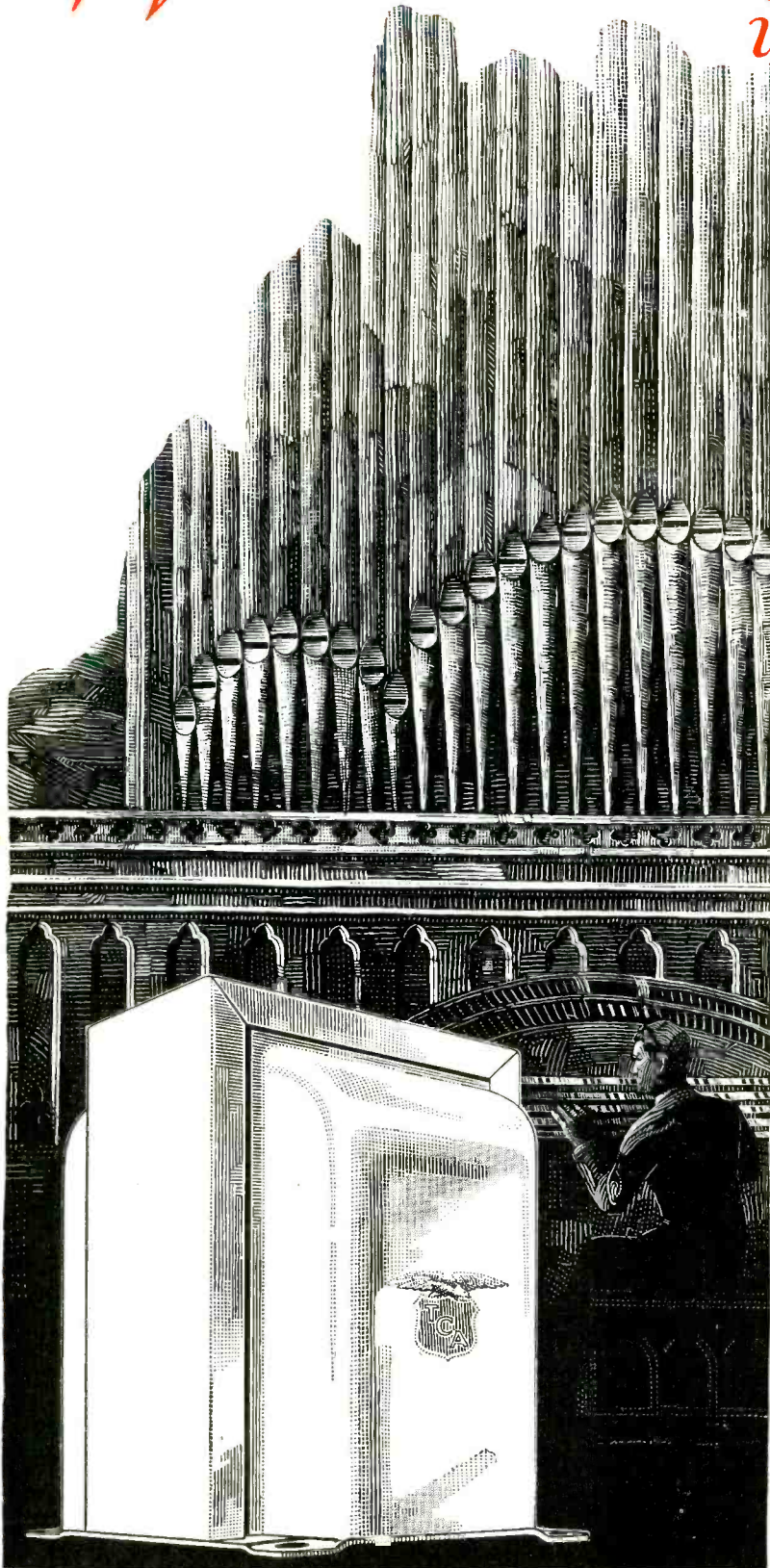
PROVED PERFORMANCE
Arcturus Tubes sell easily because their superiority is self-evident. Compare Arcturus' quick action, clear tone and long life... there will be no question which tube your customers will buy.

URUS



LIFE TUBES

When real **TONE-RICHNESS** is required



TRANSFORMER amplification is by all odds, and for many reasons, the favorite. True in tone over the full musical range, inexpensive, trouble-free, and enjoying the full confidence of a discerning public.

Transformers make the set.

The design and construction of transformers determine the quality of reception.

With the co-operation of the T·C·A engineering staff, you can be sure of the highest attainable results.

Complete manufacture and controlled quantity production have made T·C·A the favorite on the nation's finest sets. Audios . . . Power-transformers . . . Chokes . . . Power Packs . . . Dynamic Speakers.

TRANSFORMER CORPORATION
OF AMERICA

2301-2319 SOUTH KEELER AVENUE
CHICAGO, ILLINOIS



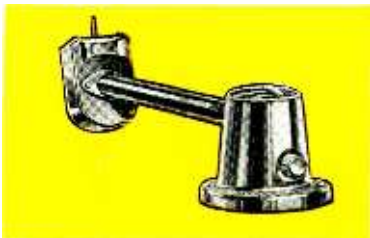


Everything Your Customers want in an Electric Pick-up!

WHEN you demonstrate the Webster Electric Pick-up, you have a great number of selling features at your command.

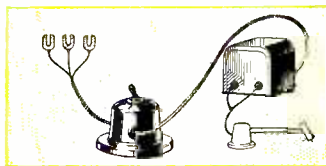
Tone Quality is, of course, the major sales point. The clean-cut sparkling performance of the Webster makes it the choice of critical music-lovers. It picks up the deepest tones and sharply reproduces the highest notes with remarkable fidelity. Buyers recognize in its rich mellow tone and full volume the result of quality construction and materials. Convenience is another big selling point. The Webster Volume Control (illustrated below) permits instant switching from phonograph to radio, from radio to phonograph, and controls phonograph volume, with just a turn of the fingers. There are no wires to change—nothing to disconnect. Once the Webster Pick-up is installed, no further wire-manipulation is necessary.

Other new developments include the Webster Scratch Filter, offered for the music lover who desires a round, mellow tone instead of one of brilliance and sharpness. The list price is \$2.00.

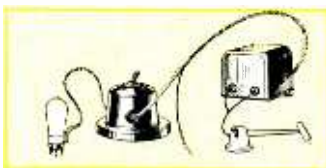


The Webster Volume Control greatly simplifies pick-up operation. To reproduce through the radio, volume control need only be turned off, reversed a quarter turn and you instantly switch on the phonograph connection. Turn knob clockwise for increased volume.

Pick-up Model 2A includes head, arm, built-in volume control and switch, adapters. List \$17.50. Model 2B includes head with attachment clamp, separate volume control and switch, and adapters. List \$13.00. Victor Radio R-32 special model, \$19.50 complete. Model for phonograph tone arm, \$15.00.



Pick-up Booster Kit BKR-706 for use with Radiola Model 66. List Price \$7.00 (Slightly Higher West of Rockies.) It is only necessary to connect the three cord terminals to the corresponding terminals of the set.



Booster Kit BK-706 for any set using "C" Bias Detection. List Price \$7.00 (Slightly Higher West of Rockies.) For screen-grid sets having only a low gain in their audio system and using "C" bias detection. Where two good stages of audio are used, sufficient volume is secured by connecting adapter in the first audio stage.

The new Webster Booster Kits are supplied for particular sets where increased volume and quality of tone are desired.

The Webster line offers you the greatest quality and the widest range to satisfy the largest number of demands. Compare Webster products, feature by feature, with all others before deciding upon the pick-up line you are going to sell this year. Stock the Webster for additional profits—if your jobber is not supplied, write us direct.

The New Type Webster Adapter for Screen-Grid Sets

In sets such as the Atwater-Kent 55, 60-Philco 65 and others employing similar circuits, this screen-grid adapter solves the problem of pick-up reproduction. Installation is simple. Remove the detector tube, plug in the Webster Adapter, and replace the tube.

No further attention is necessary. This screen-grid adapter, and the standard Adapter, are supplied with the Webster Pick-up at no extra cost. They are products of the Webster Research Laboratories—ample recommendation of their correct design and quality.



WEBSTER ELECTRIC COMPANY

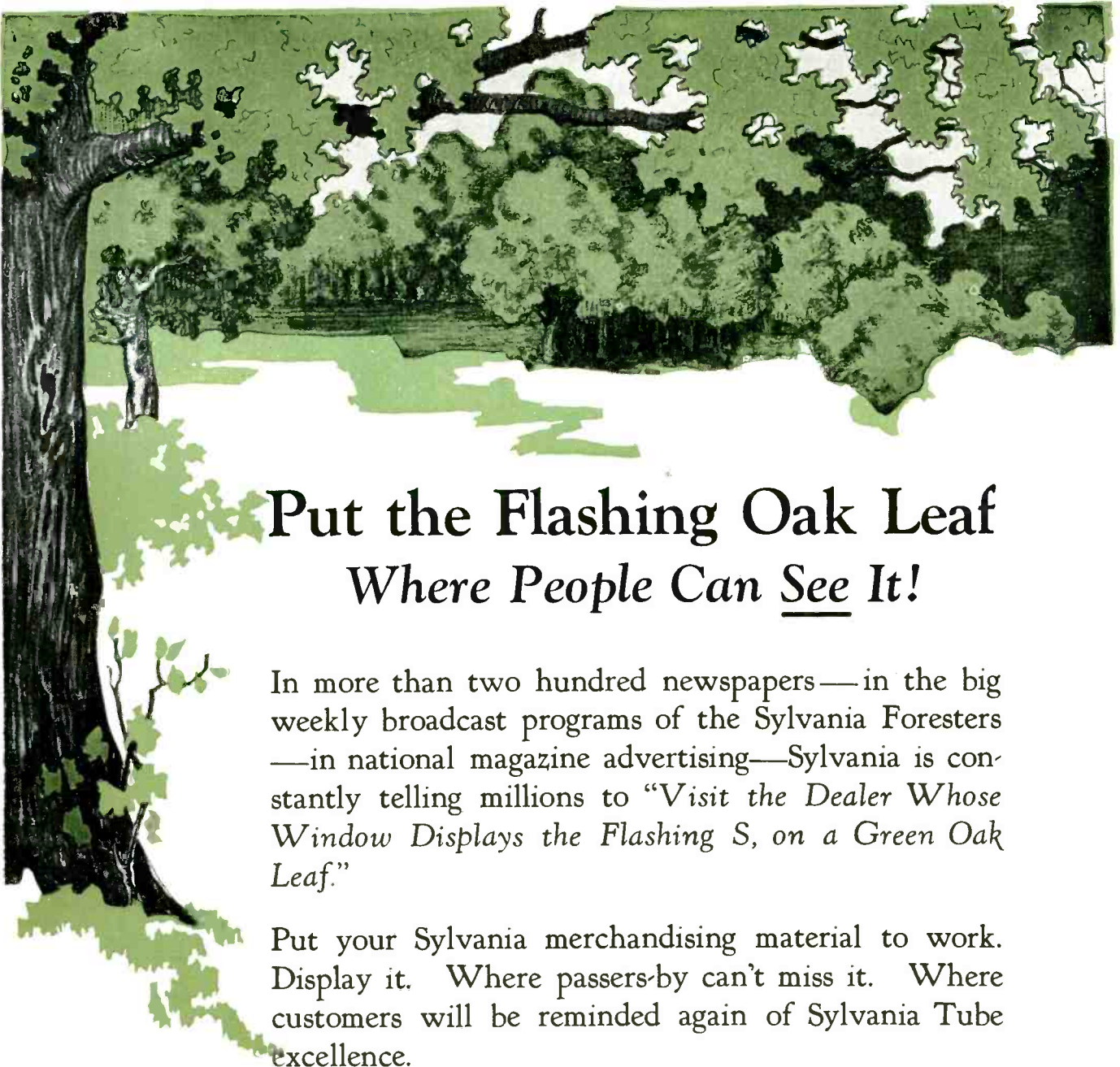
RACINE WISCONSIN

Webster

W Electric Pick-up



Theatre Pick-up
For use with 16" records at 33 1/3 R. P. M. Two models—Standard 2D, \$25.00, low impedance model 2D-1, \$30.00. Matching Transformers at \$6.50.



Put the Flashing Oak Leaf Where People Can See It!

In more than two hundred newspapers—in the big weekly broadcast programs of the Sylvania Foresters—in national magazine advertising—Sylvania is constantly telling millions to “Visit the Dealer Whose Window Displays the Flashing S, on a Green Oak Leaf.”

Put your Sylvania merchandising material to work. Display it. Where passers-by can't miss it. Where customers will be reminded again of Sylvania Tube excellence.

SYLVANIA PRODUCTS COMPANY
Emporium Pennsylvania

[The home of the Sylvania Foresters who are heard each week over
WJZ, KDKA, KWK, KYW, WBZ, WBZA, WBT, WHAM, WJR, WLW,
WREN, WRVA, KGRC, KPRC, WFAA, KFYZ, WCCO, WHK, WBRC,
WNBZ, KFAB.]

Sylvania

RADIO TUBES

Licensed Under RCA Patents



JANUARY, 1930

Radio Retailing

The Business Magazine of the Radio Industry

O. H. CALDWELL.
Editor

A MCGRAW-HILL PUBLICATION. ESTABLISHED 1925



A Decade of MIGHTY PROGRESS

TEN years ago, when KDKA ruled the roost and the galena mines were working nights, *Electrical Merchandising*, a McGraw-Hill publication, began its commercial service to a new industry—Radio. And the retail sales volume of this infant prodigy, for the year 1920, was under \$2,000,000.

Five years ago this month, in response to a need for a separate business paper of the industry, *Radio Retailing* was founded. At that time the sale of parts and accessories was almost three times that of sets.

As this issue goes to press, radio's total retail sales volume has grown from \$358,000,000 for 1924 to \$805,000,000 for the year that has passed. Sales of sets have quadrupled in dollar volume, and tubes have jumped from \$36,000,000 to the magnitude of a \$180,000,000 business.



AT THIS time let us review, quite briefly, the many transitions that have taken place within these ten tempestuous years: By natural and logical steps we see the purchase and assembly of miscellaneous parts by the "fan" user give way before the growing popularity of kits, only quickly to be replaced by the table model and detached speaker—with the storage battery on the parlor rug. But improved accessories, the most noteworthy being the battery eliminator and the development of artistic radio furniture, made practicable, in 1925-26, the unit assembly—and radio, as an article of beauty as well as of utility, came into its own. Further technical improvements were both rapid and, at times, disturbing. The dynamic reproducer and the a. c. and screen-grid tubes were the most notable examples.

Attention also should be called to the development—in conjunction with the radio reproducer—of the phonograph, and to a host of other electrical devices whose very heart has been the electronic tube.

The past five years has also witnessed the growth of an

organized, co-operating industry which, through its dealer, jobber and manufacturing associations, is furthering a continuance of these amazing records.



AND whither are we heading? Without question today's progressive radio dealer soon will be merchandising a complete collection of *home entertainment* inventions. The next appeal will be to the eye. Already the message of the phonograph disc has been visualized. The synchronized home talking-movie is an actuality. Soon the film strip of the domestic projector will carry also the sound recordings.

Another device around the corner is that of facsimile transmission. Perfected apparatus for sending and receiving news items, illustrated articles, short stories, photographs, etc., by wire or through the air, undoubtedly will arrive before motion television.

These intriguing creations of the radio technician ultimately will be marketed in one, self-contained unit. They will be sold through the same retailers who are now selling radio sets—because no other type of dealer will have the technical and sales experience to meet the exacting demands of this new, and profitable, opportunity.

And in this tremendous drama of industrial progress *Radio Retailing* will continue to play a leading part.

Under the sustained editorship of O. H. Caldwell—except during his appointment as a Federal Radio Commissioner—this *business* magazine of the radio industry has consistently preached the gospel of efficiency and of progressiveness. It is to a heightened furtherance of these policies, and to fearless leadership, that the present editorial staff pledge their hearts and their hands.

Ray V. Sutcliffe

MANAGING EDITOR

Radio Business

Radio Retailing's preliminary survey of last year's sales also reveals vast potential markets still untouched

DESPITE the October-November financial shock, 1929 was Radio's best year. *Radio Retailing's* preliminary survey indicates conclusively that the total gross sales of all radio products to the American domestic consumer—for the year 1929—will exceed those of '28 by not less than 16 per cent. Translated into dollars this means that we have done a total retail business of \$805,000,000. Receivers accounted for \$487,500,000; tubes \$177,500,000; and accessories and parts, such as aerial equipment and headsets, \$78,000,000.

This isn't all the good news. According to the National Bureau of Economic Research, New York, there are, roughly, 29,000,000 families within our boundaries—and only 11,500,000 radio receivers are in use today. But the true picture is even rosier: *modern* equipment, a.c. and battery sets sold during 1928 and 1929, total 7,100,000. In a nutshell, therefore, our total market is but 24.5 per cent saturated.

Let's view the situation from another angle: there are, in round figures, 19,700,000 wired homes in the United States. Since the advent of the a.c. tube (1928-1929)

there have been sold 6,850,000 socket power sets. The number of electrified homes still waiting for a.c. sets, then, is 12,850,000—saturation 34.8.

And the battery type market (unwired homes, mostly farms) presents still a more pleasing picture. Here there exists an actual "demand" market of not less than 8,000,000 families; and an estimated consumption of but 2,100,000 satisfactory receivers.

A STUDY of buying trends, as revealed by the tables below, verifies the theory that the separate unit speaker and the separate unit cabinet are bowing before the march of the self-contained, fully-equipped console. The year 1926 witnessed the peak of demand for the detached reproducer; and sales of "occasional" furniture pieces for radio chassis were greater in 1928 than during last year. Because it has not been possible to obtain, in segregated form at this date, the volume of furniture units sold at retail during 1929 (apart from complete radio receiver sales) this item is included in the 1929 table opposite the item "Other Accessories."

Sales of Radio Products at Retail, Prior to 1929

	1922	1923	1924	1925	1926	1927	1928
Radio Sets, factory-built (including consoles and built-in reproducers).....	100,000	250,000	1,500,000	2,000,000	1,750,000	1,350,000	3,200,000
	\$5,000,000	\$15,000,000	\$100,000,000	\$165,000,000	\$200,000,000	\$168,750,000	\$350,000,000
Radio-Phonograph Combinations.....							81,000
							\$38,000,000
Tubes.....	1,000,000	4,500,000	12,000,000	20,000,000	30,000,000	41,200,000	50,200,000
	\$6,000,000	\$17,000,000	\$36,000,000	\$48,000,000	\$58,000,000	\$67,300,000	\$110,250,000
Reproducers (excluding those in consoles and combinations).....	25,000	500,000	1,500,000	2,000,000	2,000,000	1,400,000	2,460,000
	\$750,000	\$12,000,000	\$30,000,000	\$32,000,000	\$30,000,000	\$28,000,000	\$66,400,000
A-B-C (Dry) Batteries.....	\$4,500,000	\$6,000,000	\$55,000,000	\$66,000,000	\$80,000,000	\$68,000,000	\$50,400,000
A-B Power Units, Storage Batteries and Chargers....		\$7,000,000	\$25,400,000	\$30,000,000	\$55,000,000	\$34,000,000	\$17,500,000
Other accessories*.....	\$3,750,000	\$4,000,000	\$11,600,000	\$24,000,000	\$33,000,000	\$38,550,000	\$46,000,000
Parts (does not include sales to manufacturers).....	\$40,000,000	\$75,000,000	\$100,000,000	\$65,000,000	\$50,000,000	\$21,000,000	\$12,000,000
Totals							
Sets, plus Combinations....	\$5,000,000	\$15,000,000	\$100,000,000	\$165,000,000	\$200,000,000	\$168,750,000	\$388,000,000
Parts.....	\$40,000,000	\$75,000,000	\$100,000,000	\$65,000,000	\$50,000,000	\$21,000,000	\$12,000,000
Accessories.....	\$15,000,000	\$46,000,000	\$158,000,000	\$200,000,000	\$256,000,000	\$235,850,000	\$290,550,000
Total Sales for year.....	\$60,000,000	\$136,000,000	\$358,000,000	\$430,000,000	\$506,000,000	\$425,600,000	\$690,550,000

*Includes aerial equipment, meters, pick-ups, turntables, headsets, furniture, etc.

16% Ahead of '28



There Are
29,000,000

Homes in the United States

There Are
11,500,000

Radios in the United States

but—only 7,100,000 are of Modern Design

1929 Retail Radio Sales

Item	Units and Dollars	
Radio Sets, factory-built (89% include consoles and built-in reproducers).....	3,900,000	\$487,500,000
Radio-Phonographs (Combinations).....	218,000	62,348,000
Tubes, all types.....	71,000,000	177,500,000
Reproducers (Exclusive of 3,689,000 sold with sets and combinations).....	800,000	16,000,000
B-C (Dry) Batteries.....		30,530,000
Storage (A) Batteries, Chargers and Socket Power Units.....		14,350,000
Other Accessories*.....		9,600,000
Parts (Does not include sales to manufacturers).....		7,500,000
Totals		
Sets, plus Combinations.....		\$549,848,000
Parts.....		\$7,500,000
Accessories.....		\$247,980,000
Total Sales for 1929.....		\$805,328,000

*Includes aerial equipment, pick-ups, turntables, headsets, meters, etc. Furniture is included under radio sets.

Saturation Comparisons

No. Homes in United States	29,000,000*
No. Homes with Passenger Autos	17,500,000
No. Homes with Telephones	12,600,000
No. Homes Wired for Electricity	19,721,000
No. Farms	6,500,000
No. Homes with Radio Sets	11,500,000

* Includes also individual prospects.

Number of Homes With Sets

December 31, 1921	60,000
December 31, 1922	1,500,000
December 31, 1923	3,000,000
December 31, 1924	4,000,000
December 31, 1925	5,000,000
December 31, 1926	6,500,000
December 31, 1927	7,500,000
December 31, 1928	9,500,000
December 31, 1929	11,500,000

—allowing for replacements and obsolete sets.

The figures in this article represent the close calculations of experienced radio observers on the staff of "Radio Retailing." Their findings are based on actual sales and production statements supplied them, between Dec. 20 and Jan. 4, by an average and representative majority of the manufacturers and distributors of radio sets, tubes, furniture and accessories. Because the final figures cannot be computed by the manufacturing units of the industry prior to the middle of February, a complete statistical analysis of sales progress will appear in our March issue.

New Program Features

Better Reception—Coming!

Six Improvements

in Broadcasting Due During 1930

Trans-Atlantic Programs

Many trading features from England, France, Germany, Italy and other nations, in store.

Agricultural Features

Hundreds of stations disseminating farm information, crop instruction, weather signals.

Educational Hours

Musical instruction to be expanded. Special new school lecture periods planned.

Humorous Skits

Broadcasting adding comedy. Character monologues; funny dialogues; skits.

Reducing Static

Higher station powers and greater modulation will deliver stronger program signals.

Suppressing Fading

Experiments underway may solve this perplexing phenomenon.

By O. H. Caldwell

Mr. William Marconi speaking at length from London. He was the first of a series of world figures, including kings, presidents and rulers, great literary personalities and military men, which it is planned to have address the American audience during 1930.

International programs will be the outstanding feature of the coming year's broadcasting. And the thrill of listening half way 'round the world will bring 40 new millions to radio with intensified desire to have the latest and best in receivers.

BROADER VARIETY OF ENTERTAINMENT

Our own American-made programs meanwhile are going through a greater diversification of features. There will be a broader variety of entertainment and music. Monologue, humorous dialogue and drama are being developed, and even greater emphasis will be placed on such essentials as the farm programs, educational features, and musical instruction.

The special noon farm program through eighteen great Central West and Southern stations will continue on the air in 1930, but important extensions and improvements are scheduled in this feature during the year. Weather forecasts and warnings will in 1930 be carried by some 200 stations, blanketing the whole nation with this important service. The Department of Agriculture is also co-operating with the State Colleges in a syndicate manuscript service to 150 broadcast stations, putting on the air agricultural information of the greatest value to farmers. Altogether, during 1930, nearly 300 broadcasting stations will be carrying the various farm program features prepared by the Department of Agriculture.

School and educational programs will be an important feature of 1930. The musical lecture programs will be continued as during 1929. And on two afternoons each week special school periods will be transmitted which can be tuned in by schools all over the country as supplemental to their regular school work.

TECHNICAL ADVANCEMENTS

On the technical side of broadcasting improvements are under way which will greatly improve the quality of listeners' reception. Powers of broadcasting stations on clear channels are being generally increased, thus raising

THERE are big plans ahead for radio broadcasting in 1930—plans which will make broadcasting of greater interest and service than ever, both to the average listener and to the man who is considering buying a receiving set.

In 1930 programs will increase in attractiveness to a point where no home can afford to be without a radio set of modern design, particularly as to fidelity of tone. At the same time technical advances in broadcasting will add greatly to the clarity, dependability and strength of reception.

THE THRILL OF TRANS-ATLANTIC RECEPTION

The thrill of trans-Atlantic programs will be enjoyed frequently during 1930. The short-wave art has progressed to the point where these features from beyond the sea may be scheduled with fair confidence for almost any hour of the American day or evening program. Heretofore broadcasting of such European events has been held back because of the lack of dependability of transmission. Now this difficulty is being eliminated, and the music of Piccadilly or The Strand generally will be received in clear, strong signals suitable for rebroadcasting on the American networks.

Only two weeks ago the American public listened to



NBC—Photogram

As Marconi, in London, spoke to America via short waves, this photogram of the historic scene was transmitted to our shores.

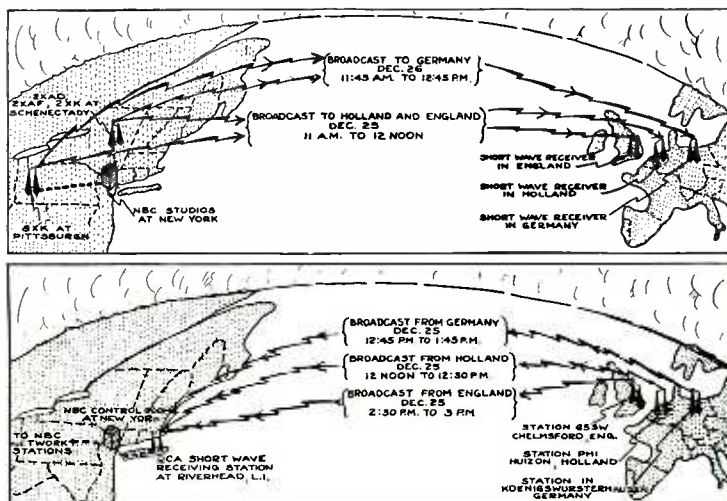
the level of signal strength throughout vast reception, areas so that the augmented signal will more readily override both natural static and electrical interference. The result to the listener is to eliminate the annoying noises which are the bane of reception when the incoming signal is faint and which can be eradicated only by raising the level of the broadcast signal well above that of the interference. A number of new 50 kilowatt stations will go into service this year, each replacing a 5 kilowatt unit, with proportional improvement in quality of reception throughout the service range of each of these improved entertainment factories.

Improvements are also being made in broadcast-station modulating equipment, by which the effectiveness of the broadcast wave is increased from former customary average values of 25 to 40 per cent up to levels as high nominally "100 per cent" or the full effective use of the carrier. In effect such improvement in carrier modulation acts like a corresponding increase in station power, so far as the listener is concerned.

While no way has yet been found to "eliminate static" altogether, these methods of raising station powers and increasing the percentage of station modulation are the most effective ways known for suppressing the interference due to static, both man-made and natural.

Radio's other annoyance, fading, also seems to be in fair way of prevention by a new plan of synchronized stations with which experiments are now being made. Fading results from the interaction of the two incoming waves received at any point from a given broadcasting station,—one wave being received by a *direct* and the

Gloria Swanson, the American actress, was one of the first to have her voice transmitted across the Atlantic by short waves. She sang in London and her voice was broadcast to America.



Practical reception from and transmission to England, Holland and Germany became an accomplished fact on Dec. 25-26, 1929

other coming down by reflection from the Kennelly-Heaviside layer. Since the second wave has a slightly longer path, it arrives momentarily "behind" and out of phase with the direct wave. When the two waves thus oppose in phase and offset each other, the signal becomes weak or disappears altogether. A few seconds later if the two waves reinforce each other, the signal is at a maximum. By utilizing two or more sources of transmission, synchronized to-

gether and transmitting the same program, the maxima and minima of fading from any single source are combined, and fluctuations, it is believed, can be ironed out, eliminating fading, so far as the listener is concerned.

With radio's technical difficulties being smoothed away, and with new program features of wide interest on the schedule for 1930, the demand of the public for modern receiving sets should increase, and a greater popular interest should be manifested in broadcasting than ever before.

What's AHEAD!

By
Henry Baukat

Glancing behind the curtain we view the new technical developments that radio manufacturers will present during 1930



THE radio industry, like everything else, moves by successive steps. In order, therefore, that we may have a more comprehensive view of what lies ahead let us review for a moment the road we have traversed.

The trend of development has been as follows: The early crystal was replaced by the audion tube. The audion tube was superseded by the 6-volt storage battery tube, the present 201A type. This in turn was supplanted by the raw a.c. filament or 226 type tube and this, in its turn, has given way to the heater or 227 type tube. Now, the 224, or screen-grid tube, is edging toward the first line.

A similar transition took place when ear phones were supplanted by the horn speaker. Then the horn was replaced by the magnetic cone, and now the magnetic cone has been shoved aside for the dynamic reproducer.

Viewing our progress from another angle, it can be said that 1919 to 1924 was the parts and battery set era, and from 1924 to 1926 the accessory market era. Since then we have been witnessing a transition to the complete ensemble, together with "lamp socket" electrification which took place in 1927.

During the past year we have seen a.c. screen-grid tubes developed and introduced into sets. This development will be continued. We may expect to see the majority of sets not only equipped with screen-grid tubes but actually using them correctly. The band-pass filter system of radio frequency tuning will be used in more sets together with dials calibrated in kilocycles only. With radio frequency currents being amplified more, due to the proper use of screen-grid tubes and by the use of grid bias detection, there will be less need for as great a degree of audio frequency amplification. Even now a few receivers have only one stage of audio-frequency amplification. We may expect more development along this line during the coming year.

EITHER for the last audio stage or for the one, and only, audio stage the 245 push-pull amplifier seems to be the popular combination. This will undoubtedly remain true until the pentode tube is developed for use

in the last audio stage. This development will probably not be marketed in this country until late in 1930. Tubes of the pentode type, or double screen-grid, have been used on the Continent and in England for the past year. However, these tubes are not suited for American use and do not work with our circuits. They will have to be re-designed before we can use them. When they do come into general use here, it will mean one stage of audio frequency, coupled by means of resistances and impedances. The audio-transformers, therefore, will likely be used less.

Power packs have received more attention lately. We find that the majority of sets are now equipped with transformers, condensers and resistances of such quality that little trouble is experienced with them. The improved 280 type rectifier will continue to be the popular center of this unit.

Then we may expect to find sets equipped with a tone or pitch control in addition to the ordinary volume control. This will give the user a chance to vary the pitch of the reproduction to suit his individual taste.

IT IS highly probable that fewer reflector or mechanical tuning devices will be used during the coming year as were in evidence the latter part of 1929.

Remote control, however, is a different proposition, and here we may expect to see great advances made, both in the number of companies using simplified remote control and in the perfecting of these devices.

The electro-dynamic reproducer has found for itself a permanent niche in the hall of fame and shows marked improvement during the past year. This indicates that its popularity will continue.

Although the majority of set sales are of the console type there still is a substantial market for the table set—for use in special cabinets or imported furniture.

Battery operated sets for farm and automobile use will be developed during the next year to a high degree of perfection, made possible through the improved d.c. or 222 type screen-grid tube.

As for radio furniture, it appears that the present
(Please turn to page 65)

Radio Retailing's

Business Averages

A summary of surveys made by RADIO RETAILING during the past year. The figures given on this page constitute yardsticks which every dealer will find valuable in measuring his business.

Retail Costs by Volume Done

Classification	Income				Total Operating Expense Per Cent	Net Profit or Loss Per Cent	The Six Main Expense Items					
	Net Retail Sales	Cost of Goods Sold	Gross Margin				Occupancy, Per Cent	Selling, Per Cent	Administration, Per Cent	Publicity, Per Cent	Servicing, Per Cent	Other Costs Per Cent
			Dollars	Per Cent								
Average of 22 stores grossing \$100,000 or over.....	\$190,671	\$116,015	74,656	39.1	30.8	8.3	5.0	12.8	2.9	3.3	1.2	5.6
Average of 25 stores between \$100,000 and \$50,000	69,033	43,850	25,183	36.6	28.8	7.8	4.1	11.6	5.7	3.8	1.8	1.8
Average of 62 stores less than \$50,000 yearly.....	20,862	13,614	7,248	34.2	25.8	8.4	4.5	10.0	5.7	2.6	1.4	1.6
Total average of 109 stores	\$7,214,009	\$4,492,661	2,721,398	37.7	29.5	8.2	4.7	12.0	4.1	3.3	1.5	3.9

Analysis of Radio Servicing Costs

Average Volume Business Done by Outlets Surveyed	Cost of Service	Free Service				Paid Service					
		Period of Guarantee (Months)	Calls Made per Sale	Cost of Each Free Call	Loss per Month on Free Calls	Charge per Hour	Calls per Month	Number Service Men Employed	Salary per Man per Week	Sales from Service Calls (of Total Sales)	Net Profit from Service (of Total Net)
\$25,804	1.75%	5.4	2.7	\$1.36	\$38.60	\$1.40	107	1.3	\$29.60	25.2%	12.3%

Trade-In Practice

Average number trade-ins per dealer for 1929..	33
Average new set sales that include trade-ins....	28%
Average allowance old set.....	\$23
Dealers accepting trade-ins.....	76.8%
Dealers marking up trade-ins for resale.....	47.8%
The average mark up.....	20%
Dealers making profit on trade-ins, 41.1%; taking loss, 26.6%; breaking even.....	32.3%

POINTS TO REMEMBER

1. Never allow more than 10% of new set sale price on trade-in.
2. Mark up of trade-in should be not less than 25%. 50% is better as this allows some margin of sales expense.
3. Accept only standard makes of sets in trade.
4. Don't even consider a battery set.
5. Sell trade-ins for cash only.
6. Keep a card file of prospects for trade-ins.

The Patent

*The commercial value of
the "key" radio*

By LeRoi J.

Chairman, Patents Committee, R.M.A., and

THE problem of the manufacturer and merchant is to move goods at a profit. Therefore, anything which affects their ability to do this is of vital concern.

Many companies which have carefully worked out their operating plans and have provided adequate organization, finances, production and distribution, have found their factories stopped without warning, and large inventories have been frozen over night by the drastic weapons of preliminary injunctions based upon patents.

However, in spite of these dangers, patents, their meanings and effects, are little known generally to business men. Possibly the great difficulties of the subject and the inherent uncertainties of patents are the reasons that business men generally do not give the subject of patents the attention it merits.

Contrary to the generally accepted notion, a patent carries three rights—the exclusive right to manufacture, the exclusive right to sell and the exclusive right to use. In essence, what a patent really does is to give its owner the right to sue. Whether the suit is justified generally involves highly technical questions of great complexity.

RELATION OF PATENTS TO INDUSTRY

Patents have had various effects on different industries. The development of some industries has paralleled the development of patented inventions. Other highly progressive and outstanding industries have developed largely independently of patents. Comparatively few of our modern industries have been built up mainly on patents. It is worthy of note that in one of the outstanding and most progressive industries of America, and probably the industry which is responsible for giving more value for the dollar than any other, monopoly based upon patents has been a negligible factor—competition was the keynote. I refer to the automobile industry, which operates under an agreement by which patent rights are interchanged or pooled.

There are those who contend that patent protection is a necessary incentive to justify research and the development of products; that without patents, industry would not be progressive. On the other hand, there is abundant evidence of a most intensive development of industry with little or no patent stimulation.

PATENTS AND THE RADIO ART

What, then, is the patent situation in our own industry? Whither are we heading? And what is the status of the "key" patents in the Courts today?

While there is a general impression that radio is a comparatively new art, obviously it had its beginnings with the discovery and the development of electricity. Modern radio apparatus is merely a new and improved application of well-known and long-established electrical principles. In fact, the transmission of voice through space was demonstrated as early as the year 1901.

Modern radio apparatus is based upon an application of devices which were primarily developed for wire purposes. It has frequently been said that the heart of modern radio is the vacuum tube, and the vacuum tube was developed long before modern radio. And now we find the radio industry laboring under a very grave patent situation. Probably no industry was ever involved in so much patent litigation as the radio industry, at the present time and during the past few years. There are

hundreds of suits pending against numerous companies, and many more threatened, covering a great variety of features.

In the early days of the industry, a few of the outstanding holders of patents relating to the industry formed a cross-licensing agreement, which substantially solved and cleared up their patent conflicts. However, as the art has developed and various improvements have been made, patents and patentable inventions have been acquired by numerous companies.

EVERYBODY WILL PAY

This development has created, as previously stated, a present condition in which a maelstrom of suits—in process or pending—injunctions, uncertainties and multiple royalty fees figure largely.

Unless this situation is corrected the progress of the commercial art will be impeded, the price of radio apparatus will be unbearably high, potential markets will seriously be reduced, and the possibility of profitable manufacturing and merchandising will be jeopardized.

Two solutions suggest themselves: the creation of a single organization for the acquisition of patents of general interest to the industry, whereby rights may be generally obtained on a basis beneficial to the industry; or the operation of the entire industry under a cross-licensing agreement.

The Radio Manufacturers' Association, which includes in its membership practically the entire industry, has proposed the latter solution and has submitted a cross-licensing agreement to its members for adoption. The principle underlying this agreement is that while some companies may give more patent value than others, the joint contributions of all the companies will be of greater value than any one company will give.

It is also proposed that under a cross-licensing agreement the industry will be in a position to set up a central patent department to investigate jointly and consider the patents and inventions which are acquired or developed outside of the organizations of the members of the agreement. Other industries which have so solved their patent problems have been notably free from patent difficulties, and have worked together harmoniously, cooperated effectively, and have in general enjoyed a prosperous and progressive industry.

Situation

*patent rights—Status of
patents summarized*

Williams

Director of Patents, Grigsby-Grunow Co.

Regardless of the practical difficulties one or both of these courses may offer, a definite plan of action must be formulated—and that right soon. We of the Radio Industry will do well to give serious thought to the effective solution of our grave patent problems.

STATUS OF KEY PATENTS

A good patent has been characterized as one you own and an invalid patent as one the other fellow owns. Recognizing this condition and the fact that it is difficult for two to agree as to the scope of patents, or even the interpretations which Courts have placed upon them, the following is an endeavor to indicate the Court status of some of the outstanding patents in the radio industry.

Feed-Back Patents

1,113,149 Armstrong (Westinghouse Electric & Mfg. Co.)
1,507,016 De Forest } (Controlled by A. T. & T., R. C. A.,
1,507,017 De Forest } G. E. and W. E. & M. in respective
bills.)

These patents have been the subject of numerous decisions in many different courts and were recently passed upon by the Supreme Court of the United States, affirming the decision of the Court of Appeals of the Third Circuit holding De Forest to be the prior inventor of the feed-back and tube oscillator inventions. Eighty to ninety per cent of the receiving sets were said to be licensed under these patents.

Multiple-Tuned Radio Frequency Patent

1,173,079 Alexanderson (General Elec. Co.)

This patent which was passed upon by the Southern District Court of New York in the Atwater Kent Case and by the New Jersey District Court in the Splittorf Case, was held to cover a radio receiving set having successive circuits tuned to the same frequency and linked together by tube relays. In other words: the conventional type of Multiple-Tuned Radio Frequency Amplifier. The patent has not been passed upon by the United States Court of Appeals.

Grid Control Patents

1,231,764 Lowenstein (A. T. & T.)

This is the so-called "C Battery" negative grid patent owned by A. T. & T. This patent was held valid by the Southern District of New York Court in case of R. C. A., G. E., et al against J. H. Bunnell & Co., Inc., A. H. Grebe & Co., Inc., et al. Negative grid bias is the form generally used on modern receiving set amplifiers.

1,282,439 Langmuir (General Elec. Co.)

The so-called "Grid Leak" patent owned by the General Electric Company has been put in suit against many different companies and involving many different makes of apparatus. The main suit against Atwater Kent was discontinued by consent.

(Please turn to page 67)



"Those in the Radio Industry will do well to give serious and active thought to the proper and effective solution of their grave patent problems."

LEROI J. WILLIAMS

Ringin' Up Sales on DOORBELLS

STABILIZING buying demand is a problem which the Southern dealer finds particularly pressing. J. F. Dobbins, president of the Florida Radio Company, Jacksonville, had about decided that those costly depressions in the volume curve of radio buying must be stopped. He was going to find some way to go out and get the sales when public apathy in off seasons cut down his receipts at such a discouraging rate.

And he hit on this—nothing other than the customary house-to-house canvass—but *with a new twist*. This new element changed it from a dreary, one-in-three-hundred proposition to a means of increasing his business 25 per cent over his record for the same period the year before.

Dobbins centered his entire campaign about the personality of a good-looking and capable young woman! In this way a new punch was added to the proven worth of the survey and canvassing idea; the advantages of its complete coverage and direct contacts were retained, and a clever novelty was incorporated to make them doubly effective.

Mr. Dobbins introduced this feminine element by recruiting a sales crew of two men and one girl. The men were experienced salesmen, while the young woman had no other qualifications than a pleasing personality and a willingness to canvass thoroughly.

Following are the details of the sure-fire system of this Florida dealer:

A map of the city is blue penciled into four sections and each territory sifted to eliminate all deadwood.

Then the new style crew of "bell ringers" goes to work. The idea is to let the girl get the leads for the salesmen to follow up.

The young woman selects one of the districts and begins a thorough canvass of every home within its limits, entering the names and addresses in a notebook she carries for the purpose. She introduces herself with the announcement that she is taking a radio census for a local dealer. Disarming her listeners in this manner, she is able to extract a quantity of useful data. She asks, first of all, if they have a radio. If they have, she learns its age, make, and condition; if they have not, she learns the reason—whether there exists any prejudice against

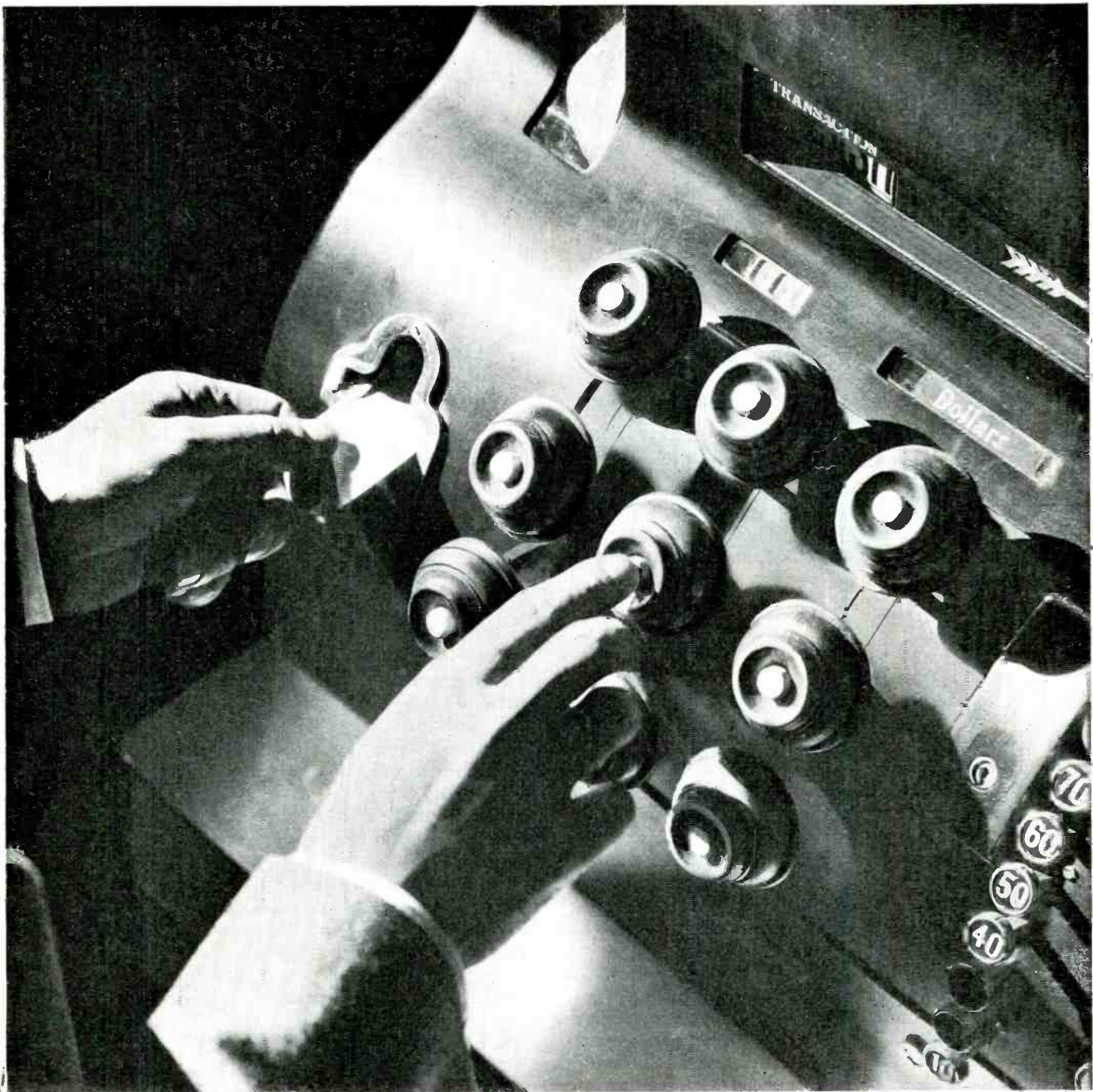
radio, or any misconception of the benefits of owning a set.

All this information is passed on to the salesmen and to the company's files. The greater part of it is used for immediate follow-ups, while some is kept for use at a more opportune time.

In the case of the originator of the idea, the salesmen, with the advance knowledge of just what line of sales talk to use, were signally successful. The girl, working on a straight salary basis of \$15 a week, averaged about 35 calls daily. Perhaps it was that much touted feminine intuition that made it so easy for the young lady to pick the most likely prospects; at any rate she turned over a sufficient number of hot leads to the salesmen to result in four or five sales a week.

When they were not following up the leads furnished them by the girl canvasser, the salesmen themselves did a little census taking. The peculiar effectiveness of Mr.



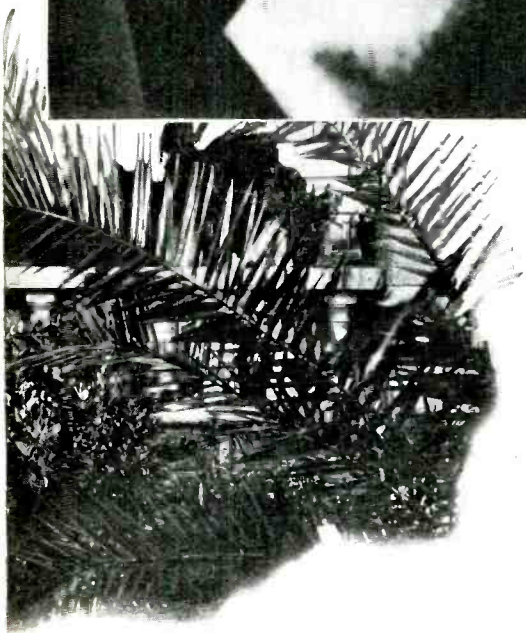


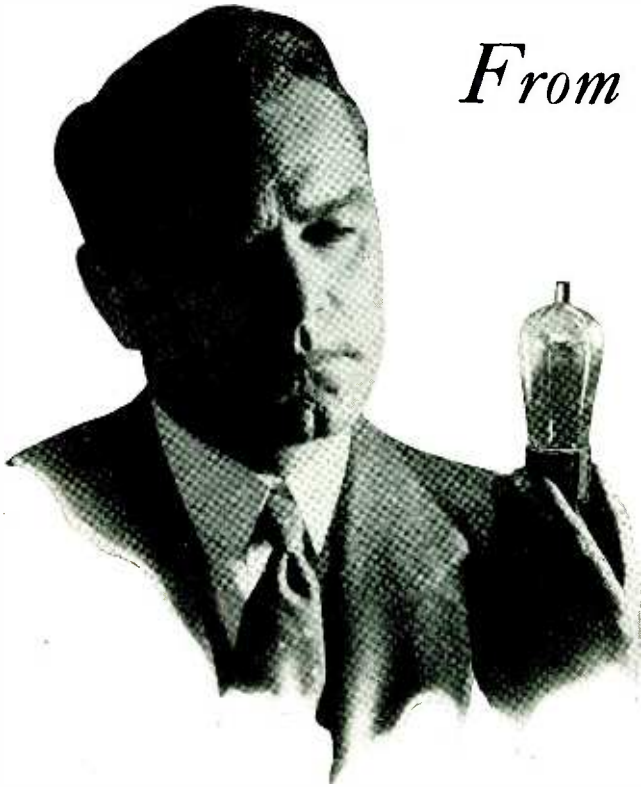
L. ZAENICK

How a Florida dealer found the new twist that was needed to rejuvenate an old method—and jumped his volume 25 per cent!

Dobbins' plan, however, is especially well shown by the fact that the efforts of the men enjoyed nothing like the girl's success in acquiring the desired facts. Many people who would refuse to talk to a man canvasser entered willingly into conversation with the pleasant-mannered young woman. The value of feminine attractiveness and of the feminine ability to become familiar with prospects (who in house-to-house work are mainly women) proved to be the whole secret of this sales scheme.

ONCE the ball is started rolling certain other elements Mr. Dobbins finds, lend valuable support to his novel campaign. For one thing, he handles only nationally advertised sets. The names of these brands are already familiar to prospects; and people
(Please turn to page 65)





From the Radio Tube *to the* Broad

*New McGraw-Hill Engineering
Magazine Covering Electronic
Tube Applications Will Appear
in April*

RADIO has revolutionized much in the everyday life of the world. It has brought the choicest offerings of the greatest artists to every fireside in the land. Its commercial messages span oceans and continents. It flashes the news of all the world everywhere, on land, on sea, and in the air.

But perhaps the greatest industrial miracle in which radio has had a part, has been quite incidental to radio itself. And that development has been little realized by most radio men.

This new miracle is the science of "electronics,"—the phenomena of the vacuum tube.

For as radio developed, the little vacuum tube which is its cornerstone, has also developed,—in accuracy, uniformity and dependability. And for the tube have been found a multiplicity of uses. Already these penetrate in every direction into industry. And the future applications which they promise, can well be said to stagger the imagination.

Electronic tubes, of course, find many uses in radio communication, broadcasting, telephony and telegraphy, as detectors, rectifiers, oscillators, and amplifiers.

Coupled with photo electric cells, they make the talking movies. Arranged in pure audio relation, they have created our modern electric phonographs and public address systems,—as well as our long distance telephone line.

Wired wireless depends upon them. And so does television, and picture broadcasting and facsimile transmission, both wire and wireless.

ANEW technique in apparatus control has been built up, around the electronic tube. Elevators can be leveled with quick accuracy by the aid of the electronic tube and its circuits. Industrial operations can be controlled; continuous flow processes reduced to absolute precision and uniformity. Street traffic signals can depend for their actuation upon approaching cars. Factory

and agricultural products are counted, inspected and graded, automatically.

A new science of metering and measurements is being developed. High temperatures, low temperatures, and small changes in heat content can be accurately indicated through the medium of the electronic tube. Phenomena of unreachable delicacy, mere indications, become dependable yardsticks capable of everyday handling by the plant workmen.

And so the electronic tube has now established itself as a universal tool. Already it finds uses in the sciences of medicine, chemistry, geology and geophysics, mineralogy, photometry. It is applied in crime detection in many ingenious ways, to discover as well as to convict the criminal.

But all of these diversified uses have as their central mechanism the electronic tube and its associated circuits. Behind each of these applications stand the designers and engineers who use tubes, electrical circuits and electrical equipment to accomplish their results. Each, working in his own field, is interested in the advances and achievements in twenty other directions, all apparently far removed from his own studies. For all of these workers a clearing house is needed.

SUCH a medium for exchanging the latest scientific and engineering information relating to the use and application of electronic tubes in whatever field, is now planned by the McGraw-Hill Publishing Company, publishers of *Radio Retailing*, *Electrical World*, *Electrical West* and 25 other engineering, electrical, industrial and business journals.

Providing such a necessary clearing-house service, and combing all industry and all laboratories both in this country and abroad, for the latest advances in the art of electronic applications, the new McGraw-Hill magazine, *Electronics*, is scheduled to appear in April.

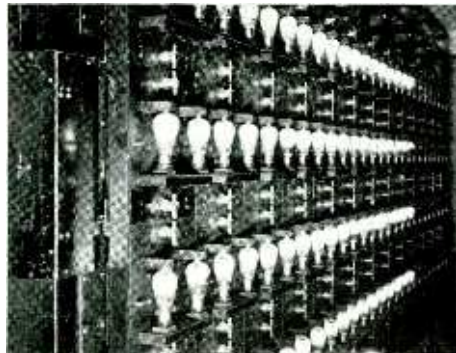
The advent of this new paper will not in any way affect the editorial policy or service of *Radio Retailing*. *Electronics*, an engineering journal, will cover the varied applications of electronic tubes and associated circuits in their radio, audio, visual and industrial applications.

Radio Retailing will continue to be the distribution medium of all home entertainment merchandise.

Field of "Electronics"

*The
VACUUM TUBE
is a Vital Part of These
Activities:*

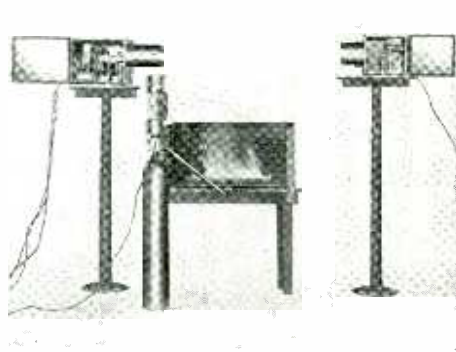
*Radio
Telephony
Telegraphy
Broadcasting
Sound Pictures
Carrier Systems
Beacons
Beam Transmission
Phonographs
Metering
Facsimile
Measurements
Receivers
Amplifiers
Traffic Control
Machine Control
Photo-Electric Cells
Grading
Counting
Electric Recording
Aviation
Analysis
Crime Detection
Compasses
Geophysics
Television
Musical Instruments
Automatic Processing*



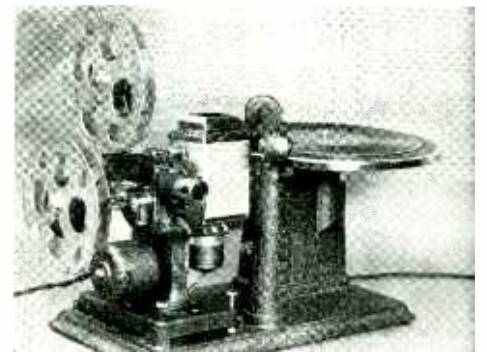
Theater Lighting Control



Airplane Beacon Indicator



Temperature Control



Sound Pictures



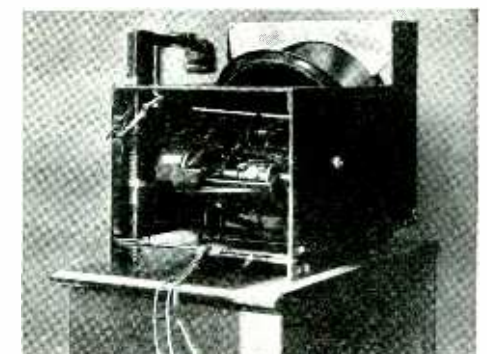
Television



Emotion Tester



Counting, Sorting



Automatic Phonograph

That FIRST

Impression

How often have you lost a sale because of a bad start? This article tells you how to make a perfect demonstration

COMPETITION in the retail selling of radio broadcast receiving sets is becoming greater and greater each day, with the result that the dealer who presents his merchandise to the consumer in the most thorough manner is the one who is realizing the greatest income.

This article is in no way intended to tell a retail merchant how to operate his business, but the author is more than confident that, if the average merchant will *make use* of the demonstration suggestions offered, his future sales will prove their worth.

In the average merchant's store today, what do we find? A number of sets of different make, all generally connected to the same antenna, with no means of switches from one set to another. Such an arrangement is very poor, to say the least, as the tuning of one set will always affect any others operating at the same time. Frequently the antenna is a piece of wire strung up in a haphazard manner with no idea of efficiency, and then run along the floor or base board of the show-room, instead of being insulated adequately and run properly to the receiver.

And, along with poor antenna installations, very few merchants pay any attention to interference caused by various electrical devices operated in the vicinity of the store. Some people believe that if the noise coming through the set stops when the antenna is removed, the noise was all coming into the set from the antenna. Such a theory is not always correct as in most cases the interference is coming to the set through the power supply lines. Except in very few cases, it will be found that all radio interference *can* be cleared up.

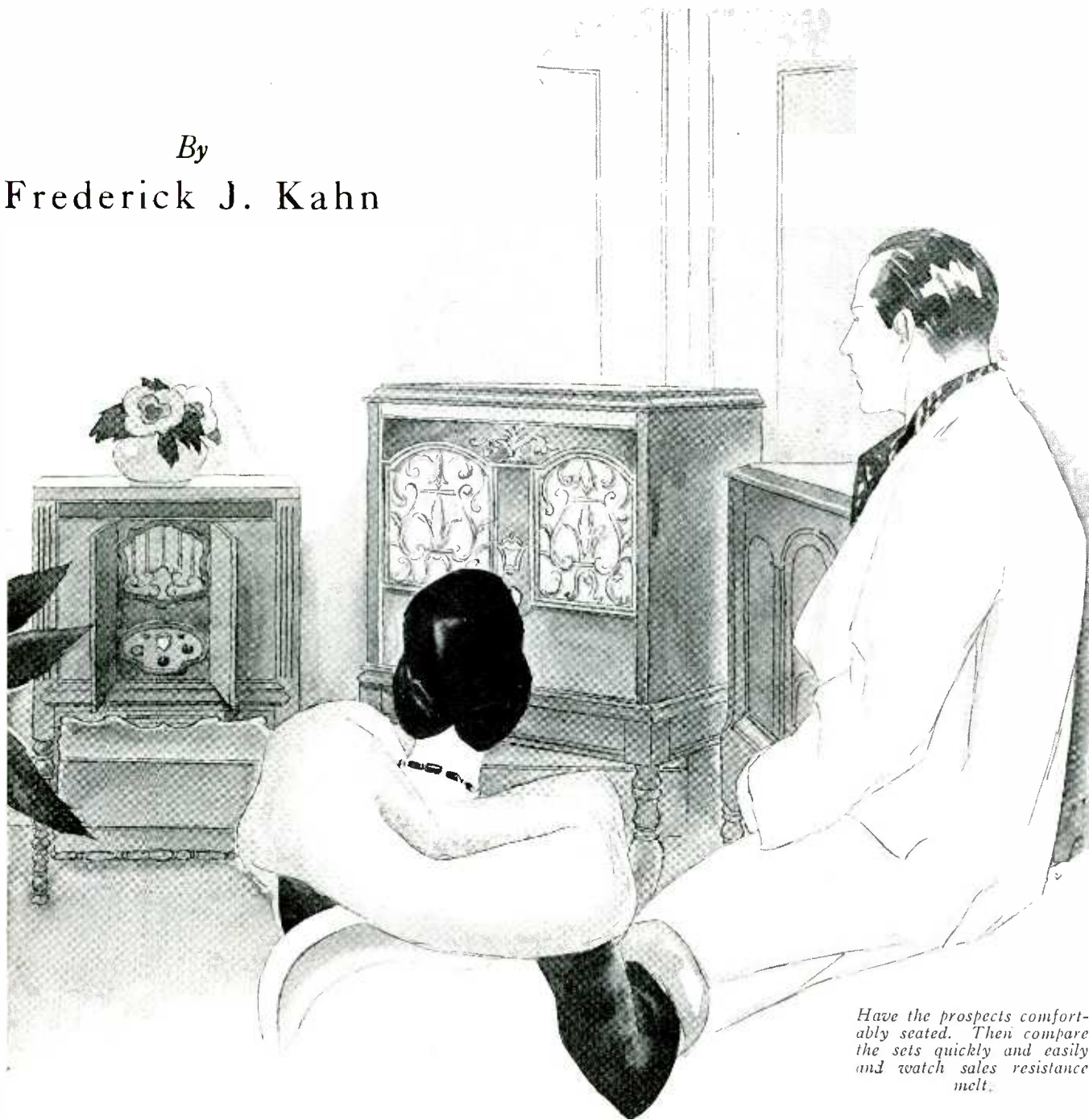
Then, too, very little, if any, attention is ever given to acoustical effects in the average store, with its plain hard walls and bare floors. Installing a small quantity of decorative drapery material, placing a rug on the floor and then arranging the sets so that they face in the proper direction, will decrease sales resistance. Incidentally, the above suggestion, if carried out, will not

only pay dividends in increased business, but will also beautify the store.

For the average set of today's design, an antenna exceeding 100 ft. is rarely necessary. In cases where interference is quite heavy, it is desirable to increase the length of the antenna to the point where the signal level is greater than the static level. By doing this, however, the selectivity is sometimes affected, and it is therefore desirable to insert a condenser of .00025 mfd. capacity in series with the antenna lead to cut down the capacity of the antenna. If there is interference caused by a strong local station, a wave trap should also be used and set against the station in question. The lead-in wire used



By
Frederick J. Kahn



Have the prospects comfortably seated. Then compare the sets quickly and easily and watch sales resistance melt.

inside the store should be well insulated and firmly fastened on insulators along the wall in back of the sets displayed. The ground wire also should be securely fastened and should not run any closer to the antenna lead than one foot. This is necessary to prevent increase in the antenna capacity.

ASSUMING that all this has been taken care of, our next object is to make the demonstration and comparison of the various sets as easy as possible for the dealer. To do this it will be necessary for the dealer to construct a few simple units containing relay switches.

Now the object of the equipment about to be described is to enable the person giving the demonstration to turn from one set to another by merely pressing a button on the remote control box. This causes the relay in the respective set control box to close the antenna circuit and at the same time to remove the short circuit from across the voice coil windings of the speaker. When

one relay goes on, the other one that has been operating cuts off and disconnects the antenna and shorts out the voice coil windings on the speaker. The 15 candlepower bulb acts as a series load from the storage battery to the relay and also illuminates the jewelled bezel which is mounted in front of it, thereby showing which set is being played.

A five-button key on the remote control box will only allow the playing of four sets with the fifth button acting as a master key to cut off the storage battery. If more sets are to be hooked up to this relay system, additional key units can be added in the same box. Hardly more than two key units will be necessary as these two will allow for the control of nine sets. The 110-volt pilot light and jewel are placed across the a.c. line to indicate that the voltage is on.

In using this method of demonstrating, all the sets to be operated should be turned on and tuned to the same station with the volume controls set equal. After that, the

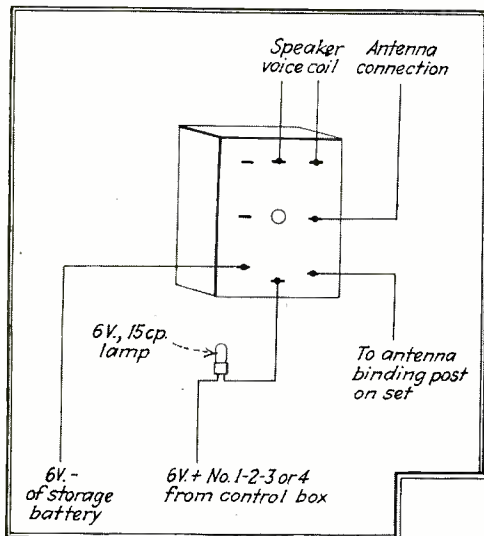


Diagram number 1. Detail of connections to relay with the cover removed.

prospect is comfortably seated while the salesman explains the various details of one set. When most opportune, that particular set is turned on and the prospect is not distracted by other sets playing at the same time. It has been proven that the sale of the higher priced models has been increased by this method of demonstrating as the superior tone qualities can be pointed out and a direct comparison can be made without the necessity of moving from one set to another.

AND now regarding the construction of the units. First determine how many sets you expect to hook up for demonstration, and then obtain the following material per set.

- 1—6-volt relay box (Brach or equivalent).
- 1—15-C.P. 6-volt bulb.
- 1—Socket for above bulb.
- 1—Jewelled bezel.
- 6—Bakelite binding posts.

Then obtain the following material for the main control box.

- 1—6-volt storage battery.
- 1—5-point Western Electric locking key.
- 1—110-volt pilot-light bulb and socket.
- 1—Red and green jewelled bezel.
- 1—A.c. supply cord with plug.
- 5—Bakelite binding posts.
- 1—Wooden box.

The relay should be removed from its original case and a small wooden box made to house it and the above listed equipment. A construction suggestion would show the relay on the bottom of the box with the bulb socket directly above and the jewelled bezel would be mounted in the front panel of the box directly in front of the small bulb. This arrangement allows for a neat and compact device and also indicates when it is in use. Diagram No. 1 gives the wiring detail of one relay box.

A wooden box should be made to house the pilot-light assembly, along with the locking keys and the pilot-light jewel. This control box should be placed on a small table about which are grouped the chairs, all arranged on the opposite side of the room from the sets.

In diagram number two is a suggested layout and also the wiring detail for the keys. This is so simple that there is no need of further explanation. Looking at diagram number three we find a general schematic layout. The wiring and arrangement of each box, the control box and the antenna and speaker connections are clearly shown.

In arranging the store artistically and using the system here described for the demonstration there is created

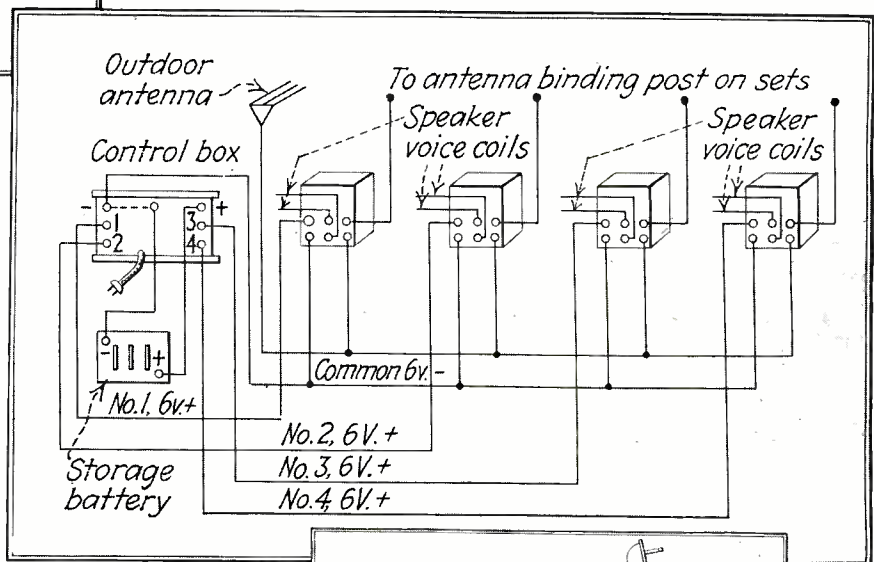


Diagram number 3. Showing external wiring of the control and relay boxes.

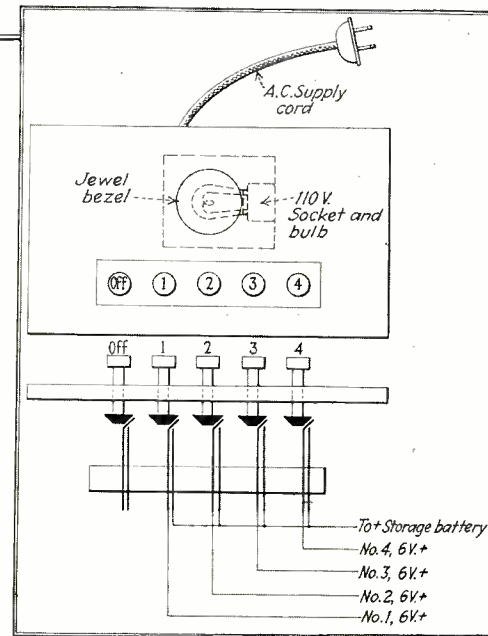
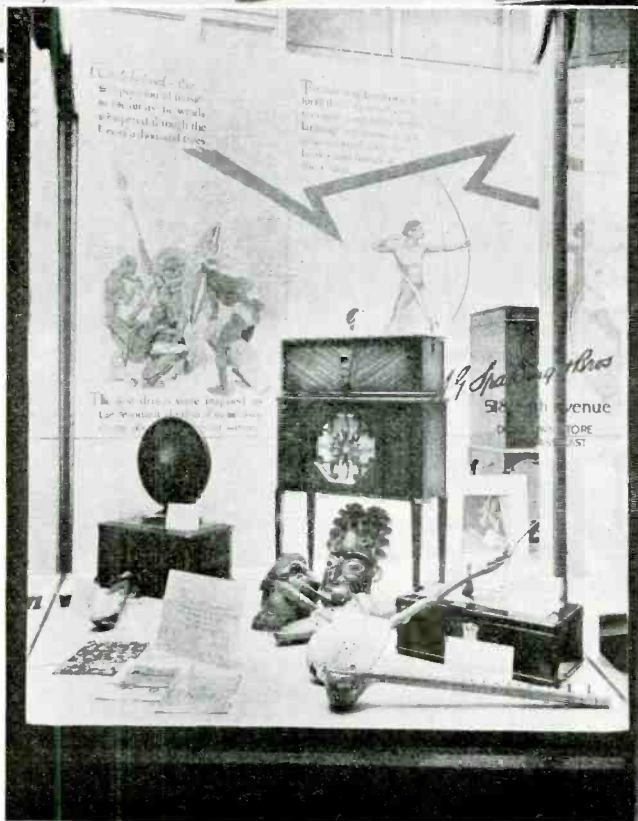
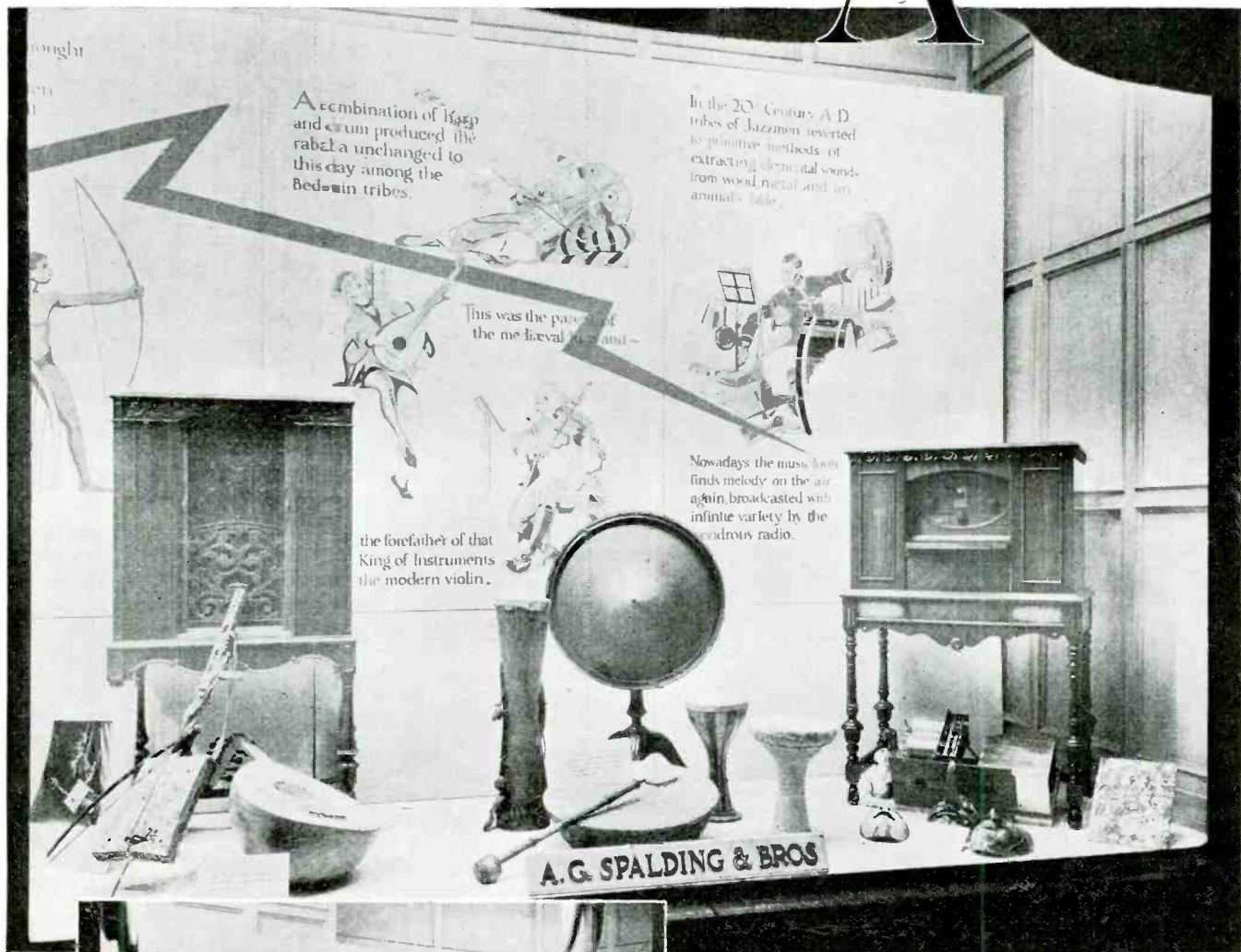


Diagram number 2. Plan view of control box with the key wiring detail.

at once an impression on the customer that "Here is a dealer who knows his business." The ability to create this feeling of confidence under ideal demonstrating conditions certainly overbalances, by a large margin, the slight construction cost and trouble. Also each item used is a stock part and readily obtainable.

And the entire cost you will find not at all high.

Down Through the AGES



The history of musical instruments in captioned drawings, from the twanging bow to the latest in radios, formed the interesting background of this display in the store windows of A. G. Spalding and Bros., New York City. Unusual musical instruments, ancient and modern, were arranged to present a striking contrast to modern console sets. By collaboration with local museums or collectors, many dealers might produce a somewhat less elaborate but equally effective display.

2,010 SET SALES

WILLIAM J. GEIGER,
*Manager Appliance Sales,
Philadelphia Electric Company*

THE Philadelphia Electric Company established its radio campaign quota at 1,800 sets—from Sept. 13 to Oct. 31. Actually it sold 2,010 receivers during this 40 business-day period.

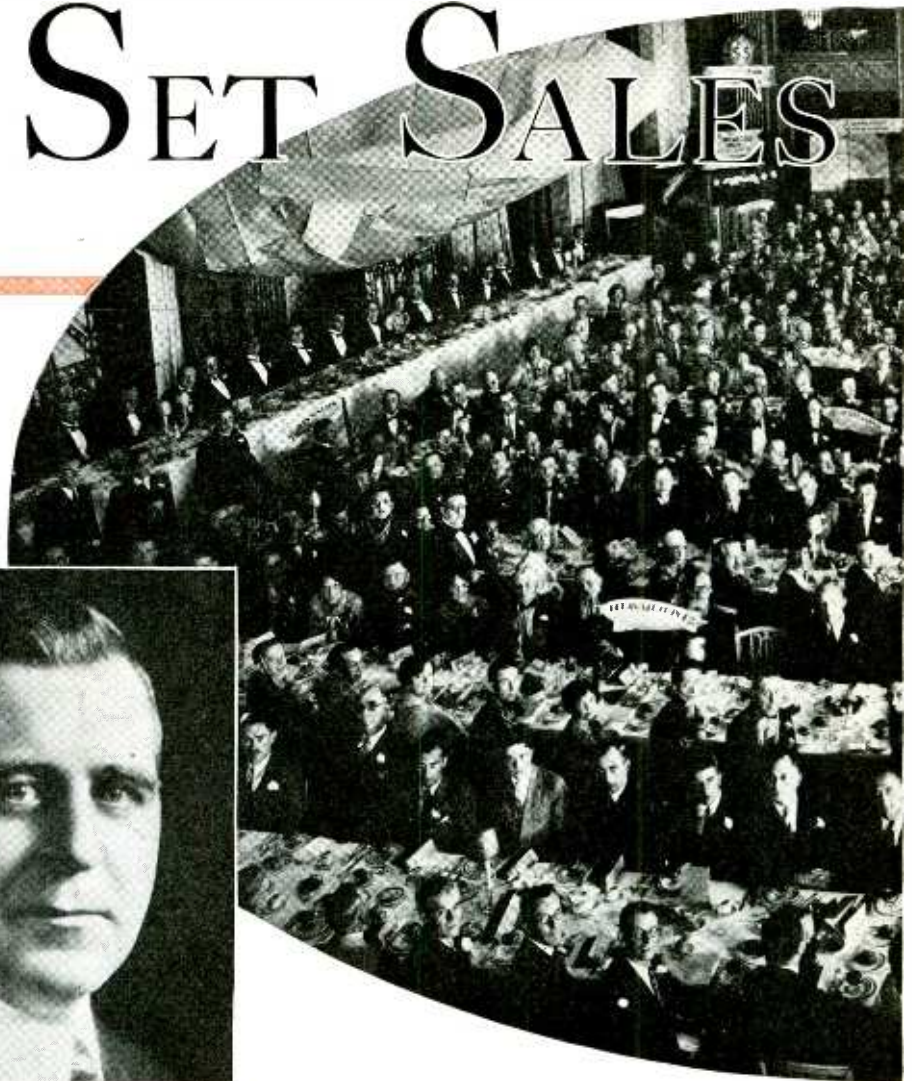
Analyzing the real reasons for this spectacular accomplishment we find that it was the psychological advantages of holding a sales drive, not the advertised "special inducements," that supplies the answer. As a matter of fact, the terms were 10 per cent down, 10 months to pay the remainder, 3 per cent on the unpaid balance and an allowance for the old set of not more than 10 per cent of the purchase price.

The 215 general appliance salesmen of this Pennsylvania public utility concern averaged 9.6 sets apiece because, reinforced by the customary series of pep meetings and preceded by a barrage of mailing pieces and newspaper advertisements, the "campaign" gave them a good reason for contacting, in the home, each of their 3,000 to 4,000 territorial customers. Likewise it supplied their district managers with a definite excuse for cracking the whip—in friendly fashion.

TWO LESSONS LEARNED

Two lessons for the independent dealer in radio products, as well as for the utility sales manager, stand out: first, that it is the reaction of the campaign spirit on the sales organization—not the actual inducements to the purchaser—that produces results; and, second, that a utility drive on radio—if properly planned and conducted—can be utilized by the other dealers in town to their own benefit.

Take point one: the terms offered were practically standard—no premiums, no cut prices, no free installations. But what sales stimulating tools did this "campaign" place at the disposal of William J. Geiger, man-



ager of appliance sales, Philadelphia Electric Company? Here they are:

First, an opportunity to assemble his entire merchandising sales organization around the banquet board and there to present, in inspiring fashion, the outline and objectives of the campaign.

Second, a real reason for conducting a school in the theory of radio and radio salesmanship. This was attended by over 200 employees, a large majority of whom previously knew very little about a radio set or how to sell it.

Third, a peg on which to hang many pieces of advertising copy which reached the prospect through the medium of the newspapers and the post office.

Fourth, an opportunity for a "Round-the-World" sales contest. This was dramatized as an airplane trip, in keeping with the timeliness of the recent flight, over Philadelphia and around the world, of the Graf Zeppelin.

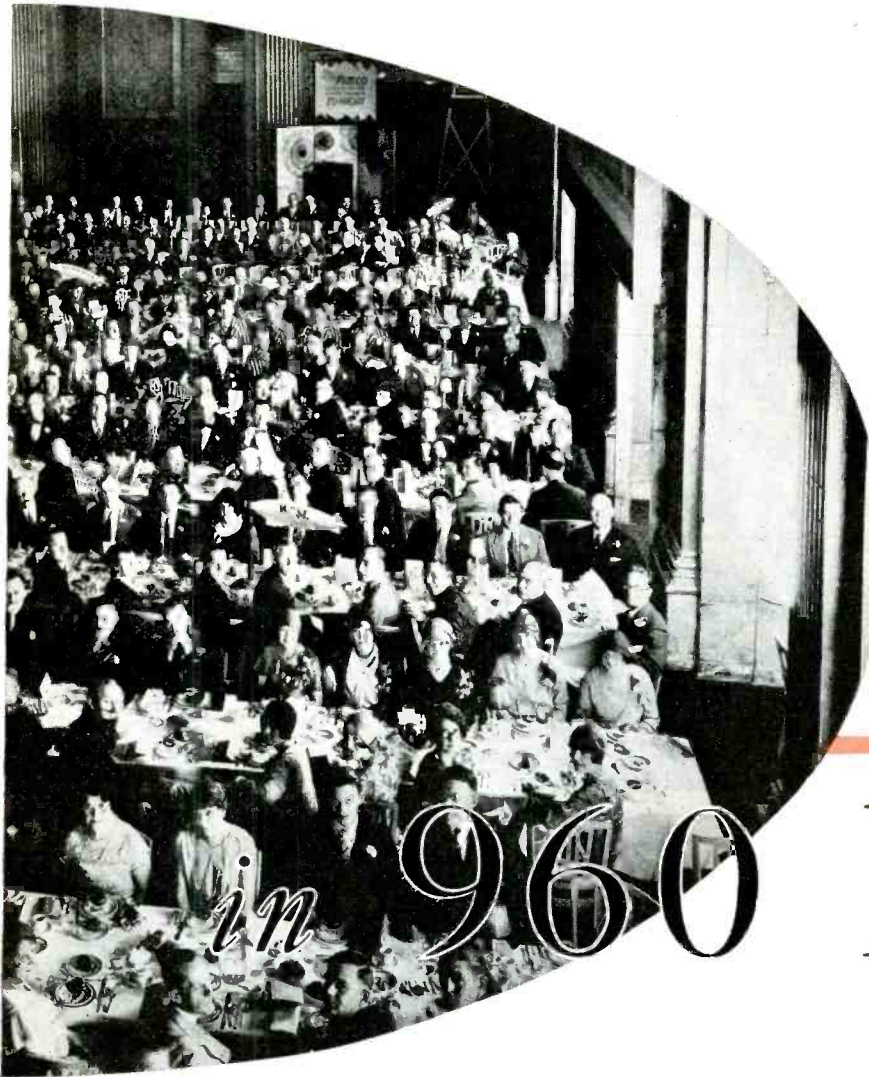
Three secondary banquets were held; the first for those fortunate members of the sales crew whose records entitled them to report in at Friederichshafen; the second for those who made Tokio, and, the final get-together of the favored ones at Los Angeles.

Fifth, special prizes and bonuses for the top-notchers.

The alert, independent radio dealer, as well as the utility manager, will see in this activity more than one opportunity to duplicate, in modified form, these tried and true sales stimulating "stunts." Frequently, volume sales come not as the result of a new idea but of the intensive and serious application of sure-fire campaign practices.

HELPED DEALER SALES

The opening gun banquet of the Philadelphia Electric Company was held September 12. The following



How a lighting company conducted a large-scale radio campaign—Constructive lessons for smaller dealers

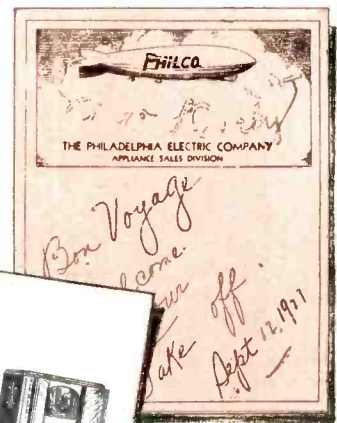
Hours

night—and this is significant—185 independent, local radio dealers handling the same make of set as that to be campaigned by the utility (Philco), held a banquet of their own. This was under the auspices of their local distributor, who tied-in with the big show at a most opportune time.

"Total sales of my dealers in the Philadelphia territory for the month of October, 1929, were at least 20 per cent better than for October, 1928," declares Ray Matthews, general sales manager for the Motor Parts Company. "I feel that much of this increase is attributable to the fact that we encouraged our dealers to get aboard the band-wagon. We instructed them to parallel the meetable and reasonable terms of the lighting company, to run display space, advertisements, and otherwise to let it be known that they, also, were in a position to offer the same service and were indulging in the same intensive selling effort as that of their big brother, the public lighting company down the street."

(Please turn to page 66)

(Right) Peppy sales bulletins kept the men enthused.



Take Your Pick!
\$119.50 TO \$205
(Slightly more on deferred payments)

The Marvelous NEW
PHILCO
Balanced Unit
RADIO

... TONE
... DISTANCE
... SELECTIVITY

FREE Home Demonstration

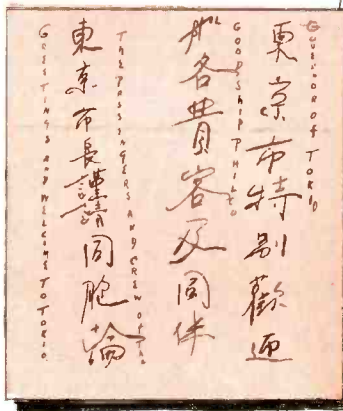
Easy Payment Terms

PHILADELPHIA ELECTRIC COMPANY
DELPHIA SUBURBAN COUNTIES GAS AND ELECTRIC COMPANY
DELAWARE COUNTY ELECTRIC COMPANY
All Scales

to See and Hear the PHILCO before you buy any Radio

(Center) Note that extreme inducements were not a part of this drive.

(Left) Which is to say: "Welcome to Tokio!"



The FARMER Must



Even obsolete crystal sets are still in use on farms, so important is radio to the man on the land

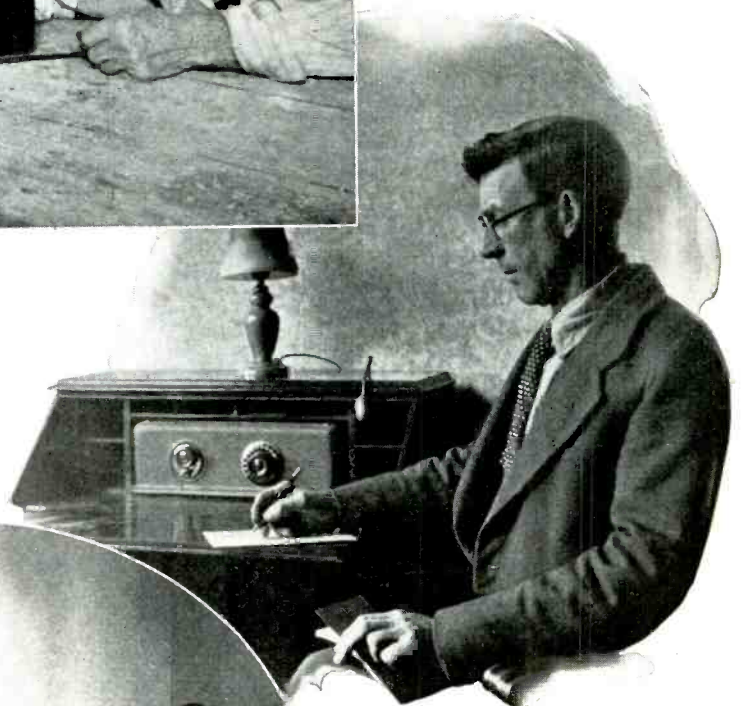
ONE of the myriad of homely proverbs originating in farm experience has it that "the grass always looks greener on the other side of the fence."

Perhaps that bit of rural wisdom explains why I, who am not a radio salesman, feel that selling radio to farmers should be one of the easiest, and at the same time, one of the most inspiring jobs in the business world.

Why should selling radio to farmers be a sinecure?

Because the radio dealer is selling a piece of merchandise which has the most convincing array of selling points imaginable. He offers his farmer client a product for which he can truly claim a list of virtues which makes the wildest superlatives of the unregulated patent-medicine advertising era seem commonplace.

Is your farmer prospect a hard-headed business man? Even the most flinty brand of sales resistance gives way



To the farmer, the electric set is an investment in modern agricultural equipment



Over 5,000,000 unwired farm homes like this must have battery sets to bring them vital information and inspiring entertainment

before the easily demonstrable merits of radio as a piece of farm business equipment. Combined in one article, radio gives the farmer a stock-ticker connection with his markets; a leased wire service on the all-important weather news; daily reports, personally given, from the agricultural scientists whose efforts, at a cost of tens of millions a year, are bent toward finding better and more profitable farm production and marketing methods.

Likewise radio gives the farm housewife—and this is of no little importance to the farm husband—an information pipeline into the experimental kitchens where new formulas for good things to cook from the store

Have **R**ADIO!

of foodstuffs grown on the farm are worked out.

This business service of radio to farmers is the burden of the story I have to tell radio salesmen. It is a unique service. No other class of producers and sellers gets the same sort of open sesame to business information. Weather data—frost and storm warnings, etc.—are invaluable to the farmer. Knowing 24 hours in advance that clear weather will prevail may mean the difference between high or indifferent quality of hay harvest; a day's warning of the approach of frost may enable the fruit grower to save his crop; advance knowledge of the coming of severe cold gives the livestock shipper a chance to protect animals in transit from the rigors of the elements and to deliver them in the best possible condition at the market.

Radio broadcasters are eager to give this important service to agriculture. At present 215 stations co-operate directly with the U. S. Weather Bureau to send daily forecasts, warnings and other data.

MARKET facts must likewise be placed in the hands of the farmer promptly in order that he may dispose of his products to the best advantage. Before the advent of radio broadcasting, the buyer of farm products had the drop on the seller because he obtained market facts from the telegraph market reporting service. Such a condition is at best sure to undermine the confidence of the producer. But nowadays the farmer is on an even footing with the buyer so far as market information is concerned—if he has a radio.

Exactly 112 radio stations in the United States co-operate with the Federal Department of Agriculture to maintain market news programs which run as heavy as 14 periods a day. These broadcasts keep every seller informed of the exact status of the current markets and also of the long time trends. The facts are supplied to broadcasting stations from the branch offices of the Bureau of Agricultural Economics in the Department of Agriculture, which are linked together with a 10,000-mile chain of leased telegraph wires. Market information for the farmer flows continually along these channels of communication and pours out into the ether ceaselessly during each hour of the marketing day.

BUT agriculture has need of more than weather news and market information. It needs the help of science just as other industries do, in order to effect improvement in products and economy in production. Realizing this, both federal and state governments are doing their utmost to harness science to the plow. In the United States Department of Agriculture and the State Agricultural Experiment Stations thousands of scientists year by year are ferreting out the facts on which agri-

By

Morse Salisbury



The chief of the U. S. Department of Agriculture's Radio Service points out the radio dealer's opportunity in the rural market—what the Government is doing to help

cultural progress is based. How are these facts to be put into the hands of the man on the land—the man who must put them to work?

Here is an answer: in co-operation with the Department of Agriculture alone, 163 radio stations now are sending daily programs of scientific farming information. Nineteen state colleges of agriculture and two state departments of agriculture maintain their own broadcasting stations. Other state colleges and state departments co-operate with commercial stations.

Lately chain broadcasting has turned toward farm and home service programs. Since July 8, 1929, a network of 32 stations associated with the National Broadcasting Company, and covering the United States east of the Rocky Mountains, has sent a daily "Farm and Home Hour" program in co-operation with the U. S. Department of Agriculture at noontime on five days of the week. On Saturdays the network is expanded to 39

(Please turn to page 66)



Pacing Your

*Each factor of the sales talk
and every customer*

By Alan

THE ideal sales talk is one which is governed by advance knowledge of the prospect's reasons for not wishing to buy. It permits the salesman to concentrate wholly on the removal of these points of sales resistance. This ideal condition is realized when selling to friends, who will frankly state just why they are unwilling prospects.

Closely approaching this ideal condition, and applicable to all kinds of prospects, is the approach by which the salesman discovers, through an accurately-paced and quickly-timed canvass, the points of sales resistance. The quicker he locates these points, the closer does he get to his objective; because he cannot get his order until he removes all objections from the prospect's mind.

Herein lies the entire basis of present-day salesmanship, as opposed to the older order which required the prospect to absorb a specified, and usually a large, number of "selling points." In brief, we no longer shove \$25 worth of ham and eggs onto the breakfast table of a man who wants nothing more than "two, sunny side up."

In thus speeding up the sale and increasing the certainty of its success we have, however, created the need for an extremely close-wrapt canvass; one which is, on the one hand, so thorough that we may with accuracy isolate all of the points on which the prospect is either "safe" or "shaky;" and on the other hand, so brief that no appreciable amount of time will be thefted from the more important work of removing the actual obstacles to business. The process requires accurate "pacing" to cover a required route without loss of time or energy.

THIS need is being met by executives in various ways, both simple and complex. Executives of the General

Motors Corporation have evolved, for at least two of its subsidiaries, Chevrolet and Frigidaire, elaborate "picturized sales talks," with which the salesman leads his prospect through a carefully organized and well-timed canvass. The Travelers Insurance Company, forced to simplicity by the multiplicity of the services which it sells, instructs its salesmen in the making of an easily drawn pencil sketch, on the backs of their applications, which serves the same purpose. Between these two extremes there are all sorts of half-way measures which radio manufacturers or dealers might devise.

By way of practical illustration of the "paced sales talk," let us examine the Chevrolet plan because, although elaborate and expensive in the form that G. M. C. employs, it is more or less readily adaptable, in scrap-book form, by dealers and salesmen.

Chevrolet's "picturized sales talk" consists of about sixty 8½-in. by 11-in. pages, bound, loose-leaf style, in a leather ring-binder. It is titled "A Ride In a Chevrolet." The salesman uses it much as he would show photographs in an old family album.

On opening to page one, we find a numerically itemized list of the ten things which every buyer should get when he purchases an automobile. The radio list likewise should cover every feature of the set offered for sale.



P PROSPECTS

*must be accurately timed,
carefully "paced"*

Streeter

This first page alone constitutes a rapid review of the entire proposition. As the salesman reads the list of ten features, he watches his prospect closely, searching for some expression of thought that indicates a doubt. Failing to note any, he turns to the next page.

Now, the ten broad claims having been set up, Chevrolet undertakes, one by one, to prove them, allotting from two to five pages of clear illustration and extremely brief text to each point.

THE essential importance of this picturized sales talk lies not so much in the individual pages, as in the broad plan and objective. Note that, on the first page—less than thirty seconds' reading time—is summed up the coming proposition along ten broad lines. It is in this section that salesmen will discover the greatest number of points of resistance to the sale.

Failing at this time to secure a response, the salesman has two more chances: when he repeats the summing up and when he asks for a model preference. The latter is almost certain to provoke some sort of comment indicative of which way the wind is blowing.

Note always the purpose to find the weak spots, then to concentrate on each of them with extended and authoritative supporting material.

The production of a picturized talk, with its auxiliary reference volume, can properly be done only by manufacturers or very large dealers. But the smallest dealer, or even the individual salesman, can easily make up a scrap book from the advertising illustrations of his manufacturer, and boldly letter it with a crayon. These pages will broadly serve the same purpose, that of pacing his prospects through a brief talk designed to uncover points of resistance. For supplementary data, however, he must have an extensive knowledge of his product and a retentive memory for all that radio reception means to the household.

Salesmen of the Travelers Insurance Company use a simpler means of attaining the same end. It is extremely valuable because it serves a double purpose: paces the prospect and "acclimates" him to the sight of the application or order blank.

The insurance salesman, at the start of the canvass, "searches" for a piece of scratch paper and failing to find it quickly in his pockets, takes an order blank form, in duplicate—concealing its nature—and places it, face down, on his prospect's desk or table.

On its blank back, he proceeds to sketch a rough drawing of the listener's "possessions;" his wife and family, a large block at the bottom; his home, a smaller block atop of it; his debts, his car, his this and that, all coming up to a peak of blocks. Then he shows how, in case of sickness and loss of income, they will all fall like a house of cards unless they have a sound foundation. This foundation may be either large bank deposits or disability insurance. This basis is drawn in as the largest and most important block.

(Please turn to page 66)

Sales Ideas



RADIO SHOW
this week
Friday and Saturday
Morning Afternoon Evening
St. John's Parish House

ADMISSION FREE
Don't Miss This Wonderful Display
Sponsored by
Strand Music Shoppe
Delhi, New York

*Small Town
Radio Show
Gets
Results*

MANY small town radio retailers think of a radio show as particularly adapted to use in the larger cities. As a matter of fact, the pulling power of the general public display is much more marked in small centers. There it takes on more of the character of an event, and, because there is less radio publicity of other types, its results are more direct and more pronounced.

These were the conclusions reached by Humberston and James, who conduct the Strand Music Shop in Delhi, N. Y. In a public hall hired for the occasion, they displayed and demonstrated every line of set or accessory they carried. By newspaper ads and direct mail invitations the town's 1,176 population was invited to attend free of charge.

The gala atmosphere which surrounded the efforts of these two radio dealers lent an impetus to sales which was high in proportion to the expense incurred. The show cost \$200, and it was estimated that a volume of \$2,000 in sales which followed was traceable either to direct contacts made at the show, or to the interest in radio which it engendered.

Holds Store "Parties"

ANEW twist to group selling has been successfully offered by Cliff Johnson, president of the Park Lane Radio, Inc., and of the Toledo Radio Trade Association, Toledo, Ohio. Once a week he requires that each employee bring a married couple to his store to participate in a "radio party." To assure an attendance of not less than ten persons, the host calls for his prospects at their homes and drives them back again. Light refreshments and selected radio programs are the attractions provided.

This activity never results in less than one immediate sale and two or three live prospects, it is stated.

Advertises Merchandise Through Anagrams

HOW many words can you make out of "Constantinople" is an old game, but in the case of one hardware-radio merchant of Carthage, Mo., a profitable one.

This dealer offered a prize of a radio set to the person making the most words out of the name of his radio. As a result, during the competition, practically everyone in town had the name of the set on their lips. The dealer not only compiled a large list of prospects from the contestants, but he also experienced a considerable increase in immediate business due to the interest aroused in the particular radio he was merchandising.

Clears 10 Per Cent on Trade-Ins

AN INGENUOUS and effective scheme for unloading trade-ins at a profit was devised by D. A. Brown, a radio dealer of Marion, Ohio. He placed a stock of used sets in the window with a placard reading, "Make Your Own Sealed Bid and Drop in Box Inside." Another card bore the date on which the offer closed. The interest and excitement aroused by this opportunity proved a valuable advertisement for the store. When, on the announced date, the bids were opened, they averaged ten per cent above the allowed price on the sets.

Mr. Brown was so pleased with the results that he has tried the plan on several occasions since, with invariable success. The net results are extremely gratifying—ten per cent on his allowance realized with no selling cost whatever, favorable mouth-to-mouth publicity among the large number of interested bidders, and a mailing list of those who failed to secure sets that gives him a number of sound leads to work on.

"Tickets" Invite Demonstrations

FREE tickets to the greatest show on earth! Residents of the better sections of Asheville, N. C., found two of these tickets—"front row" ones at that—in envelopes delivered to their doors. The show, they learned, was the constant entertainment available to radio listeners, and they might sit in the front row by merely calling the Electrolier Company, of 86 Patton Avenue. This store would give a free home demonstration for one night to any ticket holder.

Marshall H. Roberts, radio department manager for the Electrolier Company, reported a splendid response to the plan. The percentage of "free ride" demonstrations was remarkably low, and the high proportion of actual sales was very gratifying.

The expense of the scheme itself was inconsiderable, since the printing cost and the distribution by local Boy Scouts were the only items. In consequence, the idea stands out as a relatively productive one.

THIS TICKET Entitles You to a Free
Demonstration of the New Crosley Radio
in Your Home!

Phone 478

Simply tell us what night you would like
to hear the new Crosley Radio in your
home and we will do the rest. Absolutely
no cost or obligation to buy.

The ELECTROLIER Co.
86 PATTON AVENUE



Audible Billboard Commands Attention

THOUSANDS of passersby on one of the main highways entering Morgantown, W. Va., are sure to notice the billboard maintained by the S. A. Phillips Music Co., of that city.

The sign pictures an Edison Radio surmounting the earth, captioned with the slogan "The New Voice of the Skies." Housed behind the billboard is a real radio which is in operation every evening. The music received comes through the grille of the pictured instrument, which appears to be playing.

This audible billboard, a combination attention-getter and demonstrator, is reported to be responsible for a satisfying volume of business.

Effective Broadcast Staged in Show Window

TO SHOW undiscovered prospects not only what they would get with a set purchase, but also how they would get it, Paul Lauterbaum, proprietor of the Lawrence Maytag shop, Chicago, staged a complete broadcast in his store windows. Real broadcasting artists, in full view of the large crowds which assembled, presented a program which was picked up by a Bremer-Tully receiver outside the store.

Aside from its obvious advertising value, the effectiveness of the idea is well proved by actual sales results. For an expenditure of \$50, 18 sets were sold directly; five more were later sold among a group of twenty live prospects secured at the time of the "broadcast." And the idea, presented as it was with just the proper touch of showmanship, had value in publicity far beyond these results in immediate sales.



nection is inevitable; music lovers are radio lovers, and they will buy from the dealer who shows that his interest lies that way too.

Delivery Book is Prospect Record

FEW outside salesmen, especially new men, are able to keep an effective personal record of the sets they have out on trial or on call-backs.

Realizing this, the Marshall Electric Utilities of Chicago, which employs a large number of house-to-house salesmen, has so arranged the demonstration delivery book that it also serves the purpose of a prospect record.

Each demonstration involves the use of three vari-colored sheets in this book. One is removed for the concern's stock record; one is signed by the customer and then returned to the company's files; and the third copy remains bound in the book for the salesman's use. By making any notations right on this sheet, the salesman has an ever available record of each of his accounts—whether or not they bought, when to call back, and so forth.

His Customers Solve His Trade-in Problem

"WE are in the business to sell new sets; that's why we are steering clear of any practice that might enmesh us in an unprofitable and unnecessary trade-in business."

That is the way Ray Koenig, radio department manager for the H. B. Koenig Company, Tonawanda, N. Y., feels about the resale problem. His customers, he says, are willing to receive a fair price for their old sets no matter who pays it to them.

Consequently Koenig grants few trade-in allowances. Instead he offers three alternatives to the customer with an old set to trade in. He will pay for one insertion of a classified advertisement in the local paper, to help a direct sale by the owner. He will take the set to the store and try to sell it, charging nothing for his services. Or he will overhaul the set (but not service it) so that the customer may sell it himself.

By these methods the customer is made to feel the dealer's desire to co-operate. At the same time, Mr. Koenig is protected against any loss on the transaction.

Making a Customer of the Music Lover

WILL A. WATKIN, president of the company which bears his name in Dallas, Tex., has found that the real interest in radio, for many people, is actually an interest in music.

It was on this basis that Mr. Watkin planned a campaign which not only stimulated direct sales, but also developed a genuine good will and added greatly to that most valuable of a retail organization's possessions—prestige.

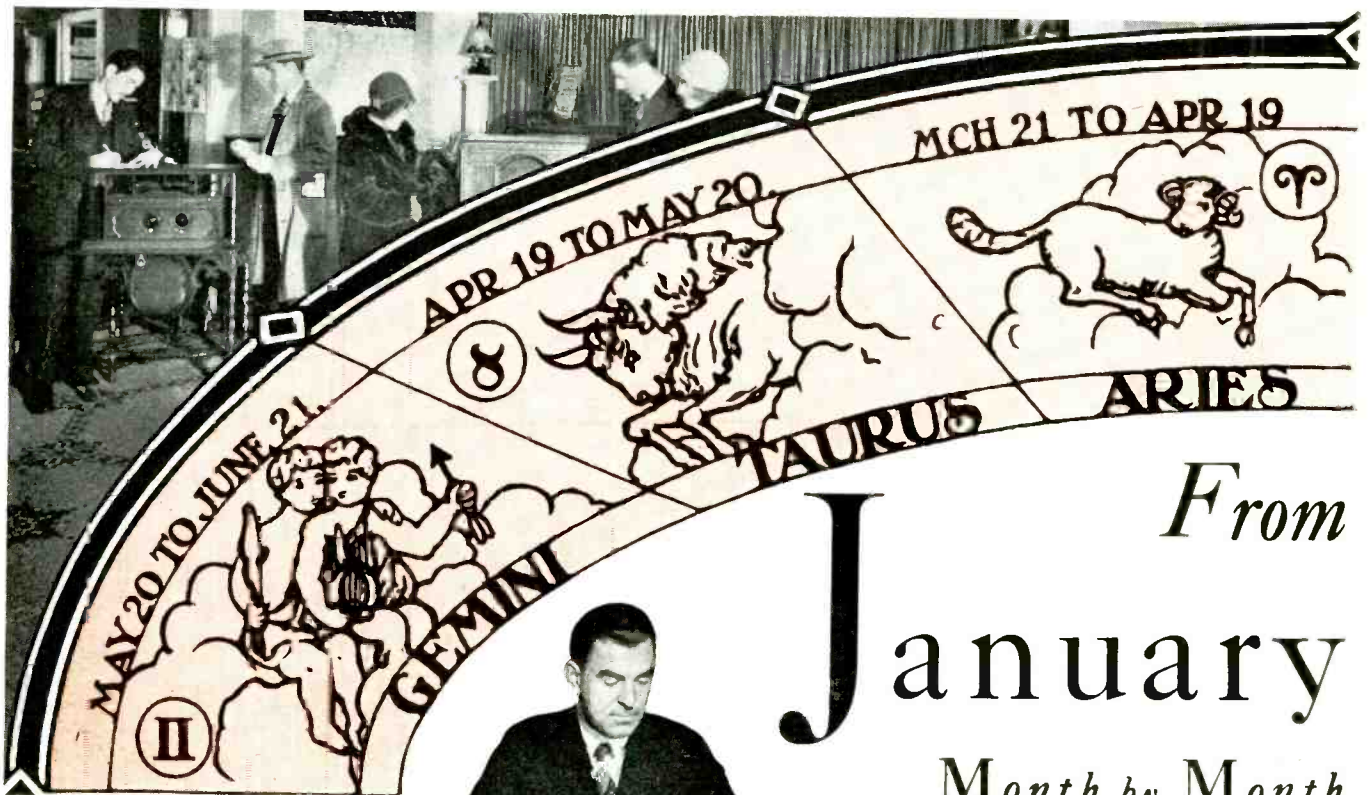
The method used was an indirect one, aiming at acquiring something of a permanent value to the store, rather than mere come-and-go sales. Over a period of five weeks a series of six free concerts by musicians of considerable local note were scheduled. These were held in a recital hall which is a part of the Watkin Company's building.

Naturally, music lovers flocked to the store. They heard good concerts, but nothing else. They heard nothing said about buying a radio, or about calling for a demonstration, or about the particular merits of any of the three makes of radios that their host was selling. They just enjoyed themselves, went home, and remembered to look forward to the next concert. But always, after that, when they thought of radio, they thought of the Will A. Watkin Company. The higher sales average of the store after this dignified campaign showed that they did. The con-

Blindfold Test Sells Radio, Too

THE confusion often aroused in a prospect's mind by a comparative demonstration of several sets can be obviated by the blindfold test so familiar in cigarette advertising. This transference of merchandising methods was made by the F. Wilkins and Sons Company, Zanesville, Ohio.

A local school official who was contemplating the purchase of a combination for school use was unable to choose among the several makes offered him until a salesman for the Wilkins company suggested a blindfold test of the sets in consideration. Two radios were played in a room of the school in such a manner that they could be heard, but not seen, by an audience of 34 people. After each had performed, the listeners voted on the sets by number. One set received a ten to one vote in its favor, and was subsequently purchased by the school board.



From January

Month by Month



Remember, however, that continuous sales effort must back up these special plans

JANUARY

Workable budget, inventory and cost finding systems are vital essentials to business success. Start now.



FEBRUARY

Promotional, or outside, selling should be in full swing. Work with your new men. Give them leads for front door contacting. Encourage them with bonuses.



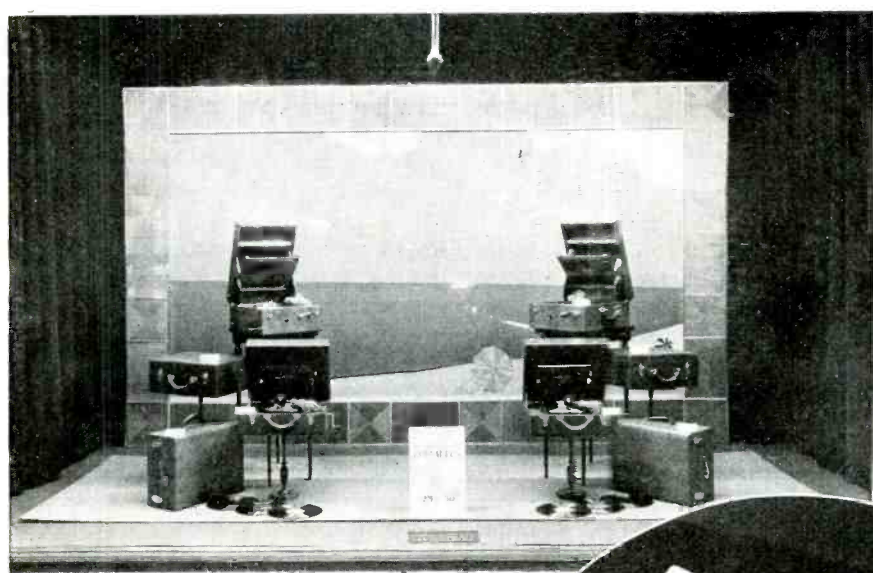
MARCH

Clean out those trade-ins. A "sale" at this time is logical and effective.



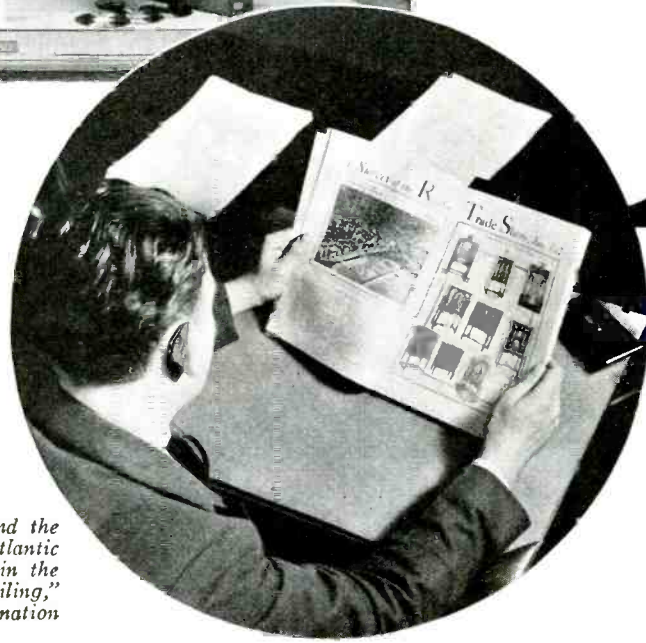
to June

Hints for Dealer Activities



APRIL

Home talking-movies, outdoor sports equipment, electrical appliances, portable radios and phonographs—these lines are especially suited to the radio dealer's merchandising set-up.



JUNE

Those who cannot attend the Annual Trade Show, at Atlantic City this year, will find, in the June issue of "Radio Retailing," a vast fund of information covering the new lines.

MAY

A direct-by-mail campaign—directed toward those whose funds are limited—will clear out the older models and pave the way for the new Fall numbers.

Radio Retailing

A McGraw-Hill Publication

JANUARY

1930

Uncle Sam

1930 Census Will Count Home Radio Sets

WHEN Uncle Sam takes his 1930 census of population, he will also count the number of radio sets in use in the nation's homes.

First proposed by *Radio Retailing* back in 1928, this radio census has finally been made possible by the energetic assistance and effort of industry leaders and the Radio Manufacturers Association to whom every credit is due.

Success, in getting the count made, despite earlier discouragements, is announced in the following telegram, received as we go to press:

"Editors, *Radio Retailing*

Glad to advise that householders will be asked in census whether they have radio.

JULIUS KLEIN,

Assistant Secretary of Commerce
Washington, D. C."

The 1930 population census will be taken in April, with the aid of 100,000 enumerators, working two to three weeks. The radio facts which it discloses will give basic data on the radio audience, and on existing "saturation" of receiving sets—facts long needed by the whole industry.

For Value Received

IS THERE any type of retailer who gives the consumer more for \$200 than the radio dealer? The answer is, "No!"

For the price of a few months' desultory entertainment of the ordinary type the buyer of a radio set gets the best in music, speech and drama for his home over the many years' service that a good radio will give. The cost, therefore, of this splendid entertainment is ridiculously low.

The seller, of course, derives, or should derive, as great an advantage from this high value of the radio dollar as the buyer, albeit in a different way. His job, therefore, is to make his customer realize how much said customer is getting when he buys a radio.

Profits In the Air

QUALITY programs are in the air these days! Yet the number of radio dealers taking fullest business advantage of these offerings is small.

Here is the finest sales tool that any industry ever had handed to it; still there is an actual apathy on the part of those who should be the most interested and who can profit most from its use.

What other inducement to buy a radio set is necessary to the average lover of good music? And 999 families

out of every 1,000 are "average lovers of good music."

Every radio dealer should, therefore, stop and ask himself the question, "What am I doing to capitalize on these programs?"

The solution is: advertise them in every way possible—through newspapers, direct mail circulars, window and store displays—offer to give home demonstrations during the time they are on the air, throw your store open to those who desire to come in and listen. If the concert is on a Sunday evening, give a "Sunday Evening Musicale."

Devote a portion of your publicity to an advance featuring of the names of the artists and the time they are to broadcast. By so doing you will be serving your customers and inviting the interest of non-owners.

Grow Men. Develop Your Assistants!

ARE you capable of developing men so that they too may step upon the rungs of the same ladder you have climbed; so that they may carry on when you are absent; so that you may win for yourself the greatest of rewards—the steadfast loyalty of those whom you have helped?

Or are you the kind of radio executive, boss, foreman, engineer, or sales manager, who carefully guards the things he learns; who gives a subordinate only enough information to insure his own success; who is suspicious of ambitious young men; who constantly thinks of himself and how a given action will, above all, affect him personally?

Remember that no man, no matter how clever, how competent, or how brilliant he is, can hope to attain the full rewards of business success alone and without the help of subordinates.

Quality Transmission

QUALITY reception has become almost a by-word in the radio industry. There is, however, another factor which enters into quality reception which is not always generally thought of. That is the difference between the output of the various broadcasting stations.

On any receiver equal results cannot be expected from both a 50-watt station and a 50,000-watt station. With the multitude of stations on the air today, we naturally find a large selection of both good and bad transmitters. The receiver can only pick up and reproduce the energy that is sent out. If the transmission is faithful and the receiver a good one, then the reproduction will be faithful. If the transmission is poor then the reception will be the same.

Keep this in mind and see that your customers also understand this situation. It may save a lot of argument over the merits of a receiver.

Will Tell Us

What Price Indifference?

An Editorial by Peter Sampson
President of the Radio Wholesalers Association

A CERTAIN radio distributor recently developed a plan which he believed would sell merchandise for his dealers. He mailed, at his own expense, thousands of dollars worth of material to people whose names were furnished by various dealers. The only thing that any dealer who wished to take advantage of this co-operation had to do was to furnish a list of the people to whom he already had sold radio sets.

The distributor presented the plan by letter to about 1,200 dealers. A sales force of 26 men followed up the letter, even offering to do the actual compiling of the lists for the dealers.

All this promotional work resulted in only 200 dealers out of the 1,200 responding with the necessary information and an expressed desire to accept the proffered help.

The fifth day after the mailing of the distributor's material, one of the participating dealers phoned to say that he already had actually made twenty sales because of the plan, and that five prospects had come into his store that day, all of whom he expected to close within 24 hours.

This story sheds further light on the reasons why so many dealers spend their time complaining about poor business. They lay their failures to bad times, to chain store competition, to any number of causes—but never to *their own indifference*.

Reviewing '29's Last Quarter

The volume of general business over the country at large for October and November was 3 per cent under that of last year. December sales, however, have shown a gratifying come-back—approximately equal to those of 1928.

The average volume of general business in the country during the last quarter of 1929 will be about 2 per cent under that of the same period last year; which is not at all alarming considering the severe nature of the stock market break.

Buying of radio sets received a temporary setback during November but staged a sharp recovery throughout the holidays. From all sources, independent dealers, department stores, radio manufacturers and jobbers, we get reports of a normal, healthy demand from the consumer public. This December buying power may be said to equal that of a year ago.

As we go to press, word comes from a number of "key" manufacturers that actual sales, for the twelve months past, have exceeded original estimates by from 5 to 15 per cent. In these facts there is every reason for congratulations.

Radio Retailing, January, 1930

Demonstration vs. Trial

THE seller who couches his talk in ambiguous terms has only himself to blame when the prospect wriggles out of buying through holes he himself has left.

One important means of psychologically "obligating" the prospect to buy is the consistent use of the *demonstration* idea, rather than the *trial* suggestion. The customer who takes a set into his home "on demonstration" can be brought to the buying point more surely and quickly—and the dealer reaps the benefits of time and expense saved.

Demonstration implies an ultimate surety of purchase; *trial* suggests possible refusal. A "demonstration" can be definitely scheduled for three days; a "trial" may last three weeks awaiting the prospect's decision.

Put sets out "on demonstration," not "on trial." Then the customer knows you mean business.

On the Job



"A trade organization worthy of its name must be more than a fair weather proposition. It should serve its industry effectively during time of storm."

H. B. RICHMOND, President,
Radio Manufacturers Association,
At Briarcliff, Dec. 6, 1929.

What every radio dealer needs to know in 1930

That the merchandise you carry is backed by a manufacturer of established reputation.

That this merchandise is of a quality that you need never be ashamed of.

That it is priced to give a fair profit to the manufacturer, a fair profit to you, and *satisfaction to your customers*.

That your standing as a responsible dealer in your community—this year and next year—will have the backing of a going and growing radio manufacturing organization—a permanent force in radio progress.

RADIO DIVISION, RCA VICTOR COMPANY, INC.

Look for and insist upon



the famous RCA trade-mark.

RCA RADIOLA



RCA Radiola 67

The new Super-Heterodyne combination with RCA Electro-Dynamic loudspeaker giving electrical reproduction of records. The complete home instrument brings to you at will Music from the air or record.
\$690 (less Radiotrons)



RCA Radiola 46

Cabinet Radiola with the new Screen-Grid Radiotrons. Built in RCA Electro-Dynamic reproducer. A powerful, efficient receiver of most modern design. \$130 (less Radiotrons)



RCA Radiola 66

A new, improved RCA Super-Heterodyne with RCA Electro-Dynamic reproducer. Built with master craftsmanship throughout. The finest Super-Heterodyne ever offered at this price.
\$225 (less Radiotrons)



RCA Radiola 47

The newest RCA "all-electric" development in Screen-Grid radio combined with the phonograph. Radio and phonograph utilize the same improved built-in Electro-Dynamic reproducer. "Music from the air or record."
\$275 (less Radiotrons)



RCA Radiola 60

Beautifully designed table mode of the Radiola Super-Heterodyne, the most selective circuit known in the radio art.
\$598 (less Radiotrons)



RCA Radiola 33

The nationally famous all-electric console type Radiola. Realistic reproduction of music and the voice from a nearby or distant station. A quality instrument at a low price.
\$55+ (less Radiotrons)



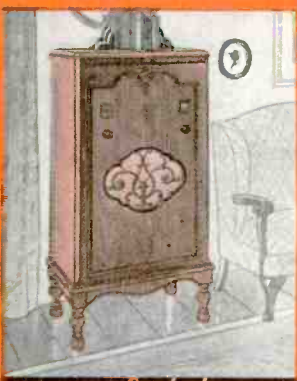
RCA Radiola 21

For battery operation. Specially designed Radiola employing the high-powered Screen-Grid Radiotrons. \$69.50 (less Radiotrons)



RCA Radiola 44

Utilizing the sensational new Screen-Grid Radiotrons. Circuit incorporates latest engineering refinements. High amplification, great selectivity and sensitivity.
\$75 (less Radiotrons)



RCA Radiola 22

RCA Screen-Grid Radiola for battery operation, with RCA loudspeaker enclosed. Reproduces voice of instruments with great fidelity.
\$135 (less Radiotrons)



RCA Loudspeaker 106

Electro-Dynamic speaker of amazing range, capacity and tone fidelity. Operates from A.C. house current. \$35



RCA Loudspeaker 103

The leading magnetic-type radio reproducer. Designed to harmonize with home furnishings. \$18



RCA Loudspeaker 100-B

With the rich, mellow tone characteristic of the popular "100" type of reproducer. The design matches Radiola 33. \$17.50

RCA RADIOLA

To Help Dealers MERCHANDISE BROADCASTING

Examples of publicity aids, prepared by radio manufacturers, to stimulate listener interest in programs



TWENTY-FIVE of the most popular programs on the air are sponsored by radio manufacturers. Weekly, sometimes daily, these broadcasts are reaching millions, making trade names into bywords—proving to the public the value of radio.

The dealer who is not tying-in constantly with these manufacturer-sponsored broadcasts is neglecting one of the greatest selling aids at his command. Sell broadcasting—that's what sells radio. Here's how some of these manufacturers are helping you do it:

The makers of Sylvania tubes provide every opportunity for their dealers to feature the weekly chain programs of the Sylvania "Foresters." Streamers, counter folders, display cards, and news stickers are provided for store use, and the words and music of the "Forester's" signature song are mailed to listener fans.

Thomas A. Edison, Inc., supplements national advertising with streamer program announcements and a weekly news bureau which publicizes broadcasting.

Atwater-Kent mails to every one of its retail salesmen a folder, "Highlights of Local Programs." All the important events of the air in each salesman's territory are listed—broadcasting *in general* is presented as a selling aid.

Stromberg-Carlson ran a prize contest among its dealers for the best suggestions on merchandising broadcasting. Retailers themselves told of ways they had found to make broadcast advertising *bring customers into the store*.

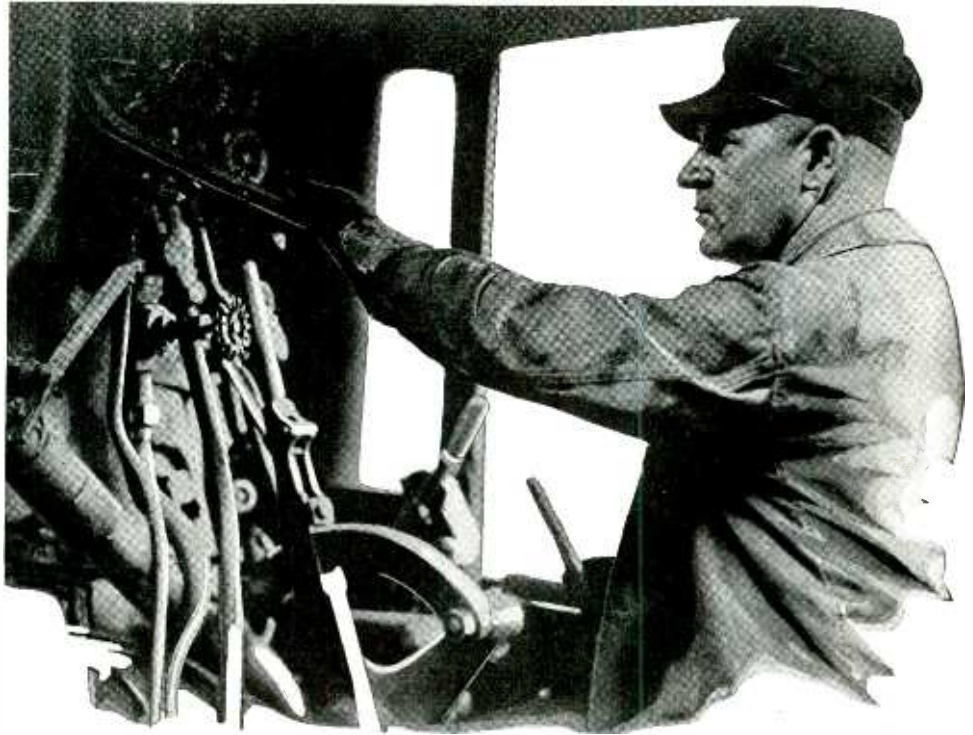
Temple Radio, recognizing the endless possibilities of program advertising, plans intensive dealer co-operation along these lines for next year.

Fada encourages extensive local advertising by dealers *to let the public know that radio advertised products are for sale in his store*. A monthly dealer magazine tells him how and when to do it.

The Triad Manufacturing Company aids distributors of Triad tubes to cash-in on the popularity of the "Triadors." Every dealer gets a facsimile of the contract with the National Broadcasting Company, a list of the chain stations carrying the program, and a photograph of the "Triadors" orchestra for his own use.



*Higher pressure
in selling
demands a
personal control
of credits and
collections*



Your

By B. T. U'Ren

Hand on the THROTTLE

THE radio dealer's job is getting harder. Competition is keener. Order getting, consequently, must be carried on under increased pressure. More people now must be *sold*.

With this situation has come the problem of the increasing risks of installment selling. Buyers cannot be so carefully selected; they must be taken from a lower social stratum. Credits, therefore, must receive the closest attention.

And, in many cases, the dealer's salesman doesn't care. When he gets the signed contract, he considers his job done. Delinquent payments, returned sets—these details mean nothing to him as long as he gets his commission.

But every one of these pitfalls of outside selling can be avoided. The proper administration of credit practice will obviate the difficulties which a more rapid sales turnover brings, and leave this advantage—*greater profit*.

The intelligent observance of two rules will provide that "proper administration" for the average dealer's business.

INVESTIGATE ALL RISKS

First of all, take a *personal* interest in *every* prospect. Even if you are not selling him yourself, see that he is investigated carefully. Make him a friend of your organization. The regular practice of finance companies in this respect is not so hypercritical as it may seem. All the customer's obligations must be known, so that the prospective creditor can judge

whether or not he has bitten off more than he can chew.

Complete credit information is indispensable to any sale. No amount of pressure or of speed justifies the slighting of this important item. Hence the procedure must be simplified and systematized so that it can be followed conveniently and efficiently.

After the prospect is accepted as a customer, the dealer has another job. He must acquaint the buyer with the exact terms of the contract, and with the interpretations which he, the dealer, places upon them. A large majority of repossessions are the results of false statements, vague promises, misunderstandings. Tell the customer just what he is to pay, just how and when he is to pay it, and exactly what he is going to get in return. Establishing a solid mutual contact with your buyer is

the first step to sure, safe installment sales. Know your man, and make sure that he knows you and your methods.

MAKE YOUR OWN COLLECTIONS

The second thing to watch is the finance company arrangement. A company carrying a dealer's paper will offer him two methods of collection: the direct, under which the finance

company gets the money from the customer each month; and the indirect, under which the dealer collects the payments as he chooses and turns the money over to the finance company.

A simple means of discovering the better of these
(Please turn to page 65)

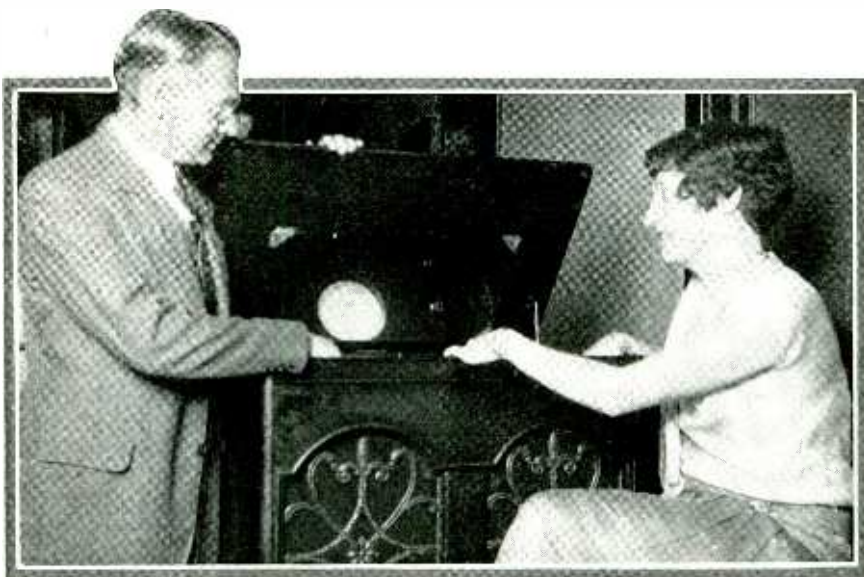
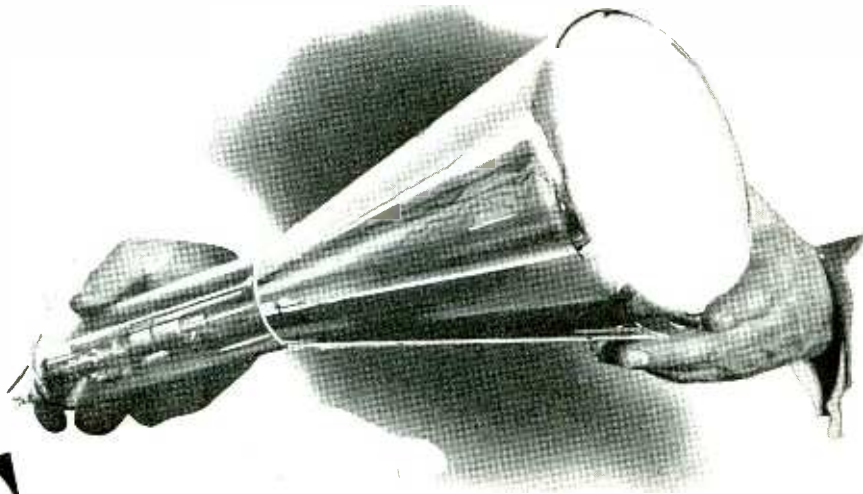
What Cost Collections?

Under the direct collection plan the finance company's "yield" is 31.3 per cent.

When the dealer makes his own collections this figure falls to 17 per cent.—One reason why the radio dealer should perform this operation.

New Heart

for TELEVISION



This new cathode ray tube, a Westinghouse development, seems to bring practical television nearer.

TELEVISION which can be viewed by a roomful of spectators rather than by one or two was announced recently by Dr. Vladimir Zworykin, research engineer of the Westinghouse Electric and Manufacturing Company. The use of a cathode ray tube as a receiver gives this new type of television many advantages over the well known scanning disc method of visual broadcasting.

The inventor, shown above, is already in position to discuss the practical possibility of flashing the images on a motion picture screen so that large audiences can receive television broadcasts of important events immediately after a film of these is printed. These visual broadcasts would be synchronized with sound.

NO MOVING PARTS

The cathode ray television receiver has no moving parts, making it more easily usable by the rank and file of the radio audience. It is quiet in operation and synchronization of transmitter and receiver

is accomplished easily, even when using a single radio channel.

Another advantage is that, using a fluorescent screen, the persistence of the eye's vision is aided and it is possible to reduce the number of pictures shown each second without noticeable flickering. This in turn allows a greater number of scanning lines and results in the picture being produced in greater detail without increasing the width of the radio channel.

The apparatus described by Dr. Zworykin is now being used in experimental form in the Westinghouse research laboratories in East Pittsburgh. A number of similar receivers are being constructed in order to give the set a thorough field test through station KDKA, Pittsburgh, which already is operating a daily television broadcast schedule with the scanning disc type of transmission.

FOUR BY FIVE INCH PICTURE

The pictures formed by the cathode ray receiver are four in. by five in. in size. They

can be made larger or brighter by increasing the voltage used in the receiver.

The transmitter of this new television apparatus consists of a motion picture projector rebuilt so that the film to be broadcast passes downward at a constant speed. This film is scanned horizontally by a tiny beam of light which after passing through the film is focussed as a stationary spot on a photo-electric cell. The scanning motion of the beam is produced by a vibrating mirror which deflects the light from one side of the film to the other.

DEVELOPED NEW CATHODE RAY

Dr. Zworykin was forced to develop an entirely new type of cathode ray tube for his receiving apparatus which he calls a "kinescope." In this tube a pencil of electrons is bombarding a screen of fluorescent material. The pencil follows the movement of the scanning light beam in the transmitter while its intensity is regulated by the strength of the impulses received from the transmitter. The movement of the scanning beam, consequently of the cathode ray pencil are so rapid that the eye receives a perfect impression of a continuous miniature motion picture.

A reflecting mirror mounted on the receiver permits the picture to be observed by a number of spectators.

EASY TO OPERATE

This condensed description of the methods used by Dr. Zworykin to effect television transmission can give only an idea of the possibilities of the new system. To the radio public it means, when perfected, a means of television which will be simple to operate because it has no scanning disc or other moving mechanical part. The receiver will operate in silence, offering no interference to sound broadcasts.

To the radio engineer the invention is important for the same reasons and because it will not be wasteful of radio wave bands. This because the transmitter and receiver can be synchronized using but one channel.

The name of Dr. Zworykin is not new to the radio public. A short time ago he was brought into the limelight in connection with his facsimile transmitting device for telegraphing photographs, letters, drawings and documents.

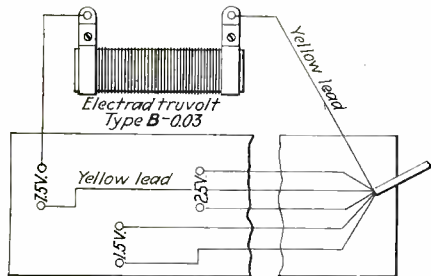
Using a 245 In Radiola 41

Greater power output and a higher degree of fidelity may be obtained from the Radiola 41 by substituting the new 245 power tube for the 210 tube.

The only circuit change is the addition of a resistance in series with the 7.5 volt winding to reduce the filament voltage to 2.5 volts.

The changes necessary are indicated below in steps:

1. Fasten an Electrad 3 ohm B resistor



Showing the proper connections

to the edge of the base board directly above the power pack.

2. Disconnect one of the yellow filament leads from the power pack.

3. Connect this lead to one terminal of the 3 ohm resistor. The remaining resistor terminal connects to the binding post on the power pack to which the yellow lead was previously connected.

Short Life of Tubes

Complaints have reached Sylvania tube engineers regarding short life of 227 and 224 tubes in Brunswick and Bremer-Tully receivers. Extensive investigation has proven that in most cases where this has occurred a voltage regulator type 105 or type 110 has been employed and the heater voltage has usually been higher than 2.6 volts, and thus shortened tube life. The Brunswick Company is now recommending a type 98 voltage regulator. The same applies to the Bremer-Tully receiver. Replace the present voltage regulators with type 98 and tube difficulties will end.

A Few Notes on the Kylectron

The United Reproducers Corporation's "Kylectron" speaker is a condenser type reproducer. The rigid aluminum back plate is ribbed and perforated. Over it, resting on the ribs, is laid a rubber-like material called "Kylite," which is a dielectric of great flexibility. On the outer side of the "Kylite" a thin and very flexible conducting coating of beaten aluminum leaf is cemented with a latex cement. The "Kylite" with this conducting coating is the diaphragm. The ribs of the rigid plate are $\frac{1}{8}$ in. apart and between these ridges the plate is concave toward the "Kylite" so that it is supported by the ribs and is free to move back towards the concave surface $\frac{12}{1000}$ of an inch.

The entire diaphragm thus acts as if it were a multiplicity of smaller diaphragms vibrating in unison. The usual installation consists of six sections, although in large halls, as many as 96 sections have been used.

Sensitivity is proportional to the bias voltage squared until the diaphragm is too strongly attracted. Tone quality is dependent upon the bias voltage and, in the event of trouble, the rectifier tube should

be tested. Permanent polarization is a possibility and in this case the speaker should be discharged, the same as you would discharge a condenser, and the leads reversed.

In handling the "Kylectron" precautions must be taken to avoid denting the back plate. Grease and oil, as well as sunlight, must be kept away from the "Kylite" and only resin flux should be used. The contact screws of the "Kylectron" should never be tightened, but in cases where it is suspected that these have become loose, the section of the speaker should be replaced. Always, in working on a "Kylectron," be sure that you have discharged the speaker before attempting to handle same.

Curved Diaphragms Improve Dynamic Tone Quality

There is a marked trend towards the curved or parabolic type of diaphragm, instead of the straight-sided or cone diaphragm, in this season's dynamic speakers. The widespread acceptance of the fabric or burtex diaphragm, in place of the former paper cone, has made possible a wider choice of sizes and shapes than could ever be obtained with paper.

The curved sides of a parabolic diaphragm make for remarkable tonal quality, according to Clifford E. Stevens, chief engineer of the Stevens Manufacturing Corporation of Newark, N. J. This company, which has developed the new diaphragm design, reports a brisk business in parabolic diaphragms, as the loudspeaker manufacturers are coming to appreciate the advantages of this type. It appears that the weaving and buckling of the usual paper cone, which causes paper noises and other forms of distortion, are entirely eliminated in the parabolic fabric cone, while many of the delicate overtones usually lost in paper cones, are faithfully reproduced in the new type of cone.

HINTS from HANK

The service man is getting more important all the time. But don't let it go to your head.

* * *

Don't be a plumber, take your tools with you the first time.

* * *

Many men remain stationary all their lives because they are afraid of starting off on the wrong foot.

* * *

Not all's static that clicks . . . check up the oil burner motor these days.

* * *

Don't try to explain to the customer why his set doesn't work, it's a waste of time . . . sometimes for both.

* * *

Keep tabs on the salesmen . . . their overselling of the ability of the set may cause you unnecessary service explanations.

* * *

Show the customer how sweet the tone of the set is after it has been repaired . . . not how loud it will play.

* * *

Don't be too free with advice on a call . . . remember you are being paid to fix the set—not to replace it with conversation.

* * *

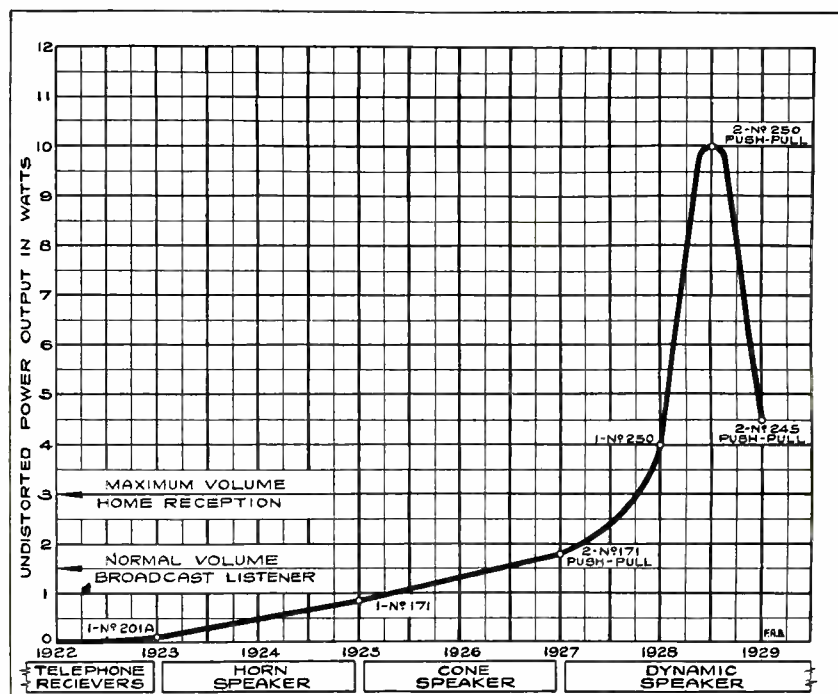
In the average suburban home you will find that with the modern screen-grid set an inside antenna, if kept away from all metal, will give as good average results as an outside antenna. And it's a lot easier and quicker to put up.

* * *

And, before we sign off, be sure and look for this column next month. We will try and make it better as we go along. If you have any remarks to make, send 'em in. If they are not too awful we will publish them with your initials.

—73—

The Reason for Increased Volume in Today's Sets

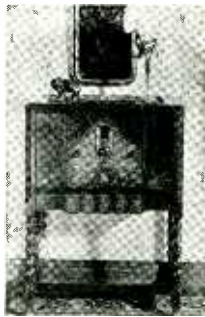


This interesting chart comes from George Lewis, vice president, Arcoturus Radio Tube Corporation. It shows the increase in volume made possible in present day sets over the old types through the development of better tubes.



New Products for

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



New Console Cabinet

New Philco Line

WITH the announcement of a new chassis and a new cabinet, the Philadelphia Storage Battery Co., Philadelphia, Pa., has placed on the market its 1930 line.

Model 76 is a screen-grid chassis using three 224 tubes, one 227, two 245's and a 280 rectifier. It has four tuned circuits including a double tuned input circuit. The "balanced unit" construction is used. This chassis will be available in the new cabinet as well as in the four console cabinets made by Philco. The intended retail prices are: new console cabinet (illustrated), \$112; table model, \$67; lowboy, \$119.50; highboy, \$139.50; highboy de luxe, \$195.

The console cabinet brought out at this time has matched butt walnut side panels and a bird's-eye maple center panel with walnut veneer sides and top. The speaker is mounted in the floor of the cabinet, pointing downward, giving "indirect sound radiation." The dimensions are height, 35 in., width, 13 in., length, 26 in.

Model 95 "screen-grid plus" chassis, recently brought out, is also being featured as a part of the new line. The intended retail prices of the various models with this chassis, are: table model, \$97; lowboy, \$149.50; highboy, \$169.50; and highboy de luxe, \$225. It is not available in the new console.—*Radio Retailing*, January, 1930.



Model 595

Victoreen Sets

THE "Circumnavigator" is a 14-tube superheterodyne receiver with dynamic speaker made by the Victoreen Radio

Co., 2825 Chester Ave., Cleveland, Ohio. The chassis comes in two parts: the receiver and the amplifier, each contained in a cast aluminum case. The tubes used are: eight 227's, two 281's, two 874 voltage regulators, one 201A and a 250 in the output.

Model 345 is known as the Artist Grande. The cabinet is Gothic in design and made of solid walnut, hand carved, with hand-rubbed finish. The intended retail price is \$345.

Model 395 is housed in the illustrated Louis XVI period highboy cabinet of walnut with curly maple overlays and inlaid wood carvings. The quarter type doors are finished on both sides. Intended retail price, \$395.

Model 595, the illustrated combination, comes in an Elizabethan cabinet of antiqued oak, hand carved. The intended retail price, complete with electric motor and pick-up, is \$595. In a walnut cabinet, \$645.—*Radio Retailing*, January, 1930.



Model 395

Victor Combination

HOUSED in a highboy cabinet, the latest addition to the line of the Radio-Victor Corporation of America, Victor Division, Camden, N. J., recently appeared on the market. The regular Victor radio is used in combination with the Electrola and the model is known as Victor-Radio-Electrola RE-75.

The cabinet employs special oriental walnut as well as American walnut matched veneers. Its door panels are in bas-relief and the speaker covering is of Bengalese damask, harmonizing with the cabinet. Leathered-backed record albums are also supplied. The intended retail price is \$375.—*Radio Retailing*, January, 1930.



New Stewart-Warner Set

THE Stewart-Warner Corporation, Diversey Blvd., Chicago, Ill., has added a Tudor period console to its line of 8-tube screen-grid sets. The cabinet is surfaced with grained walnut ornamented by molded carvings and beaded edging. It is finished in a dull lacquer and measures 35 in. x 24 in. x 12½ in. Phonograph connections are provided as well as a built-in aerial and an air-cooled transformer. The intended retail price for a.c. is \$131.50; for d.c., \$139.—*Radio Retailing*, January, 1930.



Automatic Phonograph for Homes

IT IS now possible to have continuous and automatic reproduction of phonograph records in the home with models 31 and 32 of the automatic phonograph just placed on the market by the Capehart Corporation, Ft. Wayne, Ind. These instruments will play a four hour program (28 records on both sides) without repetition or attention. Of course, single selections may be played, also. In addition to the regular speaker which is built-in, auxiliary speakers may be placed in other parts of the house.

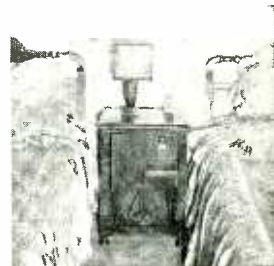
Model 31, illustrated, has an intended retail price of \$1,250.

Model 32 is housed in a walnut cabinet with a touch of the modernistic in its design. The retail price is \$1,250.—*Radio Retailing*, January, 1930.

Zenith "60" Series

THE Zenith Radio Corporation, 3620 Iron St., Chicago, has announced six console models in its new "60 line," incorporating the new Zenith "60" nine-tube screen-grid chassis featuring double push-pull audio amplification. A super-sized "Syntonic-dynamic" speaker used.

Model 60, called the "Super Midget," is designed to fill a demand for a small receiver in a walnut cabinet. It will fit alongside of a chair or in some nook or corner of the modern kitchenette apartment. It is approximately 28½ in. high, 19½ in. wide and 15½ in. deep, weighing only 75 pounds. The Zenith automatic tuning device is not included. Intended retail price, \$145.



Model 60 Super Midget

Model 61, a lowboy console of early American design, is made of selected matched butt walnut veneers with an overlay of English satin-oak. This model does not have the automatic tuning device. Price, \$155.

Model 62 is housed in a cabinet created to blend harmoniously with practically any home interior. It is priced at \$185 with automatic tuner.

Model 64 has a concealed built-in loop antenna. This model in a Charles II period cabinet of the semi-highboy type, is listed at \$370, with automatic tuner.

Model 67, also a loop operated set, comes in a modern Italian Renaissance period cabinet of walnut. It is priced at \$495, with automatic tuner.

Model 563, completing the "60" line, is a d.c. receiver. A specially designed circuit employing 11 tubes is used. The highboy cabinet is of early English design. The price is \$250.—*Radio Retailing*, January, 1930.



Model 61

Dealers to SELL

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



The "Ravenswood"

Hammond Electric Clocks

AN electric clock for practically every need is included in the line offered by the Hammond Clock Co., 4115 Ravenswood Ave., Chicago, Ill. These clocks can be used on alternating current only.

Illustrated is the "Ravenswood" in a bakelite case finished in mahogany brown. The height is 7 in. Its intended retail price is \$9.75.

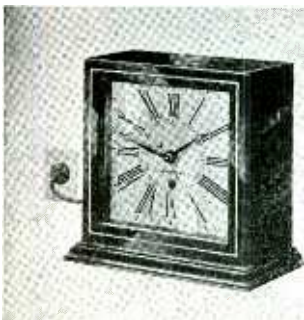
The "Colonial" model comes in a square solid walnut case, 6 in. high by 5 in. wide. Price, \$14.50.

The "Junior" wall model is round and comes in a metal case, finished in a choice of five colors to harmonize with the color scheme of the room. Price, \$14.50.

The "Cambridge" is in the popular tambour style. This model, like all other Hammond clocks, has the sweep-second hand and the flasher disc which shows the clock is running. It is 9 in. high and 20 in. wide and the case is walnut. Price, \$32.50.

The "Gothic" is, as its name implies, Gothic in design. It is 12 in. high. Price, \$29.50.

Two other wall clocks are available, a round 10 in. model and a square 18 in. x 18 in. model. The prices, respectively, are \$22.50 and \$30.—*Radio Retailing*, January, 1930.



The "Colonial"

Radio Model "Expando"

THE prices of the radio model LR "Expando" traveling sales

room described in the December issue, are as follows: Chevrolet, \$4,245; Dodge, \$5,084.50; and Reo, \$5,099. These prices include radio equipment, Expando body, chassis and cab, and chassis equipment. An aerial is installed in the top and an electric plant is furnished to supply both a.c. and d.c. The radio model is 26 in. longer and 9 in. higher than the regular model.

This body is made by the Expando Co., 105 West Adams Street, Chicago, Illinois.—*Radio Retailing*, January, 1930.

New Fleron Devices

AN AERIAL eliminator, the "Extenna", to operate in connection with the radio set is one of the four new devices offered by M. M. Fleron & Son, Inc., Trenton, N. J. Two circuits are furnished so that the user may employ the one which gives the best results. The set is plugged into the Extenna and the plug from the Extenna is placed in the light socket. It comes in a mottled brown bakelite case (7 in. long x 2 3/4 in. wide) and may be mounted on the baseboard or screwed under-



neath the set. The intended retail price, complete with plug and 8-ft. cord, is \$7.50.

The "Home Guard" lightning arrester, shown at the extreme left, is of the mineral gap type. It retails at 50c. The "Sentinel" lightning arrester, with \$100 protection bond, is also of the mineral gap type. The price is \$1.

The handy tap, shown in front of the "Extenna", is made to connect the aerial and ground wires from the set to the aerial and ground lead-in wires. The prongs are placed at right angles to simplify connecting. Price, 50c.—*Radio Retailing*, January, 1930.

Bremer-Tully Screen-Grid Sets

TWO eight-tube screen-grid sets in the same style cabinets which house the previous models 81 and 82 now supplement the line of the Bremer-Tully Mfg. Co., 656 Washington Blvd., Chicago, Ill.

The tubes used are: three 224's in the r.f. amplifier, one 224 as power detector, one 227 as the first a.f. amplifier tube, two 245's in push-pull, a 280 rectifier and one Duresite 110 voltage regulator tube. The dynamic speaker has a 10-in. cone.

Model S-81, the de luxe open console, 48 in. high, has an intended retail price of \$134.

Model S-82, with French doors of burl walnut and maple overlays (51 in. high) is \$159.—*Radio Retailing*, January, 1930.



Sea Horse Motor

Outboard Motors and Boats

OWING to the great popularity outboard motors and boats have attained during the last few years or so and with this type of water craft becoming more and more in demand, it makes a splendid spring and summer addition to the radio dealer's stock.

The Johnson Motor Company, 4595 Pershing Road, Waukegan, Ill., has just announced its new line of outboard motors and boats. Complementing the 1929 line of motors are two new models, the "Sea Horse 4" and the "Sea Horse 12," both incorporating the new alternate firing twin, a successful twin-



"Knockabout" Outboard

cylinder motor in which the cylinders fire alternately rather than simultaneously, thereby producing two impulses per revolution instead of one.

Another improvement in the new line makes possible full pivot steering with underwater exhaust. Release charger for easy starting, no moving parts, detachable aluminum cylinder heads and automobile type carburetor are some of the features of these motors.

The other models are: Sea Horse Single, a three port type motor weighing only 27 lb.; Model 3, Class A twin cylinder motor (38 lb.); Model 10, a Class B motor, for boats of medium size; Model 16, the fastest Class B motor; and Model 32, a 4-cylinder Class D motor, developing 32 hp.

A complete selection of boats of "Sealite" waterproof construction is also available. The illustrated "Knockabout" retails at \$135, with Sea Horse 3, 4, 10 or 12. The prices on other models range from \$125 to \$1,065.—*Radio Retailing*, January, 1930.

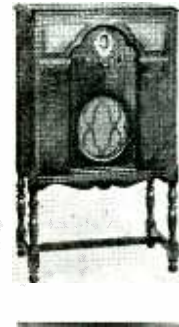
Acme Set & Chassis

AN eight-tube, screen-grid chassis has been brought out

by the Acme Electric & Manufacturing Co., 1444 Hamilton Ave., Cleveland, Ohio. The tubes used are three 224's, two 227's, two 245's in push-pull and a 280 rectifier.

A built-in antenna, Mershon condensers, a phonograph pick-up, which operates when the dial is turned below zero, and provision for television, are some of the features. The over-all dimensions are 21 in. long x 11 in. wide x 7 1/2 in. high. The weight is 25 lb. Price, \$77.

This chassis in the illustrated walnut console with burl panels is \$135. It may be had in other styles of cabinet also.—*Radio Retailing*, January, 1930.



Amrad "Minuet" Set

A NEW radio receiver, to be known as the "Minuet," has been added to the Bel Canto series of the Amrad Corporation, Medford Hillside, Mass. It uses eight tubes, including three 224's and 245's in push-pull; a Mershon condenser and has a 9 in. speaker mounted on a baffle board. The cabinet is walnut and lacewood. The intended retail price is \$158.—*Radio Retailing*, January, 1930.



Combined Outlet and Socket Antenna

THE "Plugairial," a light socket antenna with two outlets, one to take care of the set, lamp or dynamic speaker, has been placed on the market by the Consolidated Wire and Associated Corporations, Green and Congress Streets, Chicago, Ill. The intended retail price is 85c.—*Radio Retailing*, January, 1930.

RMA Fights Time

Other News Events

JANUARY 1, 1930

Manufacturers Co-operate to Iron Out Present Perplexities— R.C.A. Radiotron Co. Inc., Organized—Rosy Outlook for Broadcasting—Eckhardt-Earl Hook-Up

By Detector



DECEMBER news developments, viewed through Detector's glass, have been most significant. In the main they have been of an encouragingly constructive nature. The Radio Manufacturers Association, for example, is tackling today's problems in vigorous style. New and interest-holding broadcast programs are developing daily.

And the outlook for business is bright.

On the other hand the various groups of patent holders are organizing and girding their collective loins for future battles in the Courts—rather than settling things through methods of co-operation and conciliation. Another disquieting element is the financial weakness of a number of well-known concerns, as disclosed by recent receivership actions.

Now for the details:

Efforts are being made by the Radio Manufacturers Association, through the Washington industrial conferences and otherwise, to prevent undue restriction of credits for radio time paper. Certain financial interests handling this kind of paper have restricted discounts recently, thus placing an additional burden on the merchandising of radio products.

Initial results have been secured through Julius Barnes, Chairman of the United States Chamber of Commerce. Mr. Barnes was advised by telegram that such action, at this time, by the finance companies would increase unemployment and curtail retail sales. He responded by notifying the industrial leaders and referring the situation to a working committee.

The Manufacturers Meet At Briarcliff

Meeting at Briarcliff Lodge, N. Y., on Dec. 6, coincident with the Board of Directors of RMA, a large group of radio set manufacturers heard President

Richmond explain the need for closer control of production. Steps to accomplish this objective, through a monthly compilation of output statistics, were taken.

Supplementing his general remarks at Briarcliff, President Richmond, on Dec. 23, forecast a healthy radio industry in 1930. This opinion was based on the favorable broadcasting developments as well as technical improvements in receiver construction and a live consumer market. "Real improvement in the ratio of advertising to entertainment content in programs, and more than one set in the home, is coming."

A total of 85,000 square feet of space will be available to exhibitors at the 1930 RMA Trade Show—June, Atlantic City, N. J.—declared J. B. Hawley, chairman of the Show Committee, at Briarcliff.

R. C. A. Radiotron Co. Organized

Through the formation, Dec. 21, of the R. C. A. Radiotron Company, the Radio Corporation of America has added a seventh child to its growing family. This latest move will consolidate the radio tube manufacturing, engineering, selling and research facilities of Radio Corp., the General Electric Company and the Westinghouse Electric & Manufacturing Co. The president of the new concern will be T. W. Frech, now a vice-president of the General Electric Company.

This move is in line with a basic plan whereby all home entertainment activities will be conducted by subsidiaries of the Radio Corporation of America. The R. C. A.-Victor set-up is a similar step.

Briarcliff Lodge Host to RMA Directors—and Others



Set manufacturers, members of the R.M.A. Board, and trade press editors, in session, Dec. 6-7, at Scarsdale, N. Y., to discuss corrective measures for radio industry.

About thirty per cent of those attending failed to get in this panoramic. The less modest "left to righters" are: H. H. Frost, Utah; B. G. Erskine, Sylvania; William Sparks, Sparks-Withington; J. L. Ray, Radio-Victor; C. C. Colby, Samson; R. H. Langley, Crosley; A. L. Walsh, Edison; Le Roi Williams, Majestic; R. T. Pierson, Bremer-Tully; Lee

Robinson, Talking Machine World; George Furness, National Carbon; H. B. Richmond, General Radio; E. A. Nicholas, Radio-Victor; Frank D. Scott, Legislative Council; Ray Sutcliffe, Radio Retailing; Bond P. Geddes, R.M.A. Executive Vice-President; Nathan P. Bloom, Adler; Colin B. Kennedy, Kennedy; Morris Metcalf, American Bosch; O. H. Caldwell, Radio Retailing; John W. Van Allen, Legal Counsel; William Alley, Merchandising Manager, R.M.A.; F. G. Carson, Colonial; and A. G. Messick, U. S. Radio and Television.

Paper Restrictions

Tersely Presented

NEW YORK, N. Y.

Broadcasting Developments

Here's the latest from the broadcasting firing line:

All the major sporting events will go on the air this year. That's the report of E. G. Erskine, chairman of the Broadcasting Committee, RMA, following a series of conferences with the top officials of the two great broadcasting chains and with the leading sports promoters.

The Federal Radio Commission will be continued, and it will get a chief engineer and two assistants. "While many channels are still overloaded the Commission gradually has been reducing the number of stations. On March, 1927, there were 732, today there are 584," the Commissioners reported to Congress.

Chain broadcasting, ordered restricted about a year ago, may continue with government approval, these same gentlemen announced on Dec. 20, "as it would not be in the public interest to rule against this system."

And did you hear those vivid European exchanges? International broadcasting passed with colors flying on Christmas Day. The second program, from Berlin, almost deceived Detector into thinking it was a local station, such was its clarity and signal strength. "What hath God wrought?" and into what further thrilling fields will we be led? "For the love of Mike" get busy and SELL this development to your prospects.

Radio and music became more closely allied when, on Dec. 4, two leading music publishers, Carl Fischer, Inc., and Leo Feist, Inc., joined forces with the National Broadcasting Company. The new concern will be known as the Radio Music Company—"to enhance and improve the whole trend of American music . . . and put jazz in the background," declares its new president, E. C. Mills.

And for my final broadcast about broadcasting, I note that the balance sheet of this industry, which for the past nine years has shown big blobs of red ink, is taking on a darker complexion. Although it still is far from being a lucrative proposition, first information of any sort from a government source states that of 340 representative stations, 168 realized a profit over a recent twelve-month period.

Eckhardt-Earl Hook-up

Contracts have been signed between the receivers for the Earl Radio Corporation and Walter L. Eckhardt Associates, Inc., providing for the acquisition, by the latter concern, of approximately 40,000 Earl and Freed radio receivers. In effect, this arrangement places in the hands of this new syndicate the sales management responsibility of the Earl Radio Corporation.

Walter Eckhardt will be remembered as

one of Philadelphia's earliest radio industry pioneers. For several years he has been living in business retirement.

On petition of creditors, equity receivers were appointed two weeks ago for the United Reproducer Corporation, manufacturers of radio sets, Kyletron speakers and chicken incubators. Lester Noble, president of the radio division, was one of the men named to conduct the affairs of this concern. The company in question listed its assets at \$6,697,000 and liabilities of \$4,296,000. It is confidently expected that, with the protection of the court, a speedy and satisfactory solution of its temporary difficulties will be found.

Grebe Goes Auto-Minded

Bishop, McCormick and Bishop, distributors for Dodge automobiles in the New York territory, also will act as Metropolitan distributor for A. H. Grebe and Co. Some time ago this automobile

firm introduced the Transitone radio system for Dodge cars. The Grebe deal, it is understood, will be confined, however, to the sale of sets for home use only.

"The radio business seems to be an ideal one for the automobile dealer to adopt if he should decide to have more than one iron in the fire," states C. M. Bishop. "The best business in radio is done at a time when motor car sales are at their lowest level of the year."

"This distribution policy may, or may not, be extended to other sections of the country," Detector was told by Mr. Grebe. "It depends upon future developments. Present jobber relationships, within the radio industry, will be protected in either event."

Clause Nine Again

Like Banquo's ghost, Clause Nine will not down. December 23, Judge Hugh M. Morris, in the United States District Court, handed down a final decree granting a permanent injunction restraining defendants from using the "contract clause" among licensed manufacturers of radio sets. This decision was in the case of the De Forest Company, et al, against R. C. A. Judge Morris then granted the request for an appeal by the defendants to the Third Circuit Court of Appeals. The other plaintiffs are: the Northern Manufacturing Company, United Radio and Electric Corporation, Televocal Corporation and Harry Chirelstein, doing business in the name of the Sonatron Tube Corporation.

Files "Unfair Competition" Complaint

Articles and advertisements printed in leading magazines and newspapers by the Radio Corporation of America were made the subject of two complaints of unfair competition, filed with the Federal Trade Commission the forepart of December by the Radio Protective Association. This latter organization of independent radio manufacturers takes exception to the statements, which appeared in these publications, implying that Radio Corp. "was founded at the request of the United States Government."

* * *

The Pacific Radio Trades Association has voted to discontinue its 1930 public show. Instead, our California friends plan to hold a trade show about three weeks after the termination of the big blow-out at Atlantic City . . . "If this be treason, make the most of it!"

* * *

And in conclusion of a busy month, we wonder—

What the program directors would do if there had been no Victor Herbert?

RADIOTYPES



H. E. CAPEHART

They say that Homer Caphart made his first selling scoop when he was selling milking machines: the prospect, who owned one cow, one bull, and no money, sold the cow to obtain the down payment on the milking machine. Now Homer writes books to tell how he did it, and through a haze of aromatic smoke from little crooked cigars, he dictates feverish telegrams announcing, "Caphart Corporation breaks ground for new addition to double floor space." Horatio Alger missed a good plot in the story of Caphart's development of his automatic phonograph industry from nothing to \$1,500,000 in 20 months.

Cleveland Convention to Make Exhaustive Survey of Problems Confronting Radio Industry

N.F.R.A. with R.W.A. Will "Get Down to Facts" of Retailer's and Wholesaler's Troubles at Fourth Annual Convention

Coming at a time when the settlement of many marketing conditions in the radio industry is vital, the fourth annual convention of the National Federation of Radio Associations and the Radio Wholesalers Association will be held at the Hotel Statler, Cleveland, Feb. 10 and 11.

An invitation to sit in on the findings of the various committees of the co-operating associations has been extended to every individual dealer, wholesaler, manufacturer and broadcaster in the industry, and to representatives of state and territorial radio trade associations.

ROUND TABLE DISCUSSIONS

Prominent leaders of all branches of the industry will be present. Previous preparation will provide definite facts as material for thorough informal discussion by retailers and wholesalers of problems confronting their respective groups. The retailer's cost of doing business, cost accounting systems, finance plans, sales campaigns, and many other items are planned for mutual investigation under the supervision of Henry M. Steussy of Milwaukee, chairman of the retailer group.

JOBBER COMMITTEE REPORTS

The day preceding the convention will be devoted to committee and board meetings

in order that the convention may be started in the business-like manner which it is to assume.

The Radio Wholesalers Association will hear the final findings of committees on

classification and marketing of accessories, tube handling, and set merchandising. The Traffic Committee, which recently helped to secure the million-dollar-yearly freight rate reductions, and the Vigilance Committee will also have results to lay before the convention at this time.

Monday evening, Feb. 10, will be devoted to a banquet, with short speeches and entertainment following. Tuesday evening the annual dinner and entertainment will be held. The Ohio Radio Trade Association, official host to the coming convention, is making elaborate plans for the entertainment of its guests during this period.

"DOWN TO FACTS" PROGRAM

The N.F.R.A., by a volume of preliminary work and a definite outline of problems to be attacked, has guaranteed against a convention of over-general activities and inconclusive results. Representatives of over 10,000 dealers and wholesalers will be supplied with actual facts and distinct alternatives as a basis for action.

Interest in the convention is high, and a large attendance is expected. Michael Ert, president of N.F.R.A., and Peter Sampson, heading the R.W.A., both report an early and enthusiastic response to the general invitation. The strictly business nature of the gathering will attract the busiest of executives, and the broadness of its scope gives it a real value to the smallest retailer.

See You Here, Feb. 10!



The Hotel Statler, at Euclid Ave. and East 12th St., Cleveland, headquarters for radio men at the N.F.R.A. Convention

Broadcasters Association Holds Annual Convention

The annual convention of the National Association of Broadcasters was held recently at West Baden, Ind. Discussions were held and resolutions passed on various phases of commercial broadcasting, under the headings of ethics, uniform accounting costs, and exchange and legislation. William S. Hedges was re-elected president; Edwin Spence of WPG, Atlantic City was elected vice-president and O. D. Fisher of KOMO, Seattle, vice-president. A. J. McCosker of WOR, Newark, was re-elected treasurer.

Music Ass'n Membership Increasing

The membership promotion committee of the National Association of Music Merchants has been securing excellent results in its effort to swell the enrollment of the organization.

Special stress has been laid upon the fact that the merchandising ideas which are be-

ing disseminated monthly in the bulletins issued from the executive office are worth many times the membership dues per year. These merchandising ideas are generously contributed by members of the association who have made use of them successfully in the conduct of their own establishments.

R. S. M. A. Plans Expansion

The Radio Service Managers' Association, from its new offices at 324 West 42nd St., New York City, has issued an invitation to service men in all parts of the country to affiliate with the national association.

This invitation follows a general resolution passed by the board of directors providing for the expansion of the R. S. M. A.

Certain steps have already been taken, it was announced by Grover C. Kirchhof, executive secretary. One of these was the removal of the executive offices to the present location; another was the recent publication of "The Radio Service Man" for regular member distribution.

Mr. Kirchhof reports a steady influx of inquiries and applications.

Audio Research Foundation Formed by Manufacturers

The Audio Research Foundation, with headquarters at Chicago and offices at Washington, has been formed by leading manufacturers in the amplification field of the radio industry. It proposes to bring about co-operation among these manufacturers for the purpose of a comprehensive investigation of the art of radio reproduction as well as of the legal aspects of the field. The work will be in the hands of experts of national reputation.

Among the sponsors of the movement is Cy Colby, former president of the Radio Manufacturers Association. John R. Howell, of Chicago, is executive secretary. His office will be at 134 LaSalle St., Chicago.

THE RADIO TRADES ASSOCIATION OF CANADA, Vancouver Branch, elected J. Hart of the Radiophone Company of Canada, president at its annual meeting. It was decided to change the name of the association to the Radio and Music Trades Association of British Columbia.



Radios for Radio

Seventeen hundred miles off the Atlantic Coast, Purser J. G. Summit, of the Leviathan, lifted a telephone receiver off its hook, called Vanderbilt 8700, New York, and as casually as if he were phoning the corner electrical shop, ordered a new set of tubes for his radio set.

This message is believed to be the first order for radio merchandise ever telephoned from ship to shore.

Here is Harry S. Schott, general sales manager, National Carbon Company, and Fred Williams, manager, Eveready Raytheon Tube Division of this same concern, on the receiving end of this unique call.

HENRY H. FAULKNER, formerly production engineer for the Precision Products Radio Company, has been appointed general manager of Nathaniel Baldwin, Inc., Salt Lake City, it is announced.

LeRoi Williams to Handle Patents for Majestic

Recognizing the increasing importance of patents in the radio industry, the Grigsby-Grunow Company announces the appointment of LeRoi J. Williams as Director of Patents.

This appointment brings to Majestic an executive successful with several leading automobile, electrical and radio companies, and a nationally known expert in radio patents.

Mr. Williams has been prominently identified for several years with the important patent activities of the radio industry. Prior to his work as patent counsel of the Raytheon Manufacturing Company, he acted in a similar capacity for the General Electric Company, Westinghouse Electric and Manufacturing Company, Radio Corporation, and associated companies.

Under his leadership, as chairman of the patents committee of the Radio Manufacturers Association, a plan for the cross-licensing of patents among members of the industry for the purpose of avoiding litigation, substantially along the lines of the successful automobile cross-licensing plan, has been worked out and is now being presented to the members of the industry.

King George Will Be Heard

"THE next voice that you will hear will be that of His Majesty, King George the Fifth of England!"

And now another thrill—for set owners. Arrangements practically have been completed to relay to America the address of King George, to be delivered before the Five-Power Conference in London, January 21.

There's sales ammunition in this epochal event!

Correction of Price Statement

The advertisement of the Erla Radio which appeared in the November issue of *Radio Retailing* quoted Model 30 at \$165, instead of \$169.50, the correct price. The Erla line was quoted as being priced from \$119.50 to \$189.50, whereas the correct price range is from \$119 to \$269.50.

Electrical Research Laboratories, Inc., Chicago, maker of the Erla Radio, has made no official announcement of price reduction up to the present time.

2,010 Sets in 960 Hours

(Continued from page 39)

"I doubt," explained the dynamic and hardworking Mr. Geiger, in discussing the reasons for the success of the Philadelphia Electric Company's seasonal drive, "that we would have made our bogey were it not for the fact that the foundational field set-up for this kind of a task already had been laid. Each salesman had been living in his own exclusive bailiwick and had been cultivating the personal acquaintance and goodwill of his 3,000 to 4,000 electric light users over a period of eight months. The job resolved itself, therefore, into re-contacting as many as possible of the likely prospects for a radio set, within the period of the campaign."

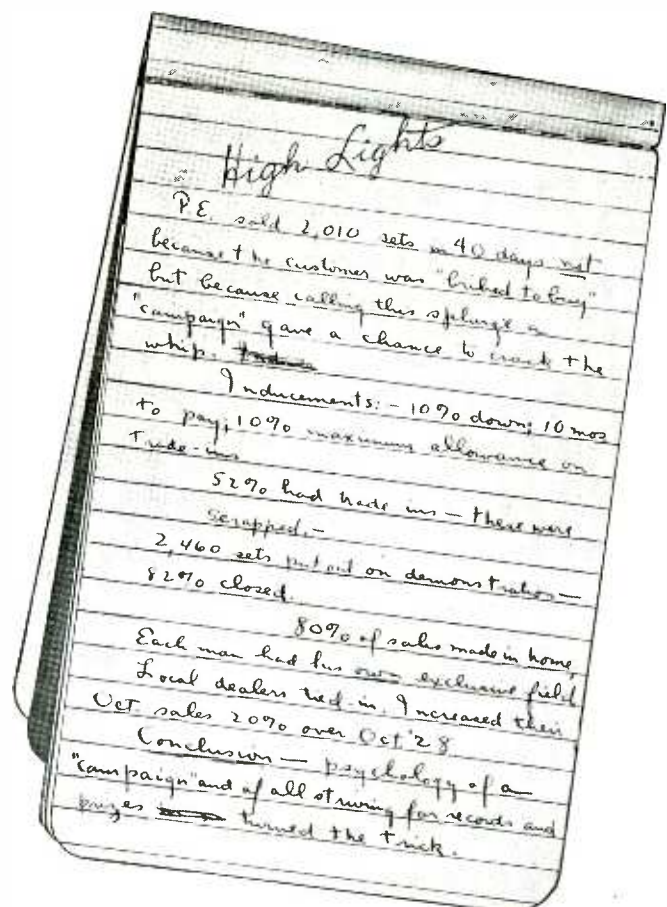
"To put a 'kick' into the proposition, radio sets of various values, according to the nature of the award, were offered to the district managers and salesmen taking the most orders in each of the company's eleven sub-divisions. Furthermore, the regular modest salary and seven per cent commission was augmented by a special bonus of \$1.50 per set to each salesman who made his individual quota."

The worth of these ideas is indicated by the sale of 730 sets in November as against an estimated normal sale for that month of 250 receivers.

That this business was, in the main, properly obtained is indicated by the fact that 82 per cent of the free demonstration cases were closed and that only 58 "reverts" were reported. These were classified as follows: poor credit, 24; could not afford 12; would not keep, 8; refused on delivery, 7; delinquent on second payment, seven.

"One concluding thought," said Mr. Geiger, "utility executives may be interested to learn that the sale of other electrical appliances did not suffer materially from the temporary switching of the major portion of each salesman's time to radio. Furthermore, the 30-day period, following the termination of the radio drive,

showed a sale of more than double the number of sets which ordinarily we would sell during November."



A Page From Our Reporter's Note Book

What the Wholesalers are Doing

St. Louis Jobber Active Association Man



The president of the St. Louis Radio Trades Association, George H. Niekamp, unquestionably stands out as a shining example of the type of man whose presence in business is an asset and a stimulation not only to trade and commerce in this community as a whole but even to his fellows and competitors in the same field.

Within the past few years, he has helped the St. Louis Trade Association attain the position of one of the leading radio dealer organizations in the country. As its president he established a successful uniform accounting system for the benefit of all members. The \$17,000 profit deposited in the association treasury after the St. Louis Radio Show was due to the excellence of his management.

In his dual capacity as chief of this important federation, and Fada distributor for St. Louis, his work is marked with distinction.

Jobber Contacts Dealers By "Show Boat" Method

In a search for a new and more productive way of contacting radio dealers, I. L. Faucett, of the Motor Supply Co., Crosley distributor of Chattanooga, hit upon an unusual and highly successful method.

Mr. Faucett stole a leaf from the book of the famous old-time thespians of the Mississippi who cruised from town to town in a show boat, except that he used a motor truck instead of a boat.

Stocked with a selection of table and console models, advertising literature and decorative material, this truck toured Tennessee, Georgia and Alabama, contacting radio dealers. Advance arrangements were made weeks ahead for advertising featuring the truck and the dealers who would display the Crosley merchandise. The public was invited to attend a miniature radio show in the store of a dealer in each town.

Mr. Faucett took advantage of the publicity thus afforded to explain the lines and the policies of his company, and to demonstrate the sets to the people who flocked to the displays. The crew was able to sample every dealer in every town where the show was put on.

CARL A. BEUCHNER has been appointed district manager in Connecticut for the Colin B. Kennedy Corporation. Announcement was also made of the appointment of W. A. GRAY to the northern Ohio territory, and of E. H. YOUNG to southern California.

A. B. SWAGERLE has been added to the field force of the Grigsby-Grunow Company to work in the territory of SHARAR-HOLMAN Co., Rochester, N. Y.

All Wholesalers
are invited to attend the
**Fourth Annual
Convention**
of the
**Radio Wholesalers
Association**
at the
**Hotel Statler,
Cleveland, Ohio,**
February 10 and 11

Buffalo Men Make Record

Fred Strayer, Sylvania sales manager, believes that two of his jobber salesmen in the Buffalo territory have made a world's record for tube sales.

O. J. Loersch, of the Buffalo Talking Machine Co., and Walter Dossert of the Philco Buffalo Distributing Co., sold 14,637 Sylvania tubes in five weeks. The men were team mates in a recent drive. Their sales, Mr. Strayer says, were made to average sized dealers, without concentrating on the quantity orders of large retailers.

HARRY P. DISBECKER now represents the Richmond Hill factory of A. H. Grebe, Incorporated, throughout the metropolitan district. He will be remembered as one time chairman of the board of directors of the Electric Appliance Development Association, in which capacity he participated in many sales promotion campaigns.

FRANK W. LOCKWOOD has been appointed general sales manager of Wilkening, Inc., Philadelphia. He was formerly with the Crosley Radio Corporation.

On the Beach at Waikiki



In the neighborhood, anyway. Ray Newby, Bosch radio service engineer, is trying hard to concentrate on effecting an *entente cordiale* with E. H. Moses of the Moses Stationery Co., Hawaii. Interference (extreme left) is terrible!

Distributor Appointments

TARR, MCCOMB, AND WARE, of Kingman, Ariz., has been appointed distributor for the state of Wyoming, and the Charleston Hardware Company of Charleston, W. Va., has been entrusted with distribution in southern West Virginia and eastern Kentucky by the Zenith Radio Corporation, of Chicago.

BRAITERMAN FEDDER COMPANY, Baltimore, Md.; George Byers and Sons Company, Columbus, Ohio; North Coast Electric Company, Portland, Ore., and Seattle and Tacoma, Wash.; Smith-Hassler-Sturm Company, Indianapolis, and the Colonial Electric Supply Company, Philadelphia, are newly franchised jobbers for the Gulbransen Company, of Chicago.

THE AMERICAN MOTOR EQUIPMENT COMPANY, of Boston, and the Standard Radio Company, of Milwaukee, have been authorized to handle Sonora radios in their respective territories.

THE RADIO WHOLESALE CORPORATION, of Atlanta, is a new outlet in the Capehart Corporation's chain of distribution.

THE JOED DISTRIBUTING COMPANY and the Robun Manufacturing Company were recently appointed distributors for the Shamrock Manufacturing Company, in and around New York City.

THE ATHENS HARDWARE COMPANY, of Athens, Ga., has been chosen to handle radio for the Silver-Marshall Company, in the adjacent counties of Georgia and South Carolina.

THE SPEED SALES COMPANY, Los Angeles, and the MONARCH SALES COMPANY, San Francisco, will cover California for the Cable Radio Tube Company. The A. S. DETSCH COMPANY, Headquarters Portland, Ore., will distribute "Speed" tubes in Washington, Oregon, and Idaho.

THE H. M. TOWER CORPORATION, of Boston and New Haven, has been appointed jobber for Bosch radios in Vermont and western Massachusetts.

SUPERIOR DISTRIBUTORS, INC., New York City, have been appointed exclusive distributors of Sterling radios in the metropolitan district.

DAYNES-BEEBE, of Salt Lake City, and J. L. BRANDEIS & SONS, Omaha, are now distributors for the Bush & Lane Piano Company in their respective territories.

HUDSON-ROSS COMPANY, of Chicago; KRUSE RADIO CORPORATION, of Indianapolis; and the TIEMAN STOVE and HARDWARE COMPANY, SHAPLEIGH HARDWARE COMPANY, and the ELECTRIC LAMP and SUPPLY COMPANY, all of St. Louis, have been appointed distributors for the Duovac Radio Tube Corporation, of Brooklyn.

THE BEALETTE and GRAHAM COMPANY, of Boston, the STUYVESANT ELECTRIC COMPANY, and the LEHR AUTOMOTIVE SUPPLY COMPANY, both of New York, have been made distributors for the Triad Manufacturing Company, Pawtucket, R. I.

THE SPRAGUE ELECTRICAL SUPPLY COMPANY, Waterbury, Conn., has recently acquired the Edison distributorship for most of Connecticut.

THE C. AND D. AUTO SUPPLY AND RADIO CORPORATION, Cincinnati, Ohio; H. S. PATTEN, JR., Albany, N. Y.; the CLAWSON AND WILSON COMPANY, Buffalo, N. Y.; and the CAPEL FURNITURE COMPANY, Dayton, Ohio, are newly franchised Grebe jobbers.



As One MANUFACTURER TO ANOTHER



"Big Show Tonight!"

The Industry Should Provide a Fund for the Special Promotion of Unusual Programs, Says Tracey



E. A. Tracey, Vice-president, National Union Radio Corp.

A new obligation confronts us radio manufacturers. We might as well meet it frankly, vigorously—and at once.

I refer to the need for merchandising the more outstanding broadcasts. Yes, and for creating spectacular programs as well, if the situation demands it. These, industry-sponsored "big shows" must be of sufficient widespread interest to

have a definite effect on radio listeners and to inspire millions of dollars in new radio purchases.

We must do this if the radio business is to continue to grow, and I feel sure that my attitude will be supported by all observant manufacturers.

Such action will provide the industry with two marvelous opportunities: First, to make the radio set indispensable to the existing owners. Second, to provoke thousands of sales to new customers.

In line with my second point—creating events—I suggest, for example, a baseball series between an All-American League and an All-National League team; or an "all-star" football game between two teams to be selected by a committee of newspaper sports editors. It might be a championship game—East vs. West—that would excite more interest than even the big college games. Or, we could assemble the world's leading statesmen for a radio discussion on disarmament and world peace.

Again, trans-atlantic broadcasting will help greatly. We can make our programs world events. Three to five spectacular affairs each year, specially promoted, advertised and merchandised, will be highly profitable to the entire industry.

The radio industry must organize, therefore, throughout all its branches. It should establish a substantial fund, available for merchandising and promoting super-events.

In making these suggestions, I am well aware that we are not in the entertainment business. Our only reason for fostering such events would be to stimulate radio interest—and that is something we must do, vigorously, from today on.

Furthermore, through a campaign of advertising such events—every advertiser in the industry to co-operate by donating a small amount of space in his newspaper and magazine copy—we can create an interest such as no private promoters ever dreamed of.

At this writing the preceding is just an idea. I would like to ask *Radio Retailing* to seek out all leaders of the industry, to obtain their suggestions and comment.

From this wholesale grouping of ideas we ought to evolve the greatest co-operative campaign known in the industrial world. Let's go!

E. A. TRACEY,
Vice-President in Charge of Sales,
National Union Radio Corporation.
Manufacturers, jobbers, dealers: What have you to say concerning Mr. Tracey's suggestions?
The Editors.

With or Without Tubes?

Another Declaration of Independence

Viewed from almost any angle, proposed plans which would enable manufacturers to ship sets complete with tubes have little to recommend them. If the purpose be merely to enable the dealer to advertise a set complete with tubes, the measure is unnecessary, since all tubes list at the same prices. Many other advantages which are claimed for the plan are similarly unsubstantial.

On the other hand, I believe it will be a very bad thing for the industry to have the set manufacturer ship the jobber a set of tubes with every receiver. The evils are too numerous to mention in detail, and I cannot see that it would be of help to anyone other than a few set manufacturers who are making their own tubes. The direct and immediate results would be the tying up of the distributors, who wish to be free and independent of having their entire radio business dominated by the set manufacturer, whose franchise they enjoy.

It would not only remove all freedom of action from the dealer, but would also result in considerable disadvantage to the consumer, who would be forced to depend on the quality of the tubes which all dealers of certain manufacturers would install.

If the manufacturing processes involved in making radio tubes were similar to those used in making sets, it would be a great step forward to have manufacturers make both sets and tubes, but since there is such a dissimilarity, I believe we will continue to find in the industry exclusive tube manufacturers as well as exclusive set manufacturers.

F. A. LA BAW,
General Sales Manager,
Marvin Radio Tube Corp.,
Irvington, N. J.

Next Month

This page in our February issue will be devoted to a discussion of auxiliary manufacturing activities suitable for factories equipped for radio production.

The Layman Will Be the Judge

Few manufacturers will disagree with the statement that, from the various factors which have influenced the public in buying radio, tone has emerged as of paramount value. Tone always has been the most important part of anything aural which plays a vital part in human experience—and the radio set is now such an instrument.

This factor of tone is not intangible or mysterious; it definitely can be analyzed as the effect of more or fewer overtones on a fundamental frequency.

While radio engineers long have been familiar with the principles of good tonal reproduction, their attention formerly was forced, by public demand, to concern itself more with other set characteristics—volume, distance, selectivity, a.c. operation, etc. The development of these qualities, and particularly of volume—once the most desirable attribute a receiver could have—often was made at the expense of tone.

No longer is this the case. Following a short initial period, when the user fancied an over-accentuation of the lower frequency notes (a reaction from screechy loud volume) we find accurate realism now becoming the first requisite of the user.

The burden of supplying this all-important element falls upon the loud speaker unit of the set. The manufacturer has the problem of selecting, from the several types of reproducers in use, the one which will give the most perfect tone. The dynamic speaker, because its development in the interests of volume has been accompanied by a corresponding development of all the tonal values at any volume, bids fair to hold a place of increasing importance in the reproducer field.

It is probable, therefore, that here again buyer demand will shape the policies of the radio manufacturer. This being the case buyer sentiment will influence not only executive and merchandising policies but will sway the technical aspects of design as well. The layman will be the judge as to which type of speaker ultimately will win out.

BURGESS DEMPSTER,
Engineer.

The Magnavox Co., Oakland, Calif.

Increase in Radio Listeners in Germany

The number of paying radio subscribers in Germany increased from 2,009,842 in 1927 to 2,635,567 last year, an increase of 625,725, or 31 per cent, according to a report of the German Federal Broadcasting Company, the covering organization which controls the German broadcasting concerns.

It is interesting to note that from the first of October, 1928, to Jan. 1, 1929—301,314 new subscribers were recorded, although this large increase is undoubtedly due to the fact that the heaviest purchases of radio sets are made during the last three months of the year.

Manufacturers' SELLING HELPS

Supplied to stimulate the dealer's business



Kellogg Service Coats

These service coats are offered by the Kellogg Switchboard and Supply Company, Chicago. In addition to their practicability, they have a definite advertising value.

Philco Display Kit

To tie in with the theme of Philco's national radio advertising, the Philadelphia Storage Battery Company, Philadelphia, has prepared this dealer's advertising kit. Right, a window of the Delineator Institute, New York, shows what effective use may be made of it.



Fada Demonstration Card

(Below) Lithographed in seven colors, this 39 in. by 57 in. card graphically points out design features of the Fada "Vibra-Control." Arrows run from explanatory paragraphs to the various construction points of the set. This demonstrating help is furnished by F. A. D. Andrea, Inc., Long Island City, N. Y.

FADA Radio

The inside story of the famous FADA VIBRA-CONTROL

CONDENSER SHEATH OF PLUM BOB STEEL
- prevents condensation and moisture in variable tuning

SECLUDED COMPACT POWER TRANSFORMER
- no hummed vibrations or no constant disturbance

CHASSIS MADE FROM AUTO BODY STEEL
- no mechanical vibration in chassis and speaker frame

SOUND ABSORBING RAYLE
- suppresses cabinet resonance

FELT INSULATED BLINDING
- SHIELDING ON SPEAKER - no noise - high efficiency

ACROBATIC VENTS
- all system heats up - no speaker overheat

HEAVY BRASS PLATE
- SHIELDING BACK - DETACHABLE CONDENSERS - no hummed vibrations or no constant disturbance

LARGER COILS THAN THE AVERAGE
- ALL WINDINGS - for full band range - frequency response

15 TUBES
- 15 TUBES - 15 TUBES - 15 TUBES - 15 TUBES - 15 TUBES

LARGER SPEAKER
- OPERATOR BUILT - for full band range - for high efficiency

GRACE - NO HUM
- NO HUM - NO HUM - NO HUM - NO HUM - NO HUM

FADA RADIO - Choice of THE EXPERTS



Silver Radio Electric Sign

Silver Marshall, Inc., Chicago, offers distributors of Silver radios this colorful electric sign for counter or window use. A length of cord is supplied, and the sign may be used with either a steady light or a flasher.



Sterling Window Cards

A set of matching display cards in the modernistic manner has been designed by the advertising staff of the Sterling Manufacturing Company, Cleveland. Dealers may use these striking cut-outs in windows or in floor set-ups.

What's Ahead?

(Continued from page 26)

day two-tone walnut finish that has been so accepted as to make it standard. The lowboy is without doubt the popular model. Next year will see more of these without doors than with doors and those that have doors will have half, swinging doors. Decorative tapestry for the speaker grille can be expected to gain in popularity as this improves the looks of the cabinet.

All in all, there is no cause for worry concerning radical departures in radio receiving sets which might make obsolete present day models. There will be, of course, a steady advance in the refinement of circuits, tubes and associated apparatus. The automatic volume control will probably receive more attention from manufacturers this year. The period of stampeding the public by new developments is, we believe, fortunately over. Performance and value, will count from now on—not technical catch-words.

Probably the most radical development for 1930—which will come, fortunately, in a completely self-contained unit—will be the “home-talking-movie-radio-phonograph-combination.” Here we will have a 16 mm. projector, synchronized with some means for producing sound (probably a record to start with and later perhaps a film), a radio receiver and an electric phonograph. Sound reproduction for the pictures will take place through the audio-frequency amplifier of the radio set.

Thus we will have in this instrument a truly “Home Entertainment” device. This merchandise will be developed by companies now in the radio business or closely associated with it, and, therefore, the radio-music merchant will have additional merchandising opportunities thrown his way. It will be a virgin field, and those dealers that dig into it first will profit most.

Thus the outlook for 1930 is a most promising one. From the standpoint of developments to be made and apparatus which will be ready for marketing we are truly entering the “Home Entertainment” era.

Ring Up Sales on Doorbells

(Continued from page 31)

are more eager to have placed in their homes a radio with a name to which widespread publicity has given prestige.

Mr. Dobbins handles only two makes of sets. A larger number, he points out, simply serves to confuse the prospect and to delay his reaching the actual buying point. Also, when a dealer handles a number of lines, he finds himself handicapped by the necessity of doing a great deal of demonstrating.

This thorough-minded Florida merchant has formulated certain rules for the conduct of his credit department which show the results of intelligent investigation into this problem so important to radio dealers.

“Almost all sets are sold on the installment plan,” says Mr. Dobbins. “Now, I consider radio sets to be a highly perishable commodity when sold on other than a cash basis. Consequently, my experience is, I must get a very substantial down payment, and I must not let the payment of the balance be spread over too long a period. Small down payments encourage dissatisfaction and repossession; large down payments discourage them.

Therefore I require 25 per cent down. I feel that if a prospect cannot pay that much, he cannot pay for a radio at all.”

An important thing to be borne in mind in arranging time payments is the fact that a pleased customer is a talking advertisement for the store. The allotment of installments should be made in such a way that the customer is never made to feel unduly obligated, or uncomfortably pressed. On the other hand, he must not be allowed to fall behind so that unpleasant dunnings are necessary. Mr. Dobbins finds a ten-month period ideal as a protective measure for the dealer and as a convenient arrangement for the customer.

THE readers of *Radio Retailing* have much to learn from the experience of Mr. Dobbins. The original application of the canvassing method is only one example of what happens when business is done the way he does it—*analytically*. He developed successful methods in every department of radio selling, from getting leads to collecting time payments, because he studied his problems systematically until he found the right means of solving them.

He saw that canvassing had been worked to death. But instead of discarding the method as many others would have done, he analyzed it to find just *what* was wrong. He saw the remedy—a new element of personality. He applied it. And up went his sales!

Your Hand on the Throttle

(Continued from page 53)

two methods is by comparing their respective yields to the finance company. Obviously, money which goes to the credit organization comes from the dealer's pocket. The direct method will yield as high as 31.29 per cent; while the indirect plan pays the finance corporation 17.15 per cent. Under the direct plan, delinquent accounts are, after a certain period, referred back to the dealer for collection anyway—he pays the credit company, yet the hardest part of the job is still his. The “dealer collect” plan, then, is the one to choose.

The dealer should not only make his own collections, but he should make them *weekly* whenever possible. People pay weekly more readily and more easily than monthly. This is logical, since the purpose of the installment plan, after all, is to make it possible for poor savers to purchase higher priced goods. Such buyers find it almost as hard to save the larger amount of a monthly payment as to save the entire purchase price. The weekly payment seems smaller and easier to meet, and actually does fit more readily into the family budget.

It will be seen, therefore, that the dealer who is making his own collections weekly under the indirect plan is himself performing the operations which the finance company would ordinarily be charging him for; but the extra expense he incurs is more than offset by the advantages he gains.

For one thing, he has the use of the weekly money he collects. For another, he has his fingers on the “throttle” of his accounts at all times; he is warned of coming collection troubles, and can protect himself.

Then, too, he keeps his name before his customers all the time. Perhaps he can arrange for them to bring payments to the store, where they become possible buyers of supplies and accessories. He certainly can maintain a greater proportion of satisfied customers.

The Farmer Must Have Radio

(Continued from page 41)

stations covering the entire country. Every program includes weather reports, reviews of market trends, and statements of new findings in farm and home science, which we have seen are so vital to the farmer's welfare. All are given by scientists and economists who have gathered in the facts; and given, we of the government service hope, interestingly and convincingly.

All told 298 of the nation's 600 radio broadcasting stations are working with the Federal Department to provide essential business information to American agriculture.

Naturally, I give you this summary because it deals with the work with which I am most thoroughly familiar. I do not want to leave the impression that the work of the stations co-operating with the Department comprehends all of the service of radio in a business way to agriculture.

Far from it. I have noted the fact that state colleges, state departments of agriculture, and several independent farm organizations are co-operating in this important work. At present the Radio Service of the Federal Department of Agriculture is engaged in an effort to correlate the federal and state information services through commercial stations. The effort, undertaken at the request of the Land Grant College Association, should show results in 1930.

There is the bare outline of the business service that radio gives to agriculture. I hope it may indicate to radio

retailers some of my reasons for maintaining that overcoming farmer sales resistance to radio should not be a terrific task.

BUT radio to the farmer and his family is far more than a business aid. In the way of entertainment and inspiration it offers more to the home on the land than to any other American home. Twenty-five years ago President Roosevelt's Country Life Commission pointed to loneliness and isolation as one of the greatest handicaps of rural life. Now, thanks largely to radio, this is no longer true—the daily life of the whole nation, great speech and great music, bulk as large in the life of the farm dweller as of the urban person. When a dealer sells a radio set to a farmer, he is opening the doors to a new life—a richer, fuller, happier life. *Now, if there isn't inspiration in purveying commodities of that sort to humanity, where in business can it be found?* To every one connected with the arrangement of agricultural radio programs it is a source of gratification that radio manufacturers seem to be turning this year once again to the farm market with a new line of battery sets. Given sets, and the will on the part of the dealer selling rural trade to give good service to his customers, I believe that radio dealers will find one of their best markets in the rural population. No other class has so much to gain from the purchase of a set; no other class needs radio so.

Pacing Your Prospects

(Continued from page 43)

As he proceeds, the salesman continually watches for that resistance which calls for extended application of proof. Encountering no resistance, or meeting and removing it, he simply turns over his sketch, slips a carbon into it, and the order is ready to be written.

RADIO dealers and salesmen can easily adapt this plan to the sale of sets. Starting with the bottom and basic box, they can label it "Musical Culture," and speak briefly on the intellectual value of radio programs, on the cultural development of the family, and, particularly, on the complete education of its younger members.

Stepping up to the next box, the salesman can cover his set's tone; moving up to selectivity; then to D.X.; then to cabinet work; with the price and easy terms at the top. Finally comes a one-two-three resumé of all of the points covered, a quick flashback to cultural value, and the direct bid for the order; always seeking and meeting, of course, the points of resistance that hamstring the deal.

Salesmen often ask, "Shall I remove these points of resistance as they are raised by the prospect, or shall I group them together and remove them as a whole?"

That's a good deal like asking, "Shall I go to the chair when the warden calls me, or when I get ready?" It seems a highly desirable thing, however, for the salesman to get them all together, remove them to the best of his ability, and then, summing up his whole case, make a bid for the business. This writer, when facing objections, has always tried to make a practice of saying, "All right, let's jot that down and I'll cover it in a minute."

But don't fail to put it in writing, or the prospect may regard it as an evasion of the point. At this point the salesman may go ahead with his quickly paced canvass. When it is finished and all points of resistance are noted, he can face each objection and then proceed to his close.

This thorough canvass must be rapid in regard to all kinds of prospects, but remember that you must adjust your delivery of it to the capacity of the prospect at hand. That is, although the same brief canvass is delivered both to the high-speed American businessman and the phlegmatic German-American factory worker, its delivery must be speeded for the former and more clearly and slowly enunciated for the latter, or the one will become impatient and the other fails to grasp the subject introduced.

That your prospects *want* radio there is no doubt. The questions are: Does it work? Does it sound good? Can we afford it? Answer those questions to the satisfaction of your prospect and he's pretty nearly roped and tied. To briefly review:

Sum up, in not more than two minutes, a small but all-embracing number of claims for the set. Watch for the points on which the prospect is inclined to dispute.

Take up each of these points separately and elaborate briefly on them, gauging your talk to your prospect's mental capacity to absorb it. "Pace" him, as carefully as a runner is "rated" to cover a prescribed course without break-down. Note the points of resistance; meet them immediately if you must, but collect them for joint removal if you can. Then sum up all points once more and ask for the business.

The Patent Situation

(Continued from page 29)

1,426,754 Mathes (A. T. & T.)

The so-called "Battery Drop Bias Patent." This patent has also been put in suit against several different distributors and makes of sets.

Neutralization Patents

1,334,118 Rice (General Electric Co.)

This patent was in suit in the case of Radio Corporation of America against Twentieth Century Corporation in the United States Circuit Court of Appeals for the Second Circuit, and it was held that it covered neutralizing of grid capacity "by means of an auxiliary circuit containing inductance and capacity."

With the development of screen grid circuits, neutralization patents have assumed less importance.

Hazeltine Patents

1,533,858 Hazeltine, April 14, 1925 (Hazeltine Corp.)

This patent has been placed in suit against many different defendants. The Circuit Court of Appeals for the Second Circuit, in the case against E. A. Wildermuth, in a decision rendered June, 1929, held certain claims of the patent valid and infringed by apparatus then manufactured by Atwater Kent Mfg. Co. This patent relates to a method which has been quite generally used for controlling feed-back by what has been called "Plate Neutralization." With the advent of screen grid sets this patent assumes less importance in the art.

1,450,080 Hazeltine (Hazeltine Corp.)

While these patents have been involved in several suits, the District Court of the Southern District of New York, in the case against the Electric Service Engineering Corp. characterized the patent as covering, among other things, the use of a system employing "close coupling between the auxiliary coil and the transformer coil and employing a neutralizing capacity unequal to the coupling capacity of the tube." In other words: to a form of neutralization.

La Tour Patents

1,614,136 La Tour (La Tour Corp.)

This patent, which has recently been put in suit, is known as the "Iron Core Transformer Patent" and has been alleged to cover close coupled transformer amplifiers, a form which has been quite generally used in radio receiving sets.

Re-16,461 La Tour (La Tour Corp.)

This patent, also, recently was put into suit and has been alleged to cover a common "B Battery" or supply source with oscillating prevention means for a three stage set, namely: radio frequency amplifier, detector, and audio-amplifier.

Condenser Patent

1,258,423 Lowenstein (Scoville Mfg. Co.)

While this patent has been placed in several different suits, the Connecticut District Court decided in the Eagle Radio Co. case that the patent was valid and infringed by the manufacture and sale of Pacent condensers of the straight line frequency type. This patent is being re-tried in other suits. The ultimate adjudication of this suit is of general interest.

A.C. Power Supply Patent

1,251,377 Hull (General Elec. Co.)

This patent has been put in suit against several companies and various makes of apparatus. It has been alleged to cover the Rectified A. C. Supply and Filter Combination. The general interest in the ultimate Court determination of this patent is obvious.

1,455,141 Lowell & Dunmore (Dubilier Condenser Corp.)

In a recent case against the Radio Corporation, the Delaware District Court held that the claim of this patent, relating to a three stage tube receiver operating on an A. C. Supply with "separate means in each of said circuits for eliminating the hum of the alternating current in said apparatus" was valid and infringed. This is the so-called "Multiple Filter A. C. Supply Patent."

1,635,117 Dunmore (Dubilier Condenser Corp.)

In the same suit, the Court in holding Claim 9 valid and infringed, stated that its novel feature was "supplying negative potential to the grid of an amplifier tube from a source of alternating current." This is understood to be a combination in general use.

Numerous suits also have been brought by Western Electric Company, Inc., and associated companies, against various moving picture houses and manufacturers or distributors, with reference to amplifiers and power supply devices as used in talking motion picture devices.

Loud Speaker Patents

1,271,529 Hopkins, July 2, 1918 (Lektophone Corp.)

1,271,527 Hopkins, July 2, 1918 (Lektophone Corp.)

The foregoing patents have been passed upon by numerous District Courts and by the Court of Appeals for the Second Circuit, Third Circuit and Ninth Circuit, respectively. These patents have been alleged to cover broadly certain modern Cone Type Speakers. Numerous licenses have been taken under these patents and they have been extensively litigated. The Circuit Court of Appeals of the Second Circuit, in the case of the Lektophone Corp. vs. Western Electric Company and the Circuit Court of Appeals of the Ninth Circuit, in the case of Lektophone Corp. vs. Rola Company, both held that the patents were not infringed. In the Second Circuit case a double cone construction was involved and in the Ninth Circuit case a paper cone $7\frac{3}{8}$ inches with outer circumference of the movable portion of the annular rim was $9\frac{1}{8}$ inches. The patent stated that "the whole diameter of the tympanum . . . should exceed 9 inches."

The Circuit Court of Appeals for the Third Circuit held patent 1,271,527 invalid and patent 1,271,529 valid and infringed in the case of the Lektophone Corp. vs. Brandes Product Corporation, stating that Hopkins was "the first to make the combination of a conical shaped paper device of proper size provided with flexible edges coupled to a rigid frame used in free air." These patents are now being made the subject of a petition to the Supreme Court of the United States. It is obvious that the ultimate outcome of this patent situation is of much interest to the industry.

Magnavox Patents

1,266,988 Pridham & Jensen (Magnavox Co.)

1,448,279 " " " "

1,579,392 " " " "

These patents relate to the dynamic type of speaker. Suits have been brought against several manufacturers of this type of speaker based on the contention that the Magnavox Company was the pioneer in this type of speaker.

Other Patents

Kolster Company have urged or sued on several patents relating to Uni-Control Condenser, or Condenser Drive Construction.

The Zenith Company has called the attention of the trade to the following patents in connection with claims on Remote Control Developments:

1,581,145 Vasselli 1,704,754 Marvin

Re-17,531 1,695,919 Vasselli

1,591,417 Flocco Gould

The Radio Patents Corp. have a group of patents and patent applications of more or less general interest, and the same may be said of the Radio Frequency Laboratories.

Tube Patents

In the tube art, while patents of general importance are not as diversely owned as in the set field, there are numerous patent suits pending of general interest.

The following refers to the outcome of a few suits on tube patents of general interest.

1,180,264 Lederer Westinghouse Lamp Co. vs. C. E. Mfg. Co., Inc.

The United States District Court for Rhode Island held that the claims which were alleged to cover the employment of thoria in filament were not infringed by the 201 A tube. This decision is of interest to all manufacturers of tungsten filament tubes.

1,082,933 Coolidge

This is the so-called pure tungsten filament patent. The Circuit Court of Appeals for the Second and Third Circuits recently affirmed the decision of the lower Court, holding that claims drawn relating to the pure tungsten "product" were invalid but that the process claims were valid. This patent is of interest in connection with all tungsten filament tubes. Petitions of Certiorari to the United States Supreme Court were denied.

1,558,436 Langmuir General Electric Co.

1,244,216 " vs.

1,244,217 " De Forest Radio Co.

1,529,597 " "

These patents have recently been passed upon by the Circuit Court of Appeals for the Third Circuit. The first, which is the so-called "high vacuum" tube patent, was declared invalid. If this patent had been held valid it would have practically covered the modern tube.

The second patent known as the "thoriated tungsten" filament patent was also held invalid. This patent relates to the combination of a thoriated tungsten filament in a high vacuum tube.

The third patent relates to a thoriated tungsten filament and "vapor" getter, such as potassium in high vacuum tube. This patent was held valid.

The fourth patent relates to the employment of magnesium as a getter. This was declared invalid.

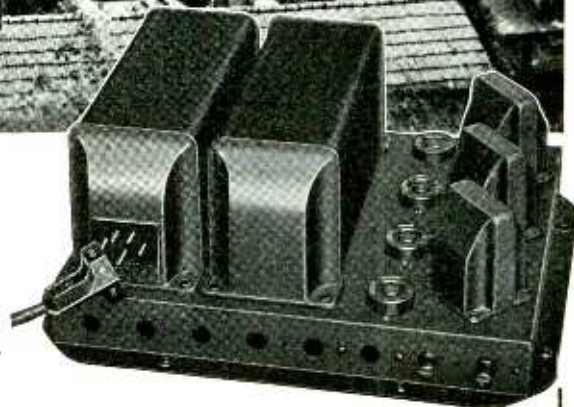


In the Swiss Alps . . .
Above the Clouds . . .
The Voice of PAM . . .

brings the news of the far-away world to the Waldheim Hotel pictured above. PAM brings music that echoes and re-echoes across deep chasms and moon-tipped glaciers . . . PAM transfers the sophisticated entertainment of the world's capitals to mountain solitudes. . . .

For all winter sports . . . skating to music on moon-lit lakes . . . skiing . . . tobogganing . . . PAM is used for announcing events as well as amplifying music from radio or phonograph.

PAM faithfully amplifies any sound from a microphone, phonograph or radio set, to a volume which can be regulated for the largest or the smallest indoor or outdoor audience.



PAM 16, Price \$125.00

And PAM is the heart of an installation comprising radio set, phonograph pick-up, wiring for each room, and loud speakers that should be in every hotel, school, church, auditorium, arena, skating rink, theatre and dance hall.

Are you making handsome profits from such installations right now?

A new 16-page bulletin giving mechanical and electrical characteristics, representative installations, and many new PAM Amplifiers, will be sent upon receipt of 10 cents in stamps to cover postage. When writing ask for Bulletin No. RR 16.

Main Office:
CANTON, MASS.

Samson Electric Co.
MEMBER
RMA

Factories: CANTON
and WATERTOWN, MASS.

TUBES

THE ONE THING IN RADIO

THAT EVERYBODY USES

YOU CAN SELL MORE TUBES IF THE TUBES YOU SELL ARE BETTER

**EVEREADY
RAYTHEON**

Trade-marks

4-PILLAR TUBES

ARE A NEW AND

REVOLUTIONARY IMPROVEMENT

TELL YOUR CUSTOMERS TO PUT A NEW **E**VEREADY



TELL your customers not to miss the full enjoyment that radio can give in these winter months. Programs are at their best. The air is clear and free from static. Distant stations come in like locals when receiving tubes are new Eveready Raytheons—packed with power.

Have your service man put a new Eveready Raytheon in each socket of your customers' receivers and note the vast improvement. You can profit from this better performance. More power, increased distance, better tone and quicker action—these are reported by people everywhere, using Eveready Raytheons in their present receivers.

Improved performance means more sales for you, quicker stock turn, more pleased customers. Push Eveready Raytheons in complete sets for replacement.

EVEREADY RAYTHEON 4-PILLAR TUBES

RAYTHEON IN EACH SOCKET

OF THEIR PRESENT RECEIVERS

YOU can *hear* the difference with Eveready Raytheons—and see the reason. Look at the diagram on this page. See the solid, four-cornered glass stem, supporting the four rigid pillars which hold the elements. Notice how this *4-Pillar construction* is braced at the top by a stiff mica plate.

Eveready Raytheons give better reception because they are stronger . . . immune to the hazards of shipment and handling which endanger the performance of ordinary tubes. The unusual precision with which Eveready Raytheons are built is safeguarded by their *4-Pillar construction*. With Eveready Raytheons only can you get all the advantages of this superior construction, for it is patented and exclusive.

Eveready Raytheons come in all types, for A.C. and battery-operated receivers.



EVEREADY RAYTHEON 4-PILLAR TUBES

WRITE FOR THESE STRIKING EVEREADY RAYTHEON DISPLAYS

EVEREADY RAYTHEON

4-Pillar Tubes



YOU can have this helpful counter display by writing to the nearest branch of the National Carbon Co., Inc. There is also a five-piece window display which tells your customers that you sell better tube performance—Eveready Raytheon performance. There is a muslin wall chart showing the characteristics of various types of tubes, and a tube register showing types of tubes required for various sets. You can hang this chart in a prominent location where it will help both you and your customers.

Eveready Raytheon Tubes are selling fast with distribution through a selected number of jobbers, conveniently located. Ask your jobber or write us now for the names of our jobbers near you.

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

4 - P I L L A R T U B E S

GIVE YOUR CASH REGISTER A NEW VOICE...

KEN-RAD Tubes will give your cash register a new voice—a big, sweet, mellow voice—if you'll adopt a plan of *aggressive* tube selling. In the past you very likely have been too busy selling sets to go out and cultivate the vast market that exists for replacement tubes.

Yet there is big money in the replacement tube market—more today than ever before. Few people know how little new Ken-Rads—as replacements for their old, worn-out tubes—will cost them.

You—the dealer—the radio *expert*—can advise them just as a skilled auto mechanic advises a car owner. And they will listen to your advice and suggestions, and buy Ken-Rads.

You can't risk your reputation with inferior tubes. But you can go the limit with Ken-Rads—the standard quality, licensed tubes that are backed by national advertising and the greatest set-up of dealer helps you ever saw. Sell Ken-Rads aggressively.

THE KEN-RAD CORPORATION, Incorporated
OWENSBORO, KENTUCKY

A Division of KEN-RAD TUBE & LAMP CORPORATION

KEN-RAD

RADIO TUBES

LICENSED BY RADIO CORPORATION OF AMERICA



ATWATER KENT RADIO

•

For
Steady Profits
year in,
year out

•

ATWATER KENT RADIO

LOOK back on the year that has just closed and you'll see why. No dealer really likes to see a brand of merchandise come forth with banners flying, only to end its days as an orphan on the bargain counter.

In this new year, 1930, radio merchants will want to take an extra good look *behind* the goods that are offered them.

More than ever, they will insist on asking: "Who make it? How long have they made it? What is their record through the years? And what is the prospect of *continuing* profits for us?"

Everybody knows that dealers who center their selling effort on Atwater Kent Radio had another good year.

So successful is the Screen-Grid Atwater Kent, so entrenched in popular favor, so proved as a profit-maker for dealers, that it is going right on through the winter. It was ahead of the field when we first announced it, and it is ahead of the field to-day.

To merchants whose cooperation and foresight carried Atwater Kent Radio ahead again in 1929, our thanks and congratulations.

To dealers who did *not* concentrate on Atwater Kent Radio in 1929, we beg leave to offer this suggestion:

Stabilize with Atwater Kent for 1930 and watch your business become the profitable business it ought to be.

ON THE AIR—Atwater Kent Radio Hour, Sunday Evenings, 9:15 (Eastern Time), WEA network of N. B. C.
Atwater Kent Mid-Week Program, Thursday Evenings, 10:00 (Eastern Time), WJZ network of N. B. C.

SCREEN - GRID

ATWATER KENT MANUFACTURING COMPANY · A. Atwater Kent, Pres. · 4733 WISSAHICKON AVE., PHILADELPHIA, PA.

3 Screen Grid Tubes, 12-in. Dynamic Speaker, Electric Phonograph, Adjustable Selectivity, Push Pull 2/250 Tubes, Single (Split) Dial, Panel Illumination—all LEUTZ QUALITY



LEUTZ

Leutz Seven Seas Radio Phonograph Combination

CLEAN, natural, "living" tones. Beautiful cabinet work. Effortless power with adjustable selectivity. A fast seller on performance, looks and price. A radio-phono combination at popular prices.

Aggressive dealers of high standing wanted right away. Get in touch with us immediately.



C. R. LEUTZ INC.

Altoona, Pa., U. S. A.

Cables: Experinfo, N. Y.

WEST COAST

B. J. Howdershell
Detwiler Bldg., 412 West Sixth St.,
Los Angeles, California

NEW YORK

112 West 42nd St., New York, N. Y.

FRANCE

Baldwin M. Baldwin
1 Boulevard Haussman, Paris, France
Cables: Experinfo Paris

SEVEN SEAS

Ask the service man, he knows

"The De Forest radio tube surpasses every known make,"

— says Joel J. Michaels,

Executive Chairman, Citizens' Radio Committee.

This is one of many unsolicited letters we have received from service men the country over.

New York City
Oct. 1, 1929

De Forest Radio Co.
Jersey City, N. J.

Gentlemen:

I have kept a record of service calls during the past four years, and almost every conceivable type of radio set has come under my observation. Sixty-five per cent of the entire troubles lay entirely to faulty tubes. Of the entire quantity of tubes found defective, less than five per cent were De Forest Audions, and I have certainly found in my travels around the New York section, carloads of De Forest tubes giving splendid service and many of them bearing the earmarks of long service.

I prefer to recommend to my clients your vacuum tubes, because they are designed and constructed by scientists who know their business, whose background and experience antedates every existing vacuum tube manufacturer, and whose researches and improvements are widely copied and considered standard. The De Forest tube, in my judgement surpasses every known make, for performance, efficiency, mechanical construction and general all-around service.

I can testify to the fact that some of the World's D.X. records were obtained after De Forest tubes were substituted for others whose manufacturers claimed unbelievable performance.

them.

When better vacuum tubes are made, De Forest will make

Respectfully,

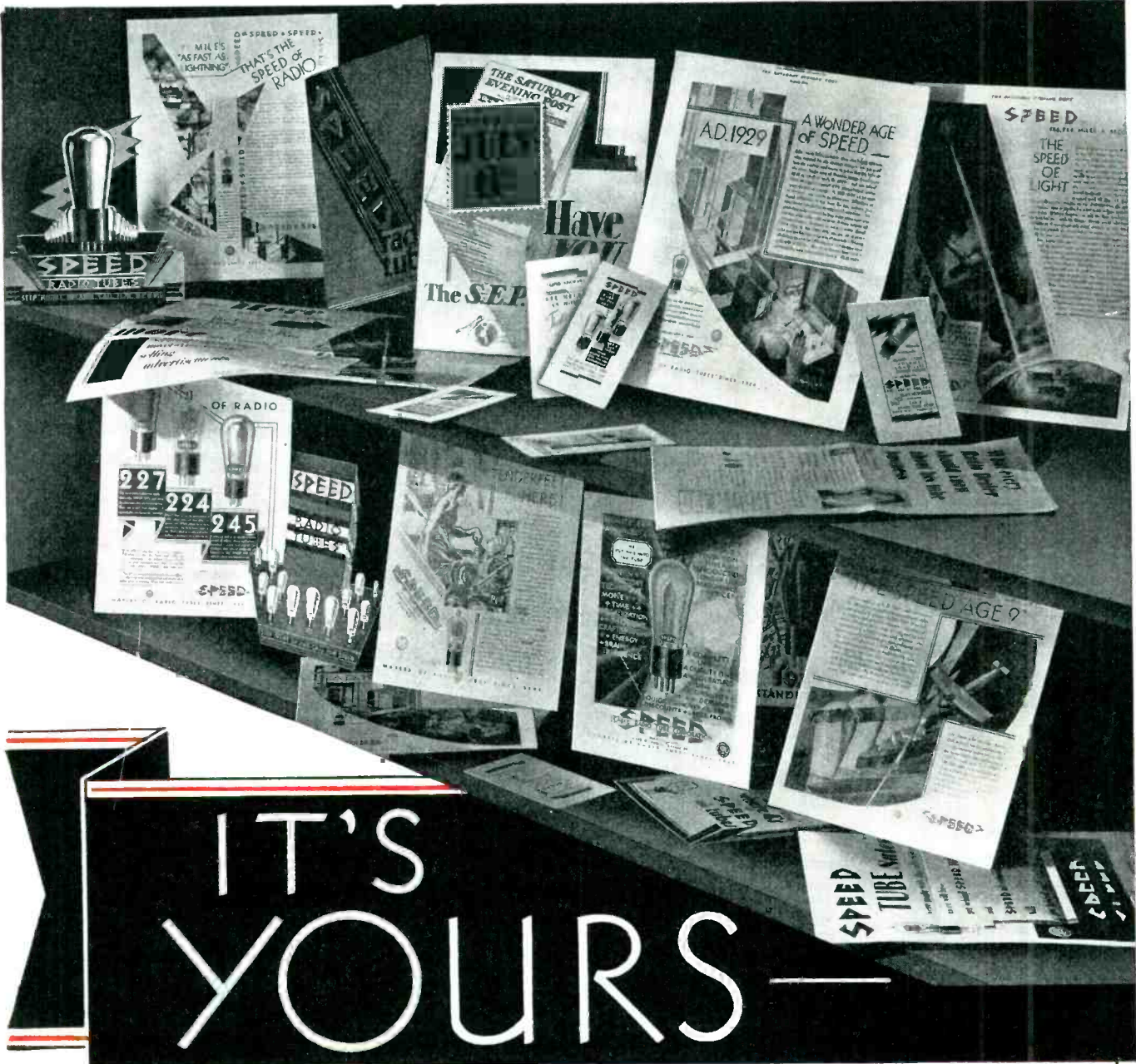
Joel J. Michaels
Executive Chairman, Citizens Radio Commit

de Forest AUDIONS

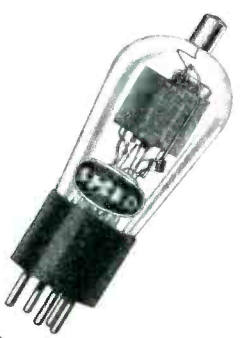
DE FOREST RADIO CO.
PASSAIC, NEW JERSEY

Branch Offices Located in

Boston, New York, Philadelphia, Atlanta, Pittsburgh, Chicago, Minneapolis, St. Louis, Kansas City, Denver, Los Angeles, Seattle, Detroit, Dallas, Cleveland



IT'S YOURS —



CABLE RADIO TUBE CORPORATION
 84-90 North Ninth Street
 Brooklyn, New York

All this advertising material — newspapers — magazines — trade papers — folders — brochures — broadsides — and many other novelties. (Remember the SPEED pistols at the Trade Show? Ask any man who was there!) SPEED advertising backs SPEED sales nationally and locally. Every day is "moving" day with SPEED advertising — it "moves" SPEED Tubes from your shelves to your customers' sets. A few SPEED jobber franchises are still available. SPEED quality + SPEED advertising + your sales ability = an unbeatable combination. The answer will be in \$ and ¢; mostly \$. Get 'em! Write right now!!

MAKERS OF RADIO TUBES SINCE 1924



Speed . . . Accuracy . . . Skill

in trouble-shooting keeps sets sold

"AMAZING!" That's the way radio technical men speak of the SUPREME DIAGNOMETER. Its numerous remarkable qualities have brought the complete facilities of the laboratory to the home of the set-owner—adding speed and accuracy to the skill of the service-man. No other device approaches it in flexibility, completeness and range. Set testers check only 29%-40% efficient in comparison with its capacity.

By equipping your Service Department with the SUPREME DIAGNOMETER you assure 100% service satisfaction which closes the sale and wins enthusiastic customer good will.

Comes in handy carrying case providing compartments for all tools and spare tubes, or at the option of the purchaser, in an even smaller case, for the service-man who does not wish to carry tools and tubes in same unit.

"Supreme" Features

The Supreme oscillation test gives the only dependable test on tubes; tubes tested under actual operating conditions.

The Diagonometer tests all tubes, including screen grid.

Tests both plates of 80 type rectifier tubes; provides bias emission tests on tubes.

All tubes tested independent of radio.

Locates unbalanced secondaries.

Reads both positive or negative cathode bias.

Provides D. C. continuity test without batteries.

Furnishes modulated signal for testing synchronizing, neutralizing, etc.

Aligning of condensers by Thermocouple meter or A.C. meter.

Neutralizing with tubes used in the set.

Tests gain of audio amplifiers.

3 precision meters: one 4 scale D.C. Voltmeter 0/750/250/100/10 volts, resistance 1000 ohms per volt. One 4 scale A.C. Voltmeter 0/750/150/10/4 volts. One 3 scale Milliammeter 0/125/25 mills. 0/2—1/2 amps.

External connection to all apparatus.

Universal analyzer plug.

Thermo-couple meter for varied uses.

Measures resistances in three ranges, 150 to 30,000 ohms (calibration curve furnished) 10—200 ohms .1 to 25 ohms.

Makes all analysis readings.

Screen grid socket analysis without producing oscillation.

Measures capacity of condensers .1 mfd. to 9 mfd.

Tests charger output by meter.

Bridges open stages of audio for tests.

Contains 500,000 ohm variable resistor, 30 ohms rheostat and .001 mfd., .002 mfd. and 1 mfd. condensers for testing.

Detects shorted variable condensers without disconnecting r.f. coil.

Provides low resistance measurement for rosin joints.

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, line voltage, etc.

The supreme laboratory test panel is equipped with a variable condenser for varying the frequency of the oscillator.

Provides many other tests, readings and functions.



and, now, the most practical
laboratory test panel

In keeping with SUPREME standards, unquestionably the most advanced test panel ever produced. Of heavy re-inforced Bakelite, it adds to the trim workmanlike appearance of laboratory or shop and assures sturdy service. Makes the DIAGNOMETER a dual purpose instrument—shop or portable service—instantly disconnectable.



Symbol of a higher type of radio service. Cash in on the prestige of the Supreme Service League and the benefits to its members. Write for information.

Most good distributors stock the Supreme. If yours cannot supply you, address, for full information, without obligation.



SUPREME

Radio Diagonometer

Makes every conceivable test on any Radio Set-

SUPREME INSTRUMENTS
CORPORATION

356 Supreme Bldg., Greenwood, Mich.

4 FACTS

the trade should know now about COLONIAL RADIO

1. No new models will be introduced before the June trade show. This is a Colonial promise. It pledges absolute protection against overnight obsolescence of Colonial merchandise. It assures good profits for many months to come on the present Colonial product which, at its reasonable price, has captured the country-wide preference of buyers.
2. There will be no reduction below the \$175 figure on Colonial Model 32, A. C. and D. C. The value these quality sets represent at present prices assures you a continued public enthusiasm for these products at present prices.
3. A note of confidence from "Radio's Clearest Voice". The approach of the New Year finds the Colonial Radio Corporation in a financially strong position in the industry. Fortunately, Colonial expansion has been held within limits of conservative reason and dealers can go ahead on the Colonial line with the certainty that they will have the strong backing of this company for many years to come.
4. Colonial faces 1930 with the gratifying knowledge that its position is exceptionally strong because of not being hampered by over-production. As rapid and satisfactory as has been Colonial growth and the increase in Colonial volume in 1929, yet the temptation to "hit the sky" was not allowed to sway our judgment. Consequently, Colonial dealers now find themselves in an enviable position. The steadily mounting demand for Colonial sets furnishes a ready and profitable market on a stock that is always adequate but never an unnecessary burden to inventory.

THE COLONIAL RADIO CORPORATION, LONG ISLAND CITY, NEW YORK

The NEW
COLONIAL
Radio

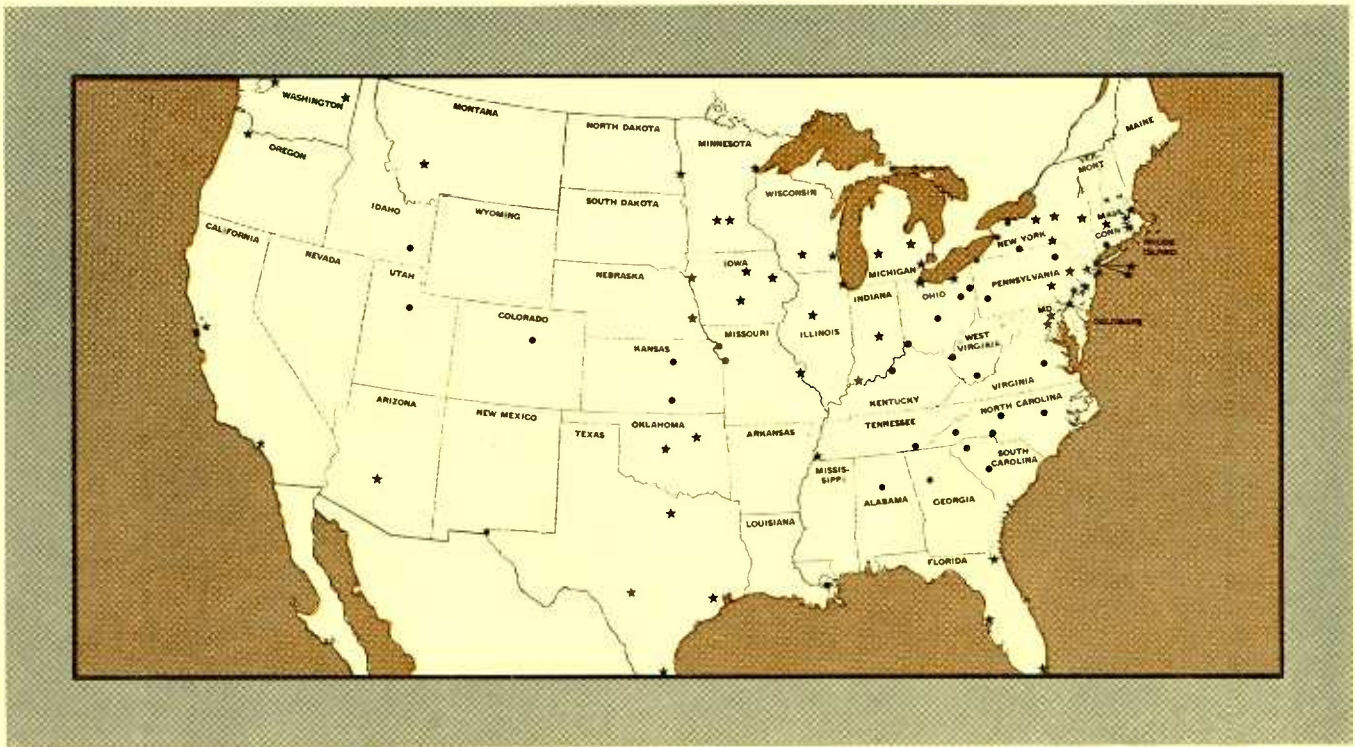
*Licensed under patents
of Radio Corporation of
America, Westinghouse,
General Electric and
American Telephone and
Telegraph Companies.*



"RADIO'S CLEAREST VOICE"

<p>Fobes Supply Company OF CALIFORNIA BUSINESS FOUNDED 1898 SAN FRANCISCO OAKLAND</p>	<p>Fobes Supply Company BUSINESS FOUNDED 1905 PORTLAND SEATTLE</p> <p>Fobes Supply Company OF MONTANA BUSINESS FOUNDED 1892 BUTTE SPOKANE</p>	<p>Great Northern Electric Appliance Co. BUSINESS FOUNDED 1899 ST. PAUL MINNEAPOLIS DULUTH FARGO</p>
<p>H. C. Roberts Electric Supply Co. BUSINESS FOUNDED 1897 PHILADELPHIA READING BALTIMORE YORK WASHINGTON ALLENTOWN WILMINGTON TRENTON</p>	<p>H. C. Roberts Electric Supply Co., Inc. BUSINESS FOUNDED 1897 SYRACUSE ALBANY UTICA BINGHAMTON</p>	<p>Illinois Electric Company BUSINESS FOUNDED 1898 CHICAGO PEORIA</p>
<p>Illinois Electric Company (OF CALIFORNIA) BUSINESS FOUNDED 1911 LOS ANGELES PHOENIX LONG BRANCH</p>	<p>Julius Andrae & Sons Co. BUSINESS FOUNDED 1860 MILWAUKEE MADISON WATERLOO DES MOINES MASON CITY</p>	<p>McGRAW DIVISION Julius Andrae & Sons Co. BUSINESS FOUNDED 1900 OMAHA SIOUX CITY</p>
<p>Newark Electrical Supply Company BUSINESS FOUNDED 1900 NEWARK, N. J.</p>	<p>Pierce Electric Company BUSINESS FOUNDED 1901 TAMPA JACKSONVILLE MIAMI</p>	<p>The Erner Electric Company BUSINESS FOUNDED 1900 CLEVELAND</p>
<p>The F. Bissell Company BUSINESS FOUNDED 1899 TOLEDO</p>	<p>The Varney Electrical Supply Company BUSINESS FOUNDED 1894 INDIANAPOLIS EVANSVILLE</p>	<p>Wetmore-Savage Electric Supply Co. BUSINESS FOUNDED 1907 BOSTON BANGOR SPRINGFIELD PROVIDENCE WORCESTER</p>

WESTINGHOUSE ELECTRIC SUPPLY COMPANY

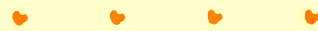


Stars show branches of Westinghouse Electric Supply Company—Dots indicate agent-jobbers handling Westinghouse products

THE SAME CONVENIENT PERSONAL SERVICE FOR YOUR BRANCHES IN OTHER CITIES

In every locality of the United States, Westinghouse Electric Supply Company is represented by a convenient house, fully equipped to supply your needs. We solicit your inquiries and orders, and invite you to employ this national service when your

needs require service at several widely separated points.



Headquarters offices are maintained at 150 Broadway, New York City, and at 20 N. Wacker Drive, Chicago.

WESTINGHOUSE ELECTRIC SUPPLY COMPANY

A



ANNOUNCING AN IMPORTANT NEW NAME IN THE ELECTRICAL SUPPLY AND RADIO BUSINESS

January, 1930, sees the formal entry of a famous name in the electrical supply business. In 60 cities throughout the country, branches of a new national system, the Westinghouse Electric Supply Company, now provide a service of unusual completeness and convenience to purchasers of electrical supplies.

Each member of the new system is a supply house which, under its original name, has established a high reputation in its territory. In adopting the Westinghouse Electric Supply Company name, it retains its local identity, its local pride and its individual enterprise. Its personnel and organi-

zation remain essentially the same. *But its facilities to serve you are enormously increased by the vast resources of Westinghouse.*

In every house, large and complete stocks of electrical supplies are available for immediate delivery at all times—including not only a full line of Westinghouse products, but also a wide range of other materials that meet typical Westinghouse high standards.

Here is a service that gives you all the advantages of the familiar, local house, now reinforced by the stocks and facilities of 59 other established jobbers—a *localized* national service.

WESTINGHOUSE ELECTRIC SUPPLY COMPANY

**LOCAL, PERSONAL
SERVICE FROM
COAST TO COAST**

These old and firmly established houses are now organized to offer a national service through the broad facilities of Westinghouse Electric Supply Company.

Alpha Electric Co., Inc.
BUSINESS FOUNDED 1914
NEW YORK BROOKLYN

Commercial Electrical
Supply Co.
BUSINESS FOUNDED 1893
ST. LOUIS MEMPHIS

Commercial Electric
Supply Co.
BUSINESS FOUNDED 1896
DETROIT
GRAND RAPIDS FLINT

Electric Appliance
Company
BUSINESS FOUNDED 1900
DALLAS SAN ANTONIO
HOUSTON HARLINGEN
TULSA OKLAHOMA CITY

WESTINGHOUSE ELECTRIC SUPPLY COMPANY



Model 106-B
\$15.00
 (Illustrated)
 Supplied with new
 Phonotrol Adapter,
 especially designed for
 Atwater Kent, Crosley,
 and other screen grid
 sets.



Prices slightly higher West of Rockies and in Canada.

Every note... high or low, whether instrument or voice... is reproduced with startling realism by the Super Phonovox. Its lifelike tone is its own best salesman... that is why dealers find it so profitable to feature. This fine pick-up has the extreme sensitivity that only English 36% Cobalt Magnets can give. It is entirely free from troublesome rubber bearings. And Super Phonovox demonstrations lead to sales.

PACENT

PACENT ELECTRIC COMPANY

91 Seventh Avenue - - New York, N. Y.

Pioneers in Radio and Electric Reproduction for Over 20 Years

Manufacturing Licensee for Great Britain and Ireland: Igranic Electric Co. Ltd., Bedford, England.
 Licensee for Canada: White Radio Limited, Hamilton, Ont.



NATIONAL GUARANTEES LOCALLY INTERPRETED

At Albany
WM. J. KATREIN
1031 Broadway

At Baltimore
W. B. MASLAND CO.
105 East Franklin Street

At Boston
TUNG-SOL SALES CO., INC.
221 Columbus Avenue

At Charlotte
S. L. BAGBY
219 W. First Street

At Chicago
THE EKKO COMPANY
111 West Monroe Street

At Dallas
THE FOLSOM CO.
1410 Paterson Avenue

At Detroit
TUNG-SOL SALES CO.
OF MICHIGAN
4612 Woodward Avenue

At Indianapolis
H. J. ARENS CO., INC.
202-4 S. Pennsylvania Street

At Minneapolis
A. A. HUME COMPANY
104 N. Third Street

At New York
WIEDENBACH-BROWN CO., INC.
118 E. 25th Street

At Philadelphia
A. HOPKIN JR. COMPANY
235 S. 8th Street

At Rochester
ERSKINE-HEALY, INC.
420 St. Paul Street

TILL now, geography has been expensive to thousands of dealers and jobbers. Each has been somewhat at loss in time and in profit because the manufacturer was hundreds of miles away.

The very worthiest of products needs occasional adjustment or replacement. Certainly its merchandising implies men on the ground who are willing and capable of intelligent assistance to wholesaler and retailer.

Such assistance is now assured to these business men in their handling of all products distributed by "ASSOCIATED FACTORY DISTRIBUTORS." Functioning as twelve factory representatives in twelve important territories, carrying large stocks of various merchandise, the "ASSOCIATED FACTORY DISTRIBUTORS" are prepared truly to assist dealer and jobber and jobber's salesman to increased profit.

For a long time these twelve organizations have separately delivered such intimate cooperation in their territories. From this time forth, their effort widens in scope and is more than ever locally valuable.

The so-called "gyp" will discover a wholehearted and financially formidable enemy in "ASSOCIATED FACTORY DISTRIBUTORS." The wholesaler will have at close hand a manufacturer's personal representative who can make immediate decisions. The wholesaler's salesmen will have intelligent, constant assistance. And the dealer will have a champion who is willing and ready to defend him, protect his profits and increase his turnover by unremitting, constructive helpfulness.

ASSOCIATED FACTORY DISTRIBUTORS

Sales Helps
you can depend upon
to help you sell the
“Tubes You Can Trust”

Probably no manufacturer of tubes has given more thought to sales helps than the Hygrade Lamp Company.

Color, novelty of design, economy of space, real selling ideas all have been considered.

The sales helps are now ready for you. Inquire about them from your Hygrade Jobber. He is in a position to supply you at once.

HYGRADE Radio Tubes

A Companion Product to Hygrade Electric Lamp Bulbs

HYGRADE LAMP CO., Salem, Mass.

Licensed under radio tube patents of Radio Corp., General Electric Co. and Westinghouse Co.

EVERY ZENITH DEALER IS
 **OFF TO A**

Announcing
THE NEW
***SUPER* ZENITHS**

**Following up the greatest year in Zenith his-
tory . . . with greater-than-ever Zenith values
. . . and greater-than-ever profit possibilities
for Zenith dealers. ZENITH LEADS AGAIN!
ZENITH RADIO CORPORATION, 3620 IRON ST., CHICAGO, ILL.**



GET IN TOUCH WITH YOUR

FLYING START



FOR ANOTHER GREAT
ZENITH YEAR!



Illustrated . . .

New Super Zenith Model 61

9 tubes, including rectifier. Advanced Screen-Grid circuit. *Double Push-Pull* audio amplification. Linear Power Detection. Super-size Zenith Syntonic-Dynamic type Speaker. Charming low-boy console of Butt Walnut in a distinctive Gothic design.

\$155

less tubes

Other NEW SUPER ZENITH Models

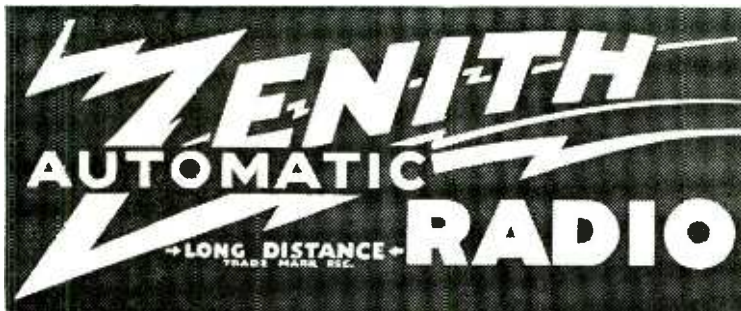
MODEL 60—Super MIDGET— an entirely new idea in radio design...a charming *miniature* console of handsome Butt Walnut. Only 28 1/2 inches in height. Same chassis features as Model 61 (described above). \$145 less tubes.

MODEL 62—New Super Zenith features including Automatic Tuning. Beautiful Early American Butt Walnut console. \$185, less tubes.

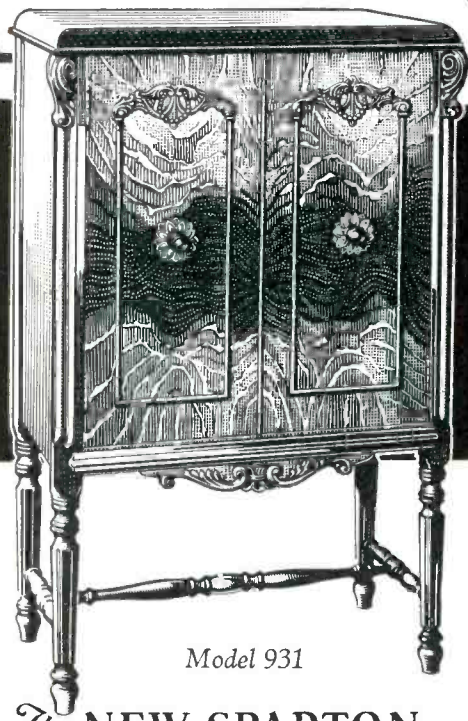
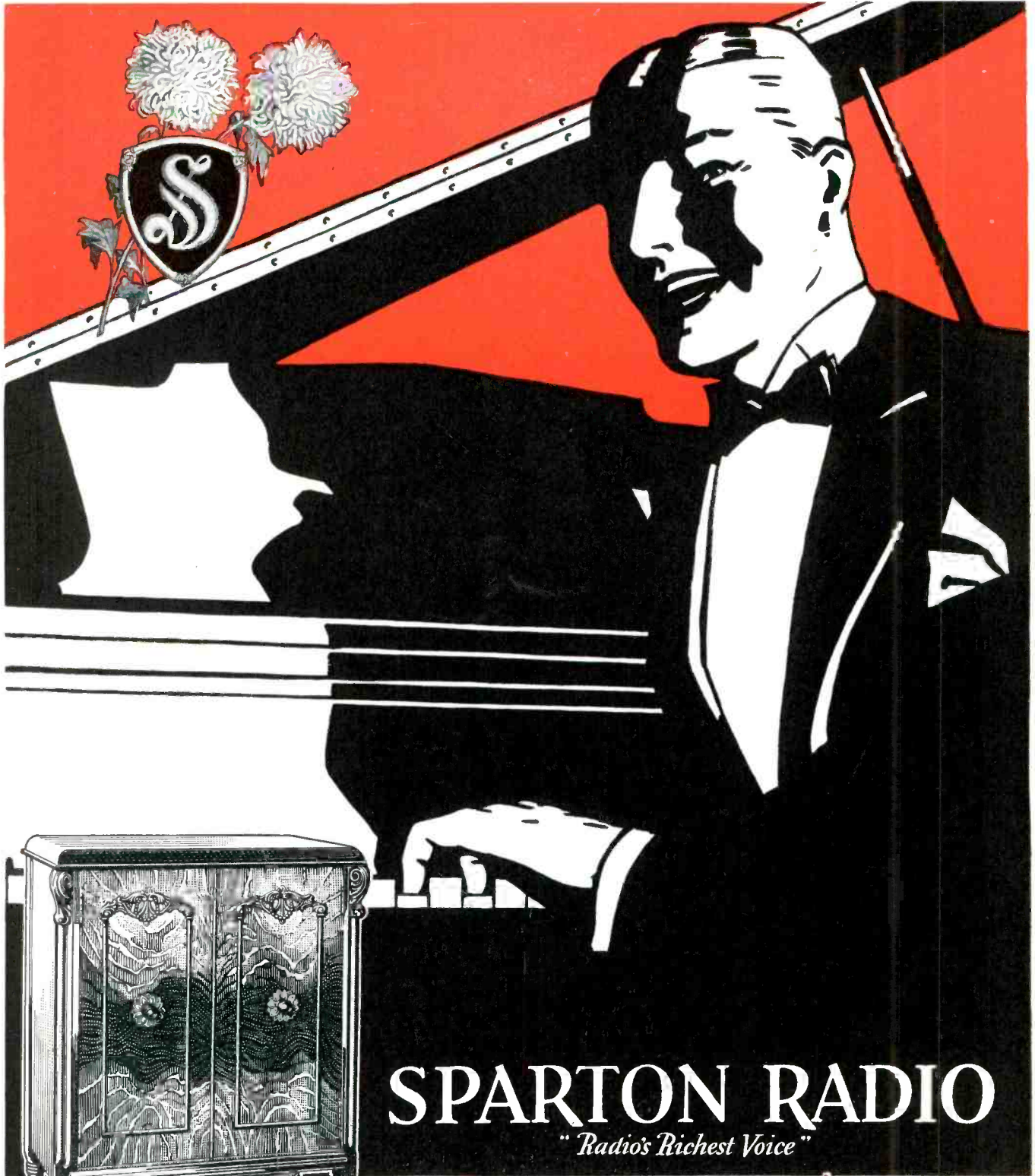
MODEL 64—Loop operated. Automatic Tuning. Handsome high-boy console. \$370, less tubes.

MODEL 67—Loop operated. Automatic Tuning. Magnificent Italian Renaissance cabinet. \$495, less tubes.

Western U. S. prices slightly higher.



NEAREST ZENITH DISTRIBUTOR



Model 931

The **NEW SPARTON
EQUASONNE**

SPARTON RADIO
"Radio's Richest Voice"

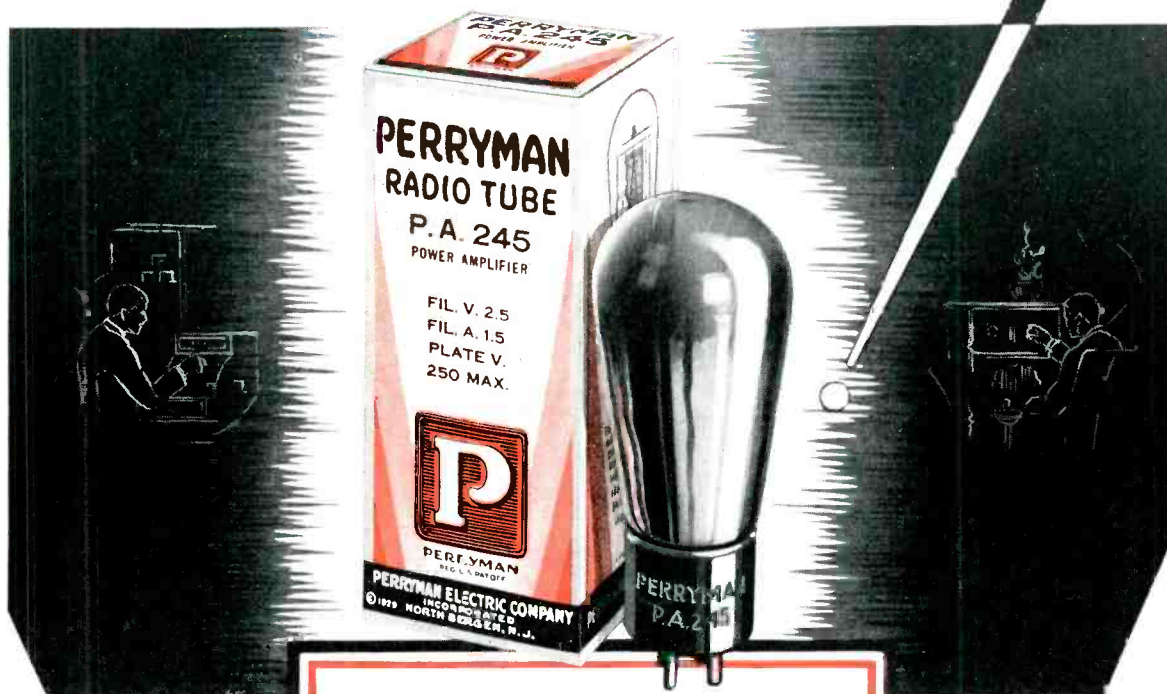
FACE-TO-FACE REALISM

... AND SOME FACTS ABOUT SPARTON TODAY

Today Sparton dealers, more than ever before, are reaping the rewards of the sound, sane policies that were responsible for Sparton's solid growth. With Sparton instruments worth one hundred cents on the dollar, and with constantly growing demand, these dealers are, beyond doubt, in the most enviable position to be found in the industry.

THE SPARKS-WITHINGTON COMPANY (Established 1900), JACKSON, MICHIGAN, U. S. A.
Pioneers of Electric Radio without batteries of any kind (409)

AS WE SEE 1930



**Uniform High Quality
of Product Bringing
Even Greater Net Profits
to Dealers and Jobbers**

Every radio manufacturer must give full recognition to the fundamentals on which all business is built: a good product; a clearly designed sales policy which provides fair profit for jobber and dealer; and ample financial backing and courage to continue such a policy in face of every condition.

From the day of its inception, when radio was still young the Perryman Electric Co., Inc., has steadfastly and successfully maintained these basic elements as their business platform.

Representative Perryman jobbers and dealers who

have carried the Perryman Tubes since they were first put on the market, and whose organizations are in harmony with these fundamentals, reflect in their cost records the inevitable result of such a policy—greater net profits on Perryman Tubes.

Because these basic principles—High quality of product and a definite sales policy—are deep-rooted in the entire Perryman organization, and because they have been operating long enough to prove their value to jobbers and dealers, 1930 opens even greater opportunities for profit on the Perryman Line.

THE PERRYMAN ELECTRIC CO., INC., 4901 Hudson Boulevard, North Bergen, N. J.

PERRYMAN RADIO TUBES

The New

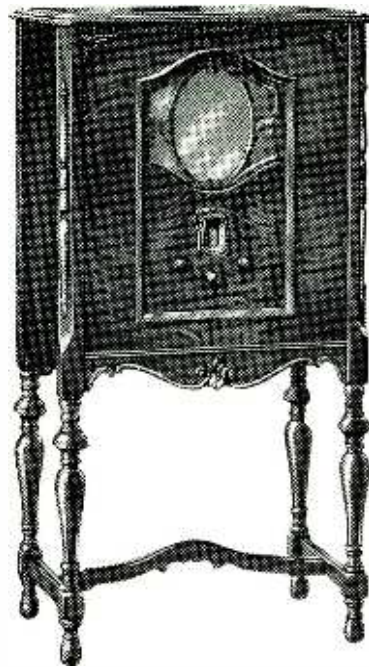
BREMER-TULLY

Perfected Screen Grid

RADIO

With 4 Screen Grid Tubes

Model S-81 — De Luxe
Open Console; Micro-
Balanced Chassis; 4 screen
grid tubes; 9 tubes in all.
\$134, less tubes



Model S-82 — De Luxe
French Door Console.
Micro-Balanced Chassis.
Beautifully finished wal-
nut cabinet.
\$159, less tubes

Screen grid, *perfected* by Bremer-Tully, radio's most painstaking engineers! *Three* times the selectivity! *Six* times the power! *Ten* times the volume! The full possibilities of screen grid reception realized for the first time—in the *power* of FOUR screen grid tubes . . . plus the *selectivity* of the Bremer-Tully Micro-Balanced

Chassis . . . plus the *tone-richness* of the big 10-inch Bremer-Tully Dynamic Speaker, specially wound with over four miles of finest copper wire! A side-by-side test with any other 1930 radio—bar none—instantly reveals the overwhelming superiority of the new Bremer-Tully *Perfected Screen Grid*. Make this test—and be convinced!

BREMER-TULLY MANUFACTURING COMPANY
629-33 South Wabash Avenue, Chicago



The Identifying Mark of a Reliable Service Man



A capable service man with good equipment generates customer confidence. The systematic manner in which a trained service man equipped with a Jewell 199 Set Analyzer checks a receiver, quickly convinces set owners of his ability.

The best visible identification of a good service man is the Jewell Pattern 199 Set Analyzer. Set owners like service men who know their business—they have confidence in radio organizations who send out such men.

The first essential of good radio service is reliable and effective test equipment. Impartial surveys indicate that the Jewell Pattern 199 is by far the most popular set analyzer—that there is a Jewell Pattern 199 in use for every service kit of all the other manufacturers combined.

There are many reasons why Jewell Pattern 199's are the most popular. They are built to the highest standards of quality. They are backed by the most thorough and up-to-date radio data service. Yet they are the lowest priced complete set analyzers on the market.

A Jewell Pattern 199 Set Analyzer quickly pays for itself. The service man who does not have one pays for it over and over again in wasted time, repeat service calls, sales lost through bad service and dissatisfied customers.

Every service man should have a Jewell Pattern 199



199 Set Analyzer

Learn about the Jewell Chart Method of set analysis—the systematic method of testing, originated by Jewell, that eliminates guesswork in radio service. Mail the coupon for this data and a free copy of Jewell Instruction Book which contains test data on receivers of leading manufacturers.



Jewell Electrical Instrument Company
1642-A Walnut Street, Chicago, Illinois

Please mail free a copy of your Instruction and Data Book together with descriptive literature on Jewell Set Analyzers.

Name.....

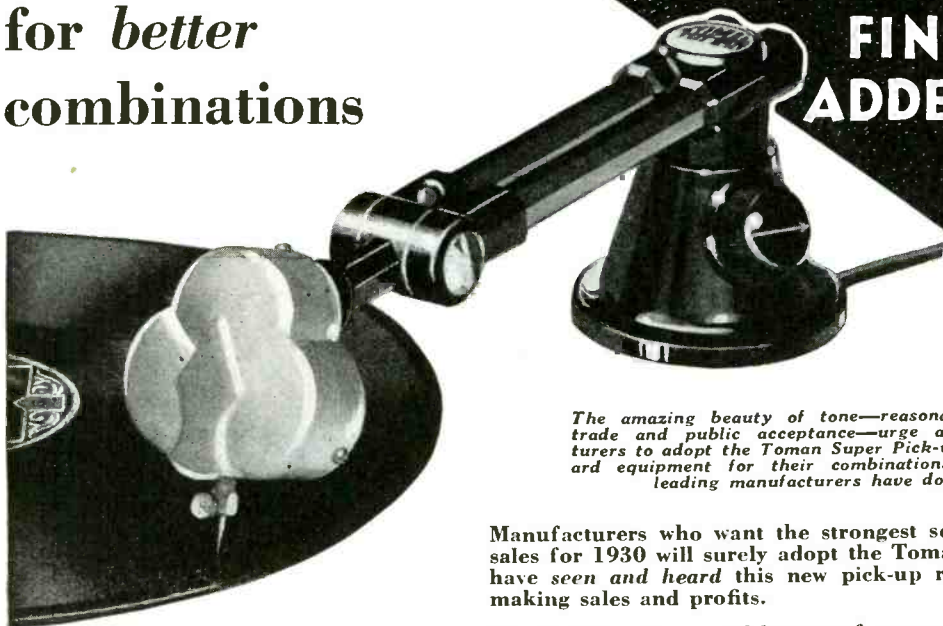
Address.....

The

TOMAN SUPER PICK-UP

The 1930
standard—
for *better*
combinations

**GREATER VOLUME
FINER TONE
ADDED BEAUTY**



The amazing beauty of tone—reasonable price—trade and public acceptance—urge all manufacturers to adopt the Toman Super Pick-up as standard equipment for their combinations—as many leading manufacturers have done!

Manufacturers who want the strongest selling features and largest sales for 1930 will surely adopt the Toman Super Pick-up. All who have *seen and heard* this new pick-up realize its *unique value* in making sales and profits.

The first Super
Pick-up — and the
finest!

Its amazing volume and beauty of tone mean *sales*. Its dependable construction assures continued customer satisfaction—and lasting reputation for manufacturers who use it. Yet—like all Toman products—its price is reasonable. Jobbers and dealers know that the nation-wide acceptance accorded the *first super pick-up* means *profits for them*. They know that Toman-equipped combinations sell quickly and give permanent pleasure to their customers. The Toman Super Pick-up will bring profit to **YOU**. Let us send you a sample today. Test it. It will prove its value to you.

PERFECT FOR THEATRICAL USE

“In view of the many favorable trade comments I’ve heard about the Super Pick-up I WANT TO TEST IT! You may send a sample today, without obligation on my part to buy.”

TOMAN
REPRODUCERS TONEARMS
PICK-UP ARMS  PICK - UPS

E. TOMAN & CO.

2621 W. 21st Pl., Chicago

Cable —SIVAD— Chicago

Established 1914

Bankers—First National Bank of Chicago

Name

Address

City

Executive

Announcement!

a new type of high vacuum detector amplifier... the CeCo-227

This recent product of the CeCo laboratories has many new features which contribute greater physical strength and higher electrical uniformity.

It embodies the following new features:

1. Two mica spacing members, the upper one much larger than usual.
2. A grid constructed around two supporting bars instead of the single bar usual in this type of tube.
3. A short cathode.
4. A shortened distance from the glass stem to the electrodes.
5. A longer glass stem.

Its extremely rigid construction renders the new CeCo-227 more resistant to damage from shock.

Cooler operation has been achieved, which means longer life.

With the new CeCo-227 in their set, your customers will enjoy clearer, cleaner reception with a knowledge that the tube will last.

Without doubt the new CeCo-227 is the best tube of its type on the market today.

Because of the great demand for this new tube, jobbers and dealers are being supplied in limited quantities for their immediate requirements only.

Get your orders in as soon as possible.

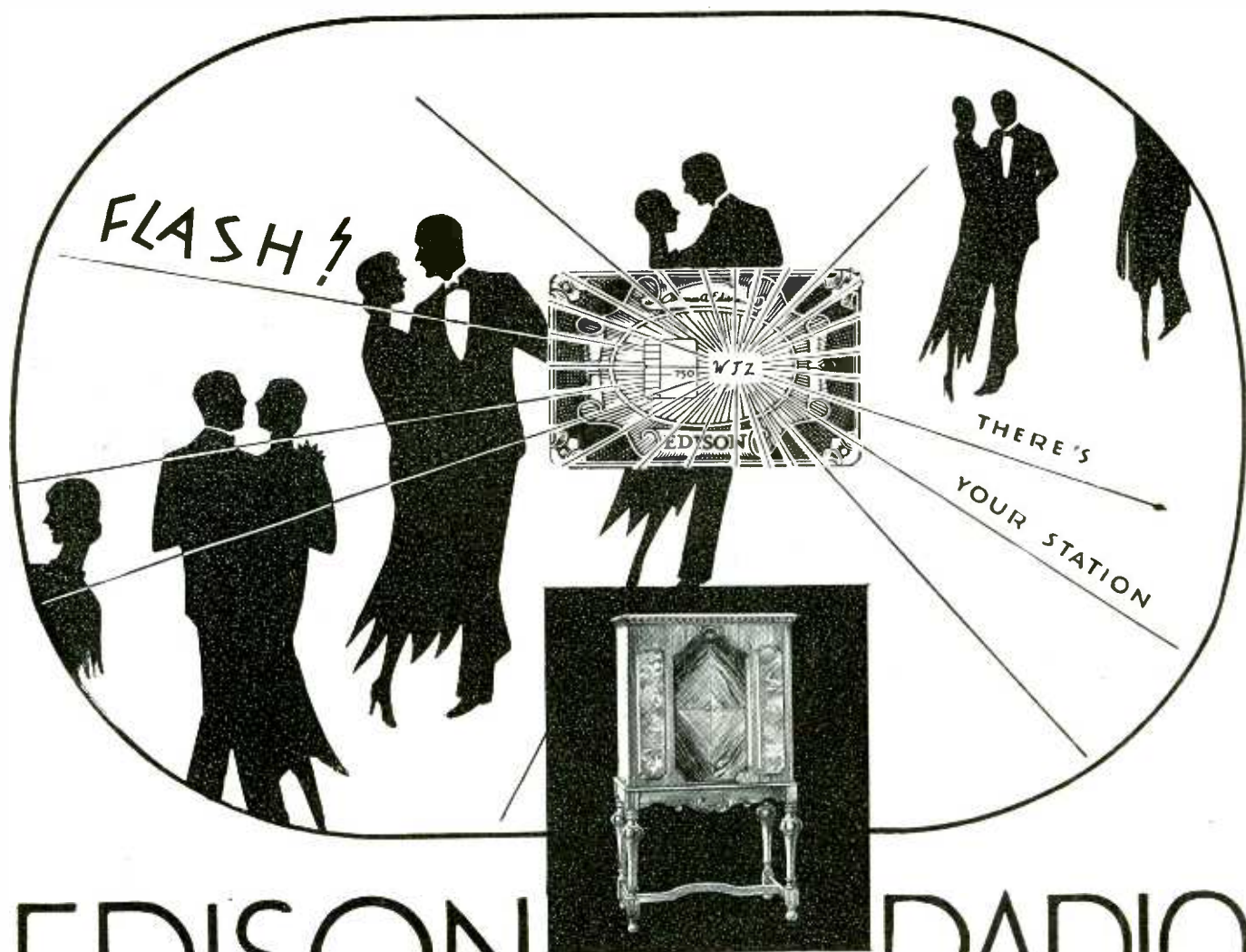
Ce Co Manufacturing Co., Inc.

PROVIDENCE, R. I.



Licensed under patents and applications of the Radio Corporation of America, the General Electric Company, and the Westinghouse Electric and Manufacturing Company.

CeCo "keen sense" tubes



EDISON LIGHT-O-MATIC RADIO

**BE AN
EDISON RADIO
DEALER**

It's the world's best way to make your radio business good . . . to get a lion's share of the business to be had today . . . to build soundly for the future. Just as now is the time to buy stock in strong companies, so is this the time to tie to a great name like Edison in the radio field. For here is a radio easy-to-sell in hard-selling days. It rides on the crest of a great wave of popular enthusiasm. People want this radio—and will buy it because the greatest name in science assures them of today's pleasures and tomorrow's security. Build your business name with the Edison name. Act now. Time is spot cash. They're all buying the new Edison.



EDISON DISTRIBUTING CORPORATION

- ATLANTA, 155 So. Forsyth St. . . . BOSTON, Statler Bldg. . . . CHICAGO, 3130 So. Michigan Ave. . . . DALLAS, Santa Fe Bldg. . . . DENVER, 1636 Lawrence St. . . . KANSAS CITY, 2107 Grand Ave. . . . MINNEAPOLIS, 608 First Ave., N. . . . NEW ORLEANS, 128 Chartres St. . . . ORANGE, N. J. . . . PITTSBURGH, 909 Penn. Ave. . . . RICHMOND, 1204 East Main St. . . . SAN FRANCISCO, 1267 Mission St. . . . SEATTLE, Volker Bldg. . . . * * *
- BINGHAMTON, Alliance Motor Corp. . . . BUFFALO, Alliance Motor Corp., 1460 Main St. . . . CINCINNATI, Edi-Radio Mart. 622 Broadway Ave. . . . CLEVELAND, B. W. Smith, Inc., 2019 Euclid Ave. . . . DETROIT, E. A. Bowman, Inc., 5115 John R. St. . . . DUBUQUE, Renier Bros. . . . GRAND RAPIDS, Morley Brothers. . . . LOS ANGELES, H. R. Curtiss Co., 727 Venice Blvd. . . . NEW YORK, Blackman Distributing Co., 28 W. 23rd St. . . . OGDEN, Proudfit Sporting Goods Co., 2327 Grant Ave. . . . PHILADELPHIA, Girard Phonograph Co., Broad & Wallace Sts. . . . ROCHESTER, Alliance Motor Corp., 727 Main St., East. . . . SAGINAW, Morley Brothers. . . . ST. LOUIS, The Clentone Co., 2342 Olive St. . . . SYRACUSE, Alliance Motor Corp., 1045 South Salina St. . . . WATERBURY, Sprague Electrical Supply Co.

89

REASONS WHY

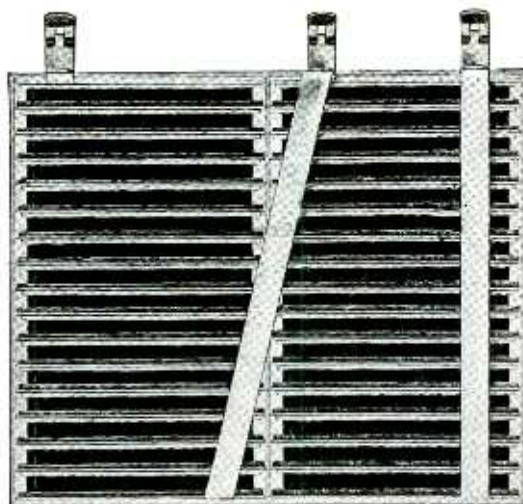
Eveready Layerbilt

"B" BATTERIES will be your heavy sellers



CYLINDRICAL CELL CONSTRUCTION

This is a typical cylindrical cell "B" battery. Note the 29 fine wires and 60 solderings—89 chances for trouble. See also the large amount of waste space.



LAYERBILT CONSTRUCTION

Here is the exclusive Eveready Layerbilt construction. Only five solderings, and two broad connecting bands, all other connections being made automatically. Waste space eliminated. Layerbilt construction is a patented Eveready feature. Only Eveready makes Layerbilt Batteries.

ADVERTISEMENTS featuring these two graphic diagrams are appearing in magazines and farm papers throughout the country. They are heralds carrying to the public the message of a better, longer-lived "B" battery—the Eveready Layerbilt. They tell the inside story of the Layerbilt, emphasizing how space is economized and how 89 chances for trouble are eliminated.

This big national advertising campaign is attracting millions of "B" battery users. Reliability—safety against interruptions—insured longer use for only a few cents more in price—are the big inducements.

As past advertising and quality production have made Eveready Layerbilt the leading "B" battery on the market, so present adver-



Eveready Layerbilt "B" Battery No. 486, the original Layerbilt and the most economical of all Evereadys. List, \$4.25. There is also the Medium Size Eveready Layerbilt No. 485, listing at \$2.95.

tising, coupled with quality production, is maintaining that leadership. There'll be millions of Eveready Layerbilt "B" Batteries sold this season. Make certain that your stock is large enough to supply the demand.

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

EVEREADY Radio Batteries

IN VITAL SERVICE

EVEREADY BATTERIES are being used in automatic train control, aircraft beacon receivers, talking motion-pictures, short-wave transmission, television, for the protection of life and property and to secure instant, unfailing, noiseless, perfect electrical power.



**“Majestic retailers
and their salesmen who are
attending the Majestic Sales
School in the Hotel Stevens,
Chicago, are adding at least
100% to their present selling
ability. Your distributor has
registration blanks.”**

W. M. P. Grunow

Vice President and Treasurer

GRIGSBY-GRUNOW COMPANY, CHICAGO, U.S.A.
World's Largest Manufacturers of Complete Radio Receivers

Makers of

Majestic
R A D I O

Licensed under patents and appli-
cations of R.C.A. and R.F.L., also
by Lektiphone, Lowell & Dunmore
and Hogan License Associates.

1 out of 2 of YOUR customers?

IN 185 cities, The American Weekly is eagerly read in more than 1 out of every 2 homes.

Amazing coverage, indeed! But not surprising from The American Weekly's 6,000,000 circulation—largest circulation on earth—more than *twice as big* as any other magazine!

If your store is in one of the 185 cities, The American Weekly probably reaches 1 out of 2 of *your customers*.

Tie up with products advertised in The American Weekly! Display them! Talk about them! Then watch your sales hit new high marks!

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 6,000,000 families who read The American Weekly.

THE AMERICAN
*Greatest
Circulation
in the World*
A WEEKLY

Main Office: 9 East 40th Street, New York City

Branch Offices: WRIGLEY BLDG., CHICAGO . . . 5 WINTHROP SQUARE, BOSTON . . . 753 BONNIE BRAE, LOS ANGELES . . . 222 MONADNOCK BLDG., SAN FRANCISCO . . . 12-231 GENERAL MOTORS BLDG., DETROIT . . . 1138 HANNA BLDG., CLEVELAND . . . 101 MARIETTA ST., ATLANTA

SCREEN GRID...TONE TESTED LOWEST PRICES

*No wonder they're all buying
CROSLEY!*

THOUGH still demanding quality, the public has an eye to economy these days! That's why Crosley Radio is now more popular than ever! Everybody is asking for Crosley—thousands of brand-new sets are rolling out of the big Crosley plant each day.

National advertising in the leading magazines and farm papers is playing its part, too. The story of how the most noted musical artists in America were engaged to tone-test Crosley Radio and give Crosley engineers the benefit of their suggestions is spreading like wildfire.

But check the sets themselves . . . you'll see plenty more reasons why the Crosley line is so Red Hot! These sets embody every modern feature—and practically the entire line can be sold complete with tubes below the \$150 price level!

Your Crosley distributor has other facts to tell you, equally interesting and full of profit possibilities. Get in touch with him!

THE CROSLEY RADIO CORPORATION
Powel Crosley, Jr., Pres.
CINCINNATI, OHIO

Home of WLW—"the Nation's Station"



\$56⁵⁰ (without tubes)

CROSLEY 31-S. Table model, with a rich burl walnut finish on a metal backing, incorporates the 7-tube Crosley Screen Grid Monotrad. **CROSLEY 41-S** (similar to above), the 8-tube Crosley Screen Grid Unitrad, \$65.85 (without tubes)



CROSLEY 34-S. This handsome cabinet model with double doors of diamond-matched panels, incorporating the 7-tube Screen Grid Set and Dynacoil Speaker. \$116 (without tubes). **CROSLEY 42-S**, utilizing the 8-tube Screen Grid set in the same cabinet, \$126 (without tubes)



\$112 (without tubes)

CROSLEY 33-S. This graceful Crosley 7-tube Screen Grid cabinet model, with Dynacoil Speaker, is beautifully finished in two tones of satiny walnut veneer



CROSLEY 82-S. 8-tube Screen Grid cabinet model, modern design, with Dynacoil Speaker. \$160 (without tubes)

Western Prices slightly higher

You're there with a

CROSLEY



COPELAND

has a logical proposition for the radio merchant!

Radio dealers who are interested in avoiding seasonal slumps will find Copeland's suggestion the logical solution:

Expand your field to include Copeland Dependable Electric Refrigeration! Copeland offers a line of nationally accepted merchandise which you can sell to those to whom you have already sold radios. The sale of Copeland involves the same principles of home demonstration, installation and service with which you are already familiar — and Copeland reaches its peak sales

volume each year just when radio sales are lowest! You can make no finer connection in electric refrigeration than Copeland! For so thoroughly does Copeland satisfy every requirement in the household, apartment and commercial fields that it has registered sharp sales increases year after year, until today it stands among the pre-eminent names in the industry.

Copeland offers the opportunity to banish seasonal slumps from your business! Mail the coupon today for further particulars.



COPELAND, 332 CASS AVENUE, MT. CLEMENS, MICHIGAN

Gentlemen: I am interested in the Copeland proposition.

Name _____ Street _____ City and State _____

NEW AUDIOS *for* OLD SETS

A profitable business for service stations is the installation of tone quality by replacing inferior units with THORDARSON REPLACEMENT TRANSFORMERS.

The chief difference between this year's sets and last year's, between high priced sets and cheap ones, is the difference in audio amplification. This is the difference which the set OWNER HEARS.

R-100 Straight Audio, \$2.25
R-101 Input Push-Pull, 3.50

AT ALL JOBBERS

THORDARSON

THORDARSON ELECTRIC MFG. CO.
Huron, Kingsbury and Larrabee Streets * CHICAGO, ILLINOIS



\$12 Net

The **New**
Readrite
Model 245



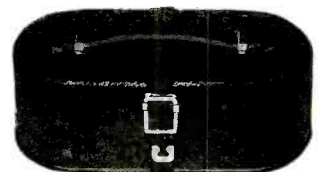
Set Analyzer and Tube Tester

Tests accurately — filament, plate, grid, screen-grid, cathode and line volts. Shows plate current and grid change.

A complete tester for the latest sets using 245 power tubes. Compact. Simple to use. Easy to carry.

Self-contained. The seamless steel cover with leather handle holds in place the cable, cords and plug. Beautiful baked enamel finish. An outstanding value.

At your jobbers. If ordered direct remittance must accompany order.



READRITE METER WORKS

Established 1904
6 College Ave., Bluffton, Ohio

After all **IT'S TONE**
that sells this set



Model 54

Small Console (38x26x14) Screen Grid, selected Walnut and Gumwood inbuilt dynamic speaker, less tubes.

\$142.50

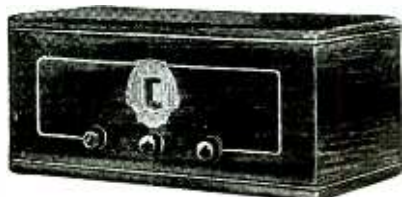
Prices slightly higher west of Rockies.

WITH all due respect to the value of selectivity sensitivity and other elements that contribute to radio reception, *tone* is outstandingly first with the public by a wide margin.

Although it has all these other features in full measure, the New 1930 Browning-Drake Screen-Grid Radio is selling easily for every authorized dealer because it reproduces with such startling reality, with such brilliancy of tone, all the delicate shades of musical instruments and of the voice.

Beautiful appearance it has, and low price, but its great selling appeal is its *tone*.

Here are some other features and reasons for its unusual performance, and its sales appeal. Semi-automatic tuning, both kilocycles and call letters on dial; five tuned circuits—nine tubes; tuned antenna; push-pull audio (245 power tubes); power detection (plate rectification) optional; band-pass filter effect (10 KC selectivity); Mershon trouble-proof condenser; voltage regulation adjustment (manual); power unit integral part of chassis; large special dynamic speaker; cabinets of selected walnut and gumwood, with satin Duco finish.



Model 53

Table Model, Screen-Grid ribbon-striped mahogany with Satin Duco finish, less tubes

\$102.50

Prices slightly higher west of Rockies

Send for full particulars of our very liberal franchise

Browning-Drake Corporation
226 Calvary Street, Waltham, Mass.

Builders also of modern screen-grid battery models.

Browning-Drake
screen-grid **RADIO**

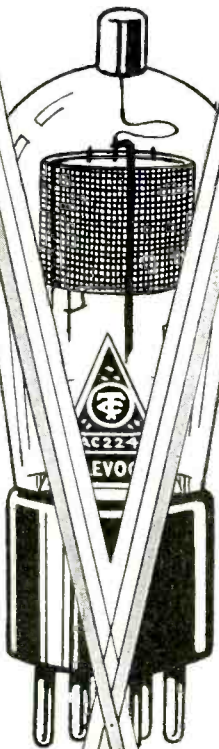
over 1,500,000 people listen in on Browning-Drake Sets.

Televocal Quality Tubes

The Televocal Screen Grid Tube AC 224 is a triumph of economic engineering. To *Set Manufacturers* it offers a tube that is long-lived and built to stand any strain. A long series of factory inspections and tests insure uniformity in quality and performance. To the *Consumer* it offers greater sensitivity and selectivity, more volume and fidelity of tone and quicker heating. To the *Dealer* it offers a tremendous popular demand for this revolutionary achievement and insures customer satisfaction.

Prepare against a possible shortage by ordering now.

Televocal Tubes are made in all standard types.



National Union
Radio
Corporation

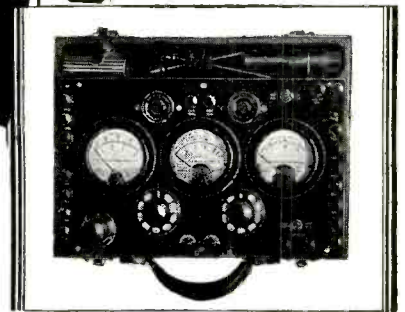
No. AC 224
Screen Grid

Televocal Division
Dep't B-2
400 Madison Ave.
New York City



"Madam—let me introduce the
FACTORY
ENGINEER"

Take this consulting specialist with you on your radio servicing calls



THINK what it would mean to your business if you were known to employ *factory engineers* for servicing radio sets—engineers familiar with every constructional feature! You would get every servicing call in your territory, because customers would have confidence that these men would know just what to do in every instance, and could promptly restore the set to perfect order.

That's exactly what the Weston Model 547 Radio Set Tester is in effect. It enables *your* servicing men to become as experienced and efficient as factory engineers. It helps the manufacturer make good his guarantee of performance; it helps you increase your servicing business with steadily increasing profits, and makes friends for your business and customers for your merchandise.

All told, the Model 547 is an outstanding achievement of the year and no dealer or service organization can afford to be without one. Write for detailed instructions on the scope of this instrument.



WESTON ELECTRICAL INSTRUMENT CORPORATION
581 Frelinghuysen Ave., Newark, N. J.



■ ■ ■ ■ GOOD JUDGMENT DEMANDS THAT YOU MAKE CERTAIN OF QUALITY BEFORE YOU BUY ■ ■ ■ Now, for the first time TRIAD has actually made that possible when purchasing radio tubes ■ The printed certificate packed in every TRIAD box guarantees a minimum of six months' perfect service or a satisfactory adjustment ■ That policy definitely protects the profit you make on every tube sale. ■ You couldn't ask for anything fairer—could you? Don't guess at tube quality any longer ■ You can rely on TRIADS and be SURE of it—always!

TRIAD MANUFACTURING COMPANY, INC.
PAWTUCKET, RHODE ISLAND



Call your jobber or write us direct for complete TRIAD dealer information

TRIAD
INSURED
RADIO TUBES

▼ TRIAD—THE WORLD'S ONLY INSURED RADIO TUBE! ▼



HARNESSING A MIGHTY POWER —your radio!

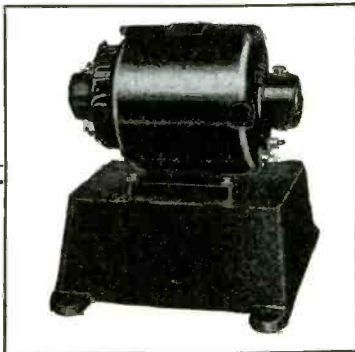
a delicate, intricate network of coils and transformers—cascading amplification tube by tube.

Such power must be harnessed—if the result is to be a smoothly flowing, clear reception.

A CENTRALAB volume control in your radio does just that . . . and does it smoothly . . . silently . . . surely. It means much if your radio is CENTRALAB equipped.

Write for free booklet
"Volume Controls,
Voltage Controls, their
uses."

Centralab
CENTRAL RADIO LABORATORIES
20 KEEFE AVE., MILWAUKEE, WIS.



To Change D.C. to A.C.

ALWAYS use JANETTE Rotary Converters. Everybody's doing it. Thousands of these machines have been absorbed by the radio and talking machine industry during the past year alone, and in practically every D.C. district in the world.

JANETTE Rotary Converters have been adopted as standard by virtually every leading company in the entire radio industry. Why? Because of their smooth, quiet, vibrationless operation and their perfect filter which eliminates the ripple or hum usually associated with the operation of a radio by a converter.

For 115,
230 or
32 volts
D. C.

Write for Bulletin 1229-C

**JANETTE MANUFACTURING
COMPANY**

Singer Bldg.
149 Broadway
New York

555 W. Monroe Street
CHICAGO

Real Estate
Trust Bldg.
Philadelphia

MAYO FOR SERVICE MEN

New Development

15,000 Ohm
Double Variable

A new Variable Wire Wound Resistance for use in Power Packs, Eliminators, etc. Has adjustable contacts that can be arranged to give exact B and C voltages. Any resistance from 0 to 15,000 can be obtained. Wire with Nichrome Wire on special refractory tube. List \$1.00.



Replace with MAYO.
"They're Guaranteed."

CONDENSER BLOCKS

FOR	Type	List
Majestic B Eliminator	287	\$7.00
Majestic Super B	281	7.50
Majestic Set (1928 m'd'l)	284	10.00
Majestic A	190	8.00
Atwater-Kent Model 37	283	12.50
Zenith Set (For all sets using 280 rectifier)	282	9.00
Mohawk A.C. 27 to 28	280	9.00
Stewart-Warner	285	9.00
Many Other Blocks, Not Listed		

TRANSFORMERS FOR

Type	List
Majestic B Eliminator (All models)	T-287 5.00
Zenith Pack	T-282 9.00
Mohawk A.C. 27 to 28 (226 type of power pack)	T-280 9.00
Stewart-Warner	T-280 9.00
Many Other Transformers, Not Listed	

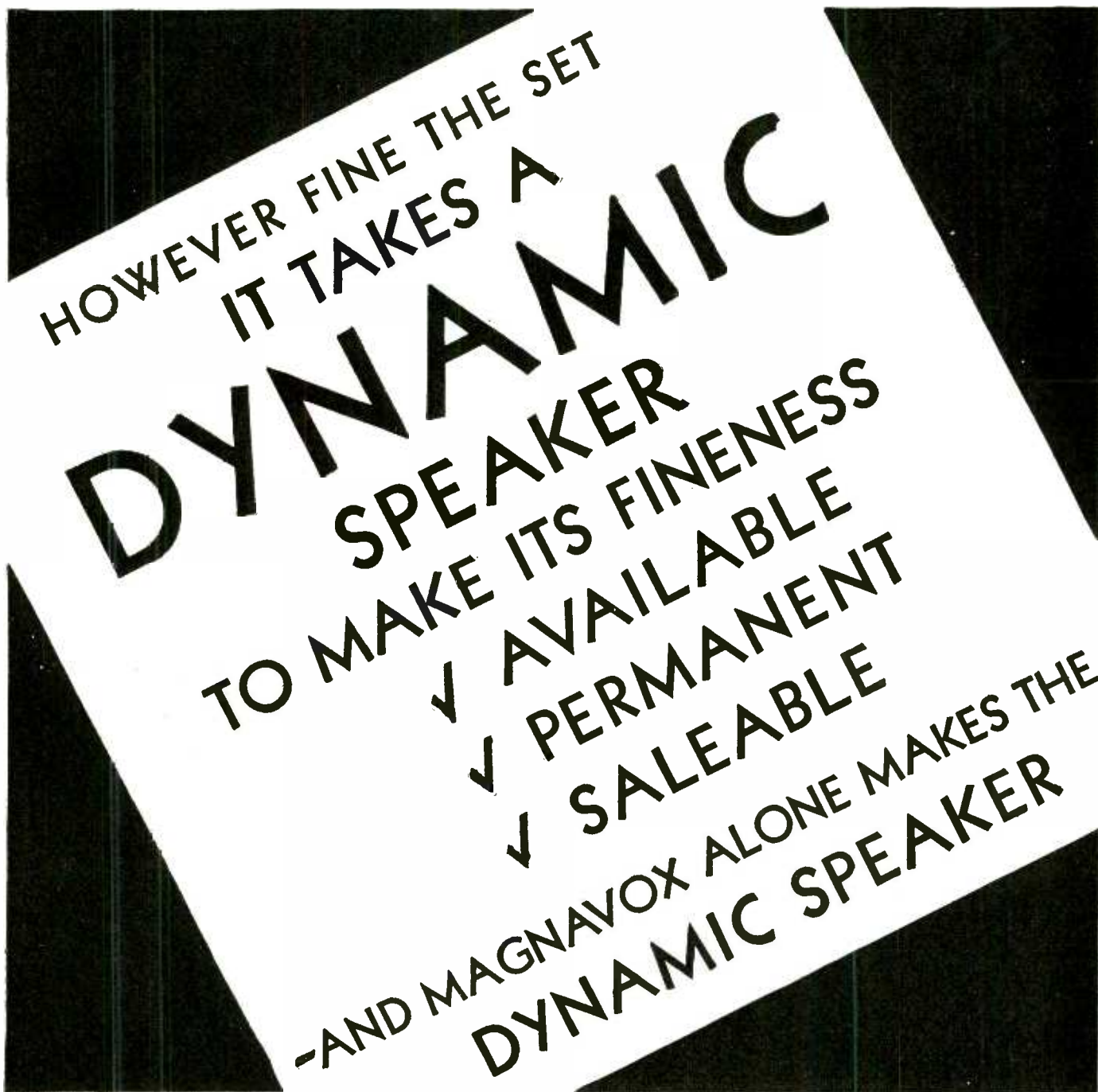


Atwater-Kent No. 37 Block
Type 283

Write for new catalogue sheets
Ask your jobber or write direct.

MAYO LABORATORIES, Inc.
281 East 137th St., New York City

RESISTANCES
A Complete Line of Wire Wound Resistances



Since the public judges the product of any radio manufacturer by the sound it hears from it, why not protect the public impression of the set YOU manufacture by building into it the **ONLY** speaker guaranteed against hum or rattle for the life of the speaker? That is the X-Core Dynamic Speaker – made by Magnavox, of course – for only Magnavox may make a Dynamic Speaker.

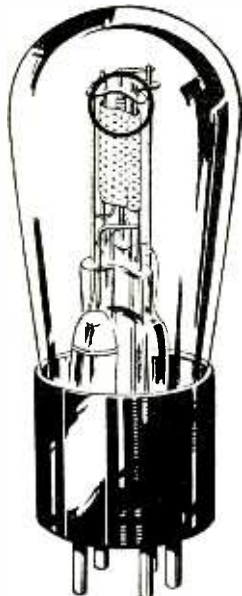
THE MAGNAVOX COMPANY

Established 1911

Factory and Pacific Sales: OAKLAND, CALIFORNIA

Factory and Sales East of the Rockies: CHICAGO, ILLINOIS

QUICK HEATING TUBE DESIGN IS BETTERED



WITH SUMMERILL
seamless nickel tubing

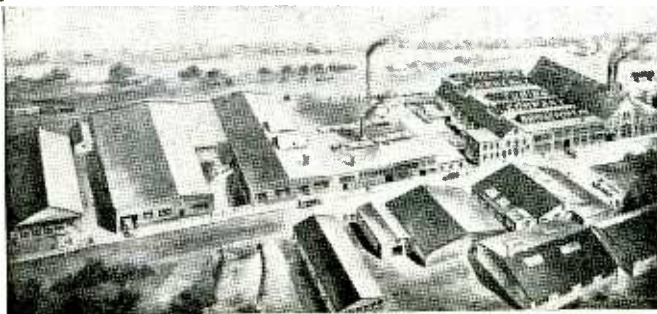
The development of the quick heating tube to its high state of efficiency is a story of long research and improvement in manufacturing methods.

One of the contributing factors in the success of quick heating tubes is Summerill Seamless Nickel Tubing backed by an experience extending over thirty years.

That's why radio tube manufacturers gave instant acceptance to Summerill Seamless Nickel Tubing—that's why we have quadrupled our output in the past six months.

The Summerill Tubing Co.

Founded in 1899
Bridgeport, Pa.
(Philadelphia District)



ACME WIRE PRODUCTS

Parvolt 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.
American Society for Testing Materials

For 25 years manufacturers and suppliers to the largest and most discriminating users.

THE ACME WIRE CO.
NEW HAVEN, CONN.

Branch Offices

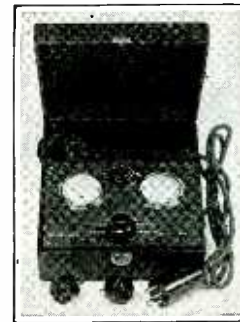
New York
52 Vanderbilt Ave.

Chicago
842 N. Michigan Ave.

Cleveland
Guardian Bldg.

Now! —An Improved Beede Combination Tube and Set Tester

No. 250
With Screen
Grid Test
List Price
\$25.00
Dealer's
Price
\$15.00



No. 20
Without
Screen Grid
Test
List Price
\$20.00
Dealer's
Price
\$12.00

It Tests Screen Grid Tubes

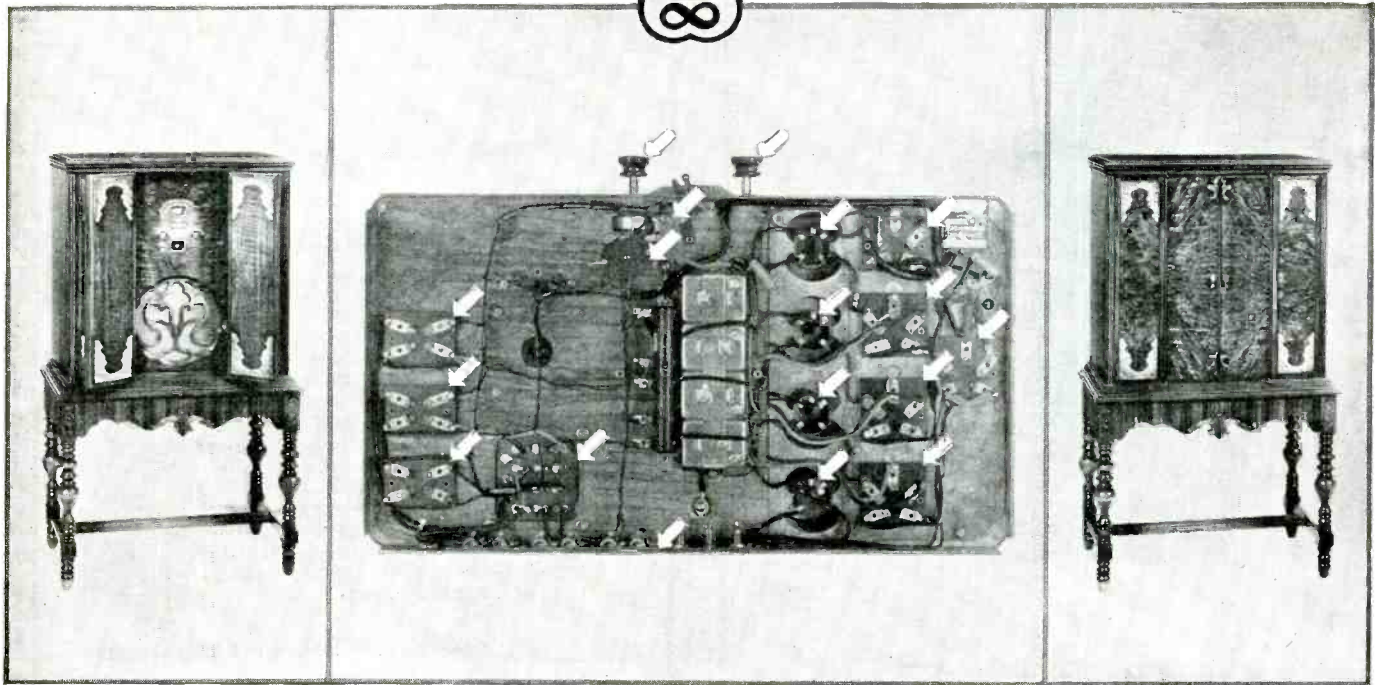
The advent of the screen grid set prompted the development of a new and better combination tube and set tester, with special attachment to test screen grid tubes. It makes all ordinary tests on A.C. and D.C. tubes and receiving sets also.

Every service-man, set builder, radio store and radio fan—should have this improved instrument. It has a large market—it offers a profit.

Get one for your own use. Write for details.

Beede Electrical Instrument Co.

Manufacturers of Quality Battery Meters, Meters for Radio Use, Etc.
PENACOOK, NEW HAMPSHIRE



Chassis of Kennedy Screen Grid Receiver insulated throughout with Bakelite Materials. Made by Colin B. Kennedy Corp., South Bend, Ind.

In the Kennedy screen grid receiver Bakelite Insulation is standard

EVER since the earliest days of factory-built radio receivers, the Kennedy has enjoyed a high reputation. Over this period of years new developments in radio have succeeded one another with great rapidity; many materials for many purposes have been tried and discarded, but Bakelite Materials have held their place as the premier insulations for radio receivers.

Bakelite Materials, both molded and laminated, are standardized

products, of great uniformity and stability. This dependability, under all conditions of service, is an assurance that the performance of a set will not depreciate in the hands of the purchaser through impaired insulation.

Dealers should be interested in the insulation materials used in the sets which they handle, as quality reception depends upon them. Write for a copy of Booklet No. 39, "Bakelite in Radio".

BAKELITE CORPORATION

247 Park Ave., New York, N. Y. Chicago, Office: 635 West 22nd St.
BAKELITE CORP. OF CANADA, LTD., 163 Dufferin St., Toronto, Ont., Can.

BAKELITE

REGISTERED

U. S. PAT. OFF.



THE MATERIAL OF A THOUSAND USES

"The registered Trade Mark and Symbol shown above may be used only on products made from materials manufactured by Bakelite Corporation. Under the capital "B" is the numerical sign for infinity, or unlimited quantity. It symbolizes the infinite number of present and future uses of Bakelite Corporation's products."



The
DAYRAD
RADIO SET
ANALYZER

The answer to your service problems is embodied in this compact and light-weight instrument.

Performs every necessary test on radio sets, power packs, screen grid circuits, etc. Tests both plates of type '80 rectifier tubes separately. Will also test total current in Raytheon tube circuits.

D.C. METER RANGES—20/100 Milliamperes, 20/100/200/600 Volts (1000 Ohms per Volt).

A.C. METER RANGES—4/8/160/800 Volts. Only one selector switch to operate. Both UY and UX sockets on the panel. Self contained continuity test. Carrying case is of genuine moulded Bakelite. Equipped with either Weston or Jewell Meters.

DEALER'S NET PRICE **\$58.50**

*Write Now For Descriptive Literature
or See Your Nearest Jobber*

THE RADIO PRODUCTS CO.
DAYTON, OHIO



STOP A.C.
Tube Troubles
at the Source

Excess voltage on the power lines ruins A.C. tubes or shortens their useful life. Many an A.C. tube gives only a few hours of useful life before it is replaced. There is an easy way to prevent damage to A.C. tubes from high voltage and voltage surges. Install a Vitrohm Unit in the wall outlet or lamp socket from which an A. C. set operates. It is certain protection against costly, frequent tube replacement.

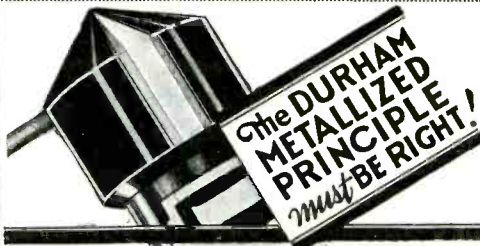


**WARD LEONARD
ELECTRIC CO.**

\$2.00

MOUNT VERNON, N. Y.

VITROHM 507-109 · VITROHM 507-109A
For sets using 65 watts or less For sets using more than 65 watts and less than 130 watts



A Million and a half used Monthly during 1929
in American Radio

To keep pace with 1930 receiver developments, Durham Metallized resistors and powerohms are now more accurate, have a greater power safety factor and can be obtained in even greater variety.

The advantages of the Durham Metallized principle have been proven by the millions of Durham resistors and powerohms now used by America's foremost manufacturers of radio receivers and allied products.

These units are now in standard production in all ratings, all types of tips for radio work.

Engineering data and samples for testing sent upon request. Please state ratings required.

International Resistance Company

2006 Chestnut Street, Philadelphia, Pa.

DURHAM
METALLIZED
**RESISTORS &
POWEROHMS**



MERSHON ELECTROLYTIC CONDENSER

A REAL PLAN

There is a genuinely profitable plan available for every interested radio dealer. Write or wire today.

THE Mershon Electrolytic Condenser, used by more than 30 of America's leading radio manufacturers, saves space, cost, weight and trouble. It gives tremendous capacity in **VERY SMALL SPACE!** For instance—72 microfarads in 32 cubic inches. It affords a **NEW** low hum level and it is self-healing as well as trouble-proof in every other way.

For these reasons—and for the further reason that the Mershon Condenser is made in a superbly equipped plant with tremendous production capacity, with a research laboratory constantly available for users, with years of experiment and improvement behind it—this fine modern radio product [is also being used more and more by custom set builders, by engineers, by replacement and repair men and is being engineered into new power packs.

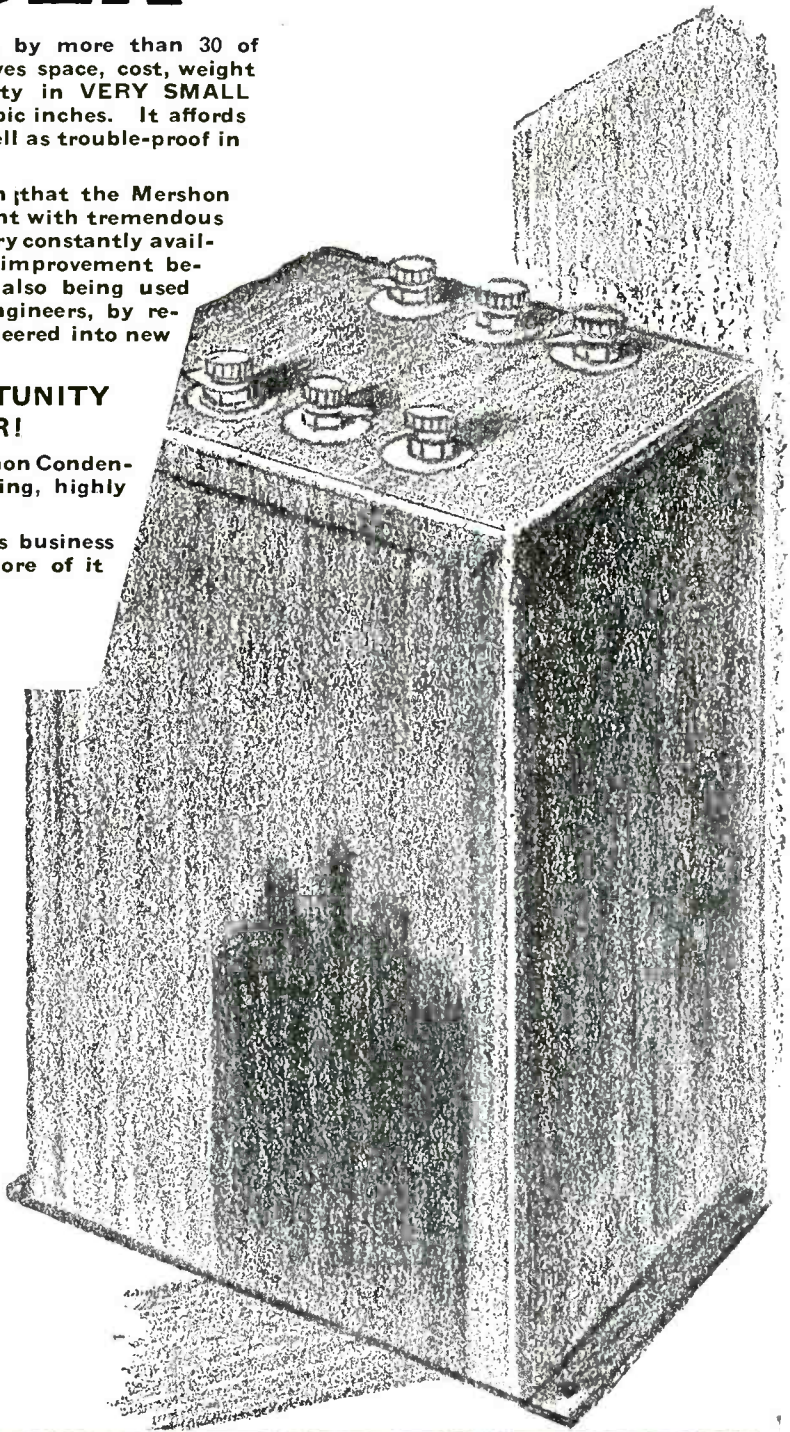
THIS CREATES A GREAT OPPORTUNITY FOR EVERY RADIO DEALER!

In the next few months thousands of Mershon Condensers will be sold and used—a quick selling, highly profitable line for the retail dealer.

We can tell you how to get and keep this business and we can help you get more and more of it throughout the year.

Address Mershon Department FFC.

THE AMRAD CORPORATION
Medford Hillside, Mass.



SELF-HEALING

NEW Model!

R-V RADIO SWITCHMAN

Modernity
RADIO
and all Electrical Appliances

Turn Current On or Off At Any Time Set

Easy to operate: Plug in, set time, and pull the lever. Complete with six-foot cord and plugs; no wiring necessary. All Bakelite case, dark walnut finish; 4 inches high. Capacity increased to 660 watts. Consumes no current.

R-V MANUFACTURING CO.
MARSHFIELD, MASS.

The Perfect Gift for Man or Woman

\$10

CORWICO VULCAN LIGHTNING ARRESTER

\$1 LIST

In addition to assuring protection against lightning, the Corwico Vulcan Lightning Arrester also dissipates accumulated static charges, thus improving reception. The Vulcan Arrester is packed in an attractive two-color box and its performance is guaranteed by a \$100 pledge to repair lightning damage to any set equipped with this arrester.

If your Jobber cannot supply you with Corwico Vulcan Lightning Arresters, order a sample carton of 6 direct.

CORNISH WIRE COMPANY
28 CHURCH ST., NEW YORK CITY
Makers of the Famous

BRAIDITE HOOK-UP WIRE

RADIO CONSTRUCTION LIBRARY
Three Volumes, 993 pages, 561 illustrations, 6x9 inches.

How to Build, Test, Repair and Maintain Modern Radio Receiving Sets—

Now available as a complete unit, these three well-known radio books present a practical and authoritative library for the radio dealer and serviceman, as well as the broadcast listener.

Volume I—PRACTICAL RADIO: The fundamental principles of radio presented so that anyone with average training will be able to apply them. Complete construction details of eight typical sets are given.

Volume II—PRACTICAL RADIO CONSTRUCTION AND REPAIR: Troubleshooting and servicing—the best practice in locating and repairing trouble in sets, speakers, eliminators, aerials, etc.

Volume III—RADIO RECEIVING TUBES: A practical explanation of the underlying principles of vacuum tubes—covering the construction, testing, reactivation and use of all types of tubes.

See This Library for 10 Days FREE!

McGraw-Hill
FREE EXAMINATION COUPON

McGraw-Hill Book Co., Inc., 370 Seventh Avenue, New York.

Gentlemen:—Send me the New Radio Construction Library, all charges prepaid, for 10 days' Free Examination. If satisfactory I will send \$1.50 in ten days and \$2.00 a month until \$7.50 has been paid. If not wanted I will return the books at your expense.

Name

Home Address

City and State

Name of Company

Occupation R.R. 1-30

ANACONDA
MAGNET WIRE

Plain Enameled Cotton Covered Silk Covered

ANACONDA
from m...umer

ANACONDA WIRE & CABLE CO.
Magnet Wire Dept.
MUSKEGON — MICHIGAN.

WASMUTH-GOODRICH COMPANY

Fine Radio Cabinets
fashioned by
Master Craftsmen

103 Park Ave., New York
Peru, Indiana

SEARCHLIGHT SECTION

EMPLOYMENT and BUSINESS OPPORTUNITIES—SURPLUS STOCKS—DISCONTINUED MODELS

UNDISPLAYED—RATE PER WORD:

Positions Wanted, 8 cents a word, *minimum* \$1.25 an insertion, payable in advance.
Positions Vacant and all other classifications, 12 cents a word, *minimum* charge \$2.50.
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

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.

REPRESENTATIVES AVAILABLE

Manufacturer's Representative

Calling on radio jobbers, state of Pennsylvania, with nationally advertised receiver, desires additional lines of merit for jobbing trade. RA-117, Radio Retailing, Tenth Ave. at 36th St., New York.

Manufacturers Attention

Newly organized manufacturer's representative organization with established agents or offices in every Southern center, wants additional lines of radio, radio tubes, musical accessories. Our personnel established at New Orleans, Atlanta, Richmond, Dallas, San Antonio, El Paso, Nashville, Memphis, Little Rock, Oklahoma City, are acquainted with every jobber, syndicate and dealer outlet in the South. We have sold merchandise in the South for over twenty years, are well financed, reliable and responsible and have a past record of successful merchandising. We solicit accounts of only dependable manufacturers. Gus Blancard, General Manager, 513 Conti Street, New Orleans, La.

3 Sensational Specials!



at Less Than Manufacturer's Cost

TEMPLE SUPER DYNAMIC SPEAKER

The Temple Super Dynamic Speaker is the only Dynamic that has these features:

1. HUM MODULATOR
2. TWO-TONE SWITCH
3. SPECIAL SWITCH FOR CUT OUT AC—

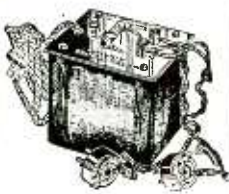
Temple AC Dynamic Model 50, in a beautiful cabinet. The speaker chassis is one of the finest made. There are an output transformer and dry rectifier built in. The cabinet has decorated walnut front and back, with carved grill ornament. An AC switch is accessible underneath cabinet. Rear is removable for adjustment of resistor knob to match the impedance of your receiver's output tube. Connect plugged AC cable to 110 volts AC, 50 to 60 cycles, and connect tipped cords to speaker post of receiver.

Regularly \$67.50 **\$10**

Adapter for 245 Power Tube

This adapter makes it easy to adapt your set to the new 245 Super Power Tube for greater volume, clarity and amazing ability to reproduce low notes. No rewiring necessary.

\$7.95



"Tobe" Bone Dry "A" Eliminator "Absolutely Humless"

Operates on 105-120 volts, AC, 50 to 60 cycles. Complete with "B" Eliminator receptacle and pendant switch which controls set. "A" Power and "B" Eliminator.

\$8.95



Quantity Prices on Request

A Deposit of 25% Must Accompany All Orders!

BROOKLYN RADIO

Service Corp.

1072 Atlantic Ave., Brooklyn, N. Y.

REMOTE CONTROL!

Designing Engineer wishes to interest responsible manufacturer of popular priced sets in improved multi-outlet remote control system, including automatic station selection, self compensating visual tuning, and other striking selling features.

Engineer, BO-116, Radio Retailing Tenth Ave. at 36th St., New York City

"Your Radex is the best index (log book) I have seen, and I have had five other publications."

"With the help of Radex I logged 90 stations one night recently, by far the largest number I had ever before logged in one night."

RADEX

"The DX Tuning Book"

Teaches them to tune correctly; gives them an understanding of radio; is an incentive to get the most from their set; tells them where to set dials for any station. "The most interesting log book available."

Request on letterhead brings sample and full details. Write TODAY!

THE RADEX PRESS

Dept. R.R., 1367 E. 6th St., Cleveland, O.

KEEP POSTED ON PRICES

With no obligation to you, this coupon will bring you our bargain listings on Radio and Electrical merchandise. Send for it now.

S. S. Jobbing House
 154 W. 26th St., New York City, N. Y.
 Please send your listings.

Name
 Address
 City State.....

Get ^{at least} a \$1000 Raise this Year!



I've helped others do it

I am doubling the salaries of many men in Radio every year by fitting them for better jobs



Let me help you make 1930 your biggest year

In addition to helping men break into Radio, my course shows men and young men already in the field how to get ahead—how to win promotions and raises in pay. I will train you at home in your spare time. I will make an agreement with you to refund every penny of your tuition if you are not satisfied with my lessons and instruction service after you complete my course. The Pioneer and World's Largest organization devoted exclusively to training men and young men for good jobs in the Radio industry stands back of this agreement.

Read what these graduates say

Erle Chambers, 228-230 W. 7th St., Cincinnati, Ohio.

"Last year my income went very much over \$5,000. Your course served a good basis upon which I was able to build a successful future."

Harry Laborde, 2010 First Ave., Perry, Iowa.

"My present position as Manager of the Murray Tire Sales Company, Radio Department, is I feel going to be a good one. I believe I will earn at least \$4,000 this year."

E. E. Winborne, 1414 48th St., Norfolk, Va.

"My earnings in Radio are many times greater than I ever anticipated when I enrolled for your course. They seldom fall under \$100 a week. You give a man more for his money than anyone else."

J. A. Vaughn, 3715 S. Kings-highway, St. Louis, Mo.

"Before I entered Radio I was making \$35 a week. I had the pleasure of earning \$110 last week, and I have made as high as \$241 in two weeks. I owe my success to the N.R.I."

Resolve now to make this year a really prosperous one. If you are making \$25, \$30 or \$35 a week let me show you how to make more than that, beginning long before the year has passed. When you and I work together I am sure we can raise your salary a lot. You can buy a lot of things with \$1,000 more a year that you have to do without now.

Make your future secure. Employers are slow to fire their best men. Let me show you how you can quickly get ready for the better jobs with manufacturers and dealers and in broadcasting stations. My course not only trains you thoroughly in the fundamentals of Radio—it also gives you practical experience while learning. I'd like to tell you about my 50-50 method of training at home—half from lessons and half from practical experiments. Let me show you how my training in merchandising gives you the information you need to quickly develop into a head service man with a large dealer, a buyer, or store manager. Let me show you the types of jobs my men get in Broadcasting Stations, tell you about the training I give you in Talking Movies where good men with Radio training many times make \$75 to \$200 a week.

Read the many letters from graduates who got the information from my training that is now enabling them to operate successful businesses of their own. My book, "Rich Rewards in Radio," gives over 100 letters from men and young men whose successes prove the value of my training. This book is free to you. You won't obligate yourself in the least by clipping and mailing the coupon below.

**National Radio Institute
16th and You Streets, N. W.
Washington, D. C.**

Mail this NOW for free Information

**J. E. SMITH, President,
National Radio Institute, Dept. OA75, Washington, D. C.**

Dear Mr. Smith:—Send me your book, "Rich Rewards in Radio", which tells about your training that is fitting hundreds to make more money in Radio every year. I understand this request does not obligate me, and that no agent will call.

Name

Address

City State

Big and little fortunes are coming out of Radio every year. Its rapid growth has made many men rich—and will make many more wealthy in the future. Set \$60, \$75 or \$100 a week as your goal—resolve that you are going to get it—and then get the knowledge that will make you worth that much. It is surprising what can be crowded into 365 days in actual accomplishment. The information you need to get a firm foundation for a bigger job in Radio is in my course. Many of my men get raises within a few months after starting with me.

Dealers too are benefiting from my training

Many Radio dealers enroll with me every year to round out, to complete their knowledge of Radio so as to be able to make bigger profits—to be able to buy more carefully, handle employees more successfully, solve service problems without the expense of a service man, to make them better salesmen. Included in my course are four special books written by an authority on Radio Retailing devoted to opening and managing a Radio Retail store.

Besides many dealers are encouraging their service men, salesmen and other employees to enroll with me and learn more about Radio. It makes for more profits and better satisfied customers. Suggest to your employees that they answer this advertisement so they can become more valuable to you and make more for themselves.

LET RCA INSTITUTES START YOU ON THE ROAD TO . . . SUCCESS IN RADIO

Radio needs you . . . That's why the entire Radio industry is calling for trained men . . . That's why thousands of men who answered these advertisements are now earning from \$2,000 and up a year. Radio is thrilling work . . . easy hours, too, vacations with pay and a chance to see the world. Manufacturers and broadcasting stations are now eagerly seeking trained RCA men . . . Aviation and radio in the movies also provide innumerable opportunities . . . Millions of sets need servicing . . . thousands of ships require experienced operators . . . Never before was there an opportunity like this.



Radio Mechanic and Inspector \$1800 to \$4000 a Year.



Broadcast Section Mechanic \$1800 to \$3600 a Year.



Land Station Operator \$1800 to \$4000 a Year.



Broadcast Operators \$1800 to \$4800 a Year.

This is the Only Course Sponsored by Radio Corporation of America

RCA sets the standards for the entire Radio industry . . . The RCA Institutes' Home Laboratory Training Course enables you to quickly learn all the secrets of Radio . . . In your spare time, in only an hour or so a day, you can obtain a thorough, practical education in Radio . . . You get the inside information, too, because you study right at the source of all the latest, up-to-the-minute developments. RCA, the world's largest Radio organization sponsors every single detail in this course.

You learn Radio by actual experience with the remarkable outlay of apparatus given to every student. You learn the "How" as well as the "Why" of every Radio problem, such as repairing, installing and servicing fine sets. That's why every graduate of RCA Institutes has the experience, the ability and the confidence to hold a big-money Radio job.

For the added convenience of students who prefer a Resident Study Course, RCA Institutes, Inc., has established Resident Schools in the following cities:

- New York 326 Broadway
- Boston, Mass. 899 Boylston St.
- Philadelphia, Pa. 1211 Chestnut St.
- Baltimore, Md. 1215 North Charles St.
- Newark, N. J. 560 Broad St.

Graduates of both the Home Laboratory Training Course and the Resident Schools receive exactly the same training and enjoy the same privileges so far as jobs and salaries are concerned. And every Home Study graduate may also attend any one of our resident schools for post-graduate instruction at no extra charge.

Graduates of RCA Institutes Find It Easier to Get Good Jobs

They are closest to the source of Radio's greatest achievements because the progress of Radio is measured by the accomplishments of the great engineers in the huge research laboratories of the Radio Corporation of America.

Students of RCA Institutes get first-hand knowledge, get it quickly and get it complete. Success in Radio depends upon training and that's the training you get with RCA Institutes. That's why every graduate who desired a position has been able to get one . . . That's why graduates are always in big demand.

Study Radio at the Oldest and Largest Commercial Training Organization in the World

Send for our Free Book . . . or step in at one of our resident schools and see how thousands of men are already on the road to success in Radio. Remember that you, too, can be successful . . . can speed up your earning capacity . . . can earn more money in Radio than you ever earned before. The man who trains today will hold down the big-money Radio job of the future. Come in and get our free book or send for it by mail. Everything you want to know about Radio. 40 fascinating pages, packed with pictures and descriptions of the brilliant opportunities in this gigantic, world-wide money-making profession.

See for yourself why graduates of RCA Institutes now occupy thousands of well-paid positions. These positions are usually available in from 3 to 10 days after graduation for men who can qualify. RCA Institutes will back you up to the limit. Our catalogue is yours free . . . SEND FOR IT TODAY!

Clip this Coupon NOW!

RCA INSTITUTES, INC.

Formerly Radio Institute of America

SPONSORED BY



RCA INSTITUTES Inc.
Dept. KT-1, 326 Broadway, New York, N. Y.

Gentlemen: Please send me your FREE 40 page book which illustrates the brilliant opportunities in Radio and describes your laboratory-method of instruction at home!

Name.....

Address.....

Start the New Year right

Feature these easy-selling, proved profit-makers

Genuine KOLSTER PRODUCTS at less than one-seventh original list price

Either of these KOLSTER items at less than one-seventh of the original list price



Model K-5
Height 42", width
25 1/4", depth 19"

According to hundreds of dealers this is an outstanding offering sure to bring handsome profit returns.

Priced at *one-seventh* of original list, you can easily feature these items as New Year business builders.

All are brand new, sealed in original factory packing, each bears the KOLSTER Serial Number and guarantee tag.

BUY AS YOU SELL

Buy either item as needed at the *top* price but—if you order a total of 5 or more of one or the other within a period of 30 days from date of your first order, we will allow you the 5-lot price on all purchased and refund the difference in price on sets purchased.

Get started today! Place your order now!



Model 6-H
Height 53", width
27", depth 18 1/2"

K O L S T E R

ELECTRO-DYNAMIC REPRODUCER

Combined with 210 Power Amplifier
and "B" Supply Unit

Features

1. Electro - Dynamic Reproducer (10 1/4 - in. dia.)
2. 210 Power Amplifier. Fine tone quality.
3. Supplies "B" voltage, if desired.
4. Can be used with any electric or battery set.
5. Complete A.C. Electric operation.
6. Beautiful pencil-stripped walnut cabinet.

This finely matched, rugged unit comprises a complete heavy duty Electro-Dynamic Reproducer, including a 210 Power Amplifier with "B" supply unit, all self-contained in a steel frame. It weighs 45 pounds without the cabinet. The cabinet itself is of pencil-stripped walnut, beautifully designed with Cathedral grille. It is equipped with switch for control of house current to Reproducer, power unit and amplifier. A pilot light indicates when the Reproducer is in operation.

If desired, the 210 Power Amplifier will also supply 22, 67 and 90 volts "B" current, sufficient for any set using up to 8 tubes. An automatic voltage regulator tube, UX-874, maintains the "B" voltage silent and steady.

This Electro-Dynamic Reproducer

can be used with any battery or A.C. set, replacing the last audio stage or be used with all tubes of the set. Wherever used, it will bring out every shading and range of tone; every note is reproduced with utmost faithfulness, pure and undistorted. It will modernize any radio receiver.

The following tubes are required for its operation: 2—UX-281 (for full-wave rectification); 1—UX-210 (for super power amplification); 1—UX-874 (for voltage regulation). For use with phonograph pick-up, one additional audio stage is recommended between the pick-up and this Reproducer.

A 20-ft. cable is included with each instrument. Operates direct from 50-60 cycle, 110-120 volt A.C. current.

List Price, \$175.00 (less tubes)

Going at **\$24.50!**

Lots of 5 or more \$21.50 ea.

K O L S T E R

SIX TUBE CONSOLE RECEIVER

With Built-In Kolster
Electro-Dynamic Reproducer

The entire set can be operated direct from the A.C. light socket, 50-60 cycle, 110-120-v., by simply adding any "A" supply unit and a small 4 1/2-volt "C" battery. The built-in Electro-Dynamic Power Reproducer furnishes the "B" supply current to the set. A switch snaps the receiver in or out of operation and a pilot light tells instantly when set is in operation. The single dial control makes this the simplest of receivers to operate.

Features

1. Beautiful highboy console of burl walnut with maple overlay.
2. Kolster K-5, Electro-Dynamic Reproducer with built-in 210 Power Amplifier included for fine tone quality (see opposite page).
3. Famous Kolster 6-tube T.R.F. circuit.
4. Hairline selectivity. Distance Reception.
5. Single dial control—simple to operate.

This Receiver Employs the Famous Kolster T.R.F. Circuit

It operates on either indoor or outdoor antenna using three stages of R. F. detector and two stages of A. F. The three point tap switch aerial adjuster operated from panel gives hairline selectivity. A loose coupled coil in conjunction with tap switch increases the distance getting value of the receiver. In addition, the 210 power amplifier built into the model K-5 Dynamic Reproducer, achieves remarkable tone quality. In this receiver is embodied everything looked for in modern radio.

The combination Kolster Set and Electro-Dynamic Reproducer is housed in a beautiful console of burl walnut with maple overlay. Full swinging doors found only in the finest cabinets add to its beauty.

The receiver uses 6—UX-201A tubes and the Electro-Dynamic Reproducer uses 2—UX-281, 1—UX-210, and 1—UX-874 tubes.

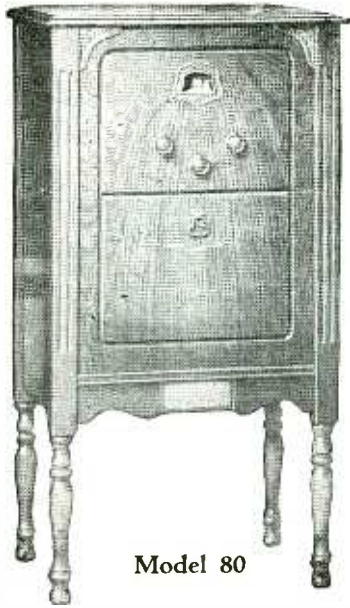
List Price, \$295.00 (less tubes)

Going at **\$39.50!**

Lots of 5 or more \$35.50 ea.

TERMS: 20% cash with order, balance C.O.D. f.o.b., New York.

AMERICAN SALES COMPANY,



Model 80

List: \$89.50
(without tubes)

BREMER-TULLY SIX TUBE CONSOLE RECEIVER

(for battery operation)

An entirely new Bremer-Tully 6-tube model with all the newest improvements. Latest type shielded circuit, perfectly tuned and neutralized. It incorporates three stages of Radio frequency amplification, Detector and two stages of Audio amplification using a power tube 112-A or 171-A.

The four-tuned stages are operated by a single control illuminated with the added advantage of the special Bremer-Tully antenna trimmer for fine tuning.

In selectivity, distance, reception and tone we believe that this Model 80 Bremer-Tully Receiver is the best battery operated receiver obtainable. Incorporated are all the latest developments in radio engineering and design.

Model 80 is a handsome piece of furniture, substantially and well built. Beautiful grained walnut finish console cabinet. Stands 39 1/2-in. high, bringing tuning panel to eye level when sitting.

Battery compartment provides ample room for both A and B batteries and is accessible from the front.

Uses 4-UX-201-A, one UX-200-A or 201-A as Detector and one UX-112-A or 171-A tubes.

One Dial Illuminated Control
Completely Shielded

Special \$21.50 ea.

R.C.A. Dealers and Distributors. Look!

Get In On These Two Items At Once.

Real Big Savings For You.

We have a limited quantity of these two numbers for sale at the following exceptional low prices.

WE SUGGEST THAT YOU STOCK UP ON THESE PARTS FOR REPLACEMENTS ON THE 33, 18 and 17 RECEIVERS. Look up your records and find out what you are now paying for this merchandise.



SIZE: 5 1/4 x 4 1/4 x 3 1/4"
List Price \$12.90



POWER TRANSFORMER

RCA Part No. 8335



This Power Transformer is used in the Radiola 33, 18 and 17 for supplying all filament and plate supply voltages, Replacement Part No. 8335.

Primary Voltage 110 Volts 50-60 Cycles A.C., filament rating 50 watts. Supplies filament voltage for four 226, one 227 and one or two 171-A's and one UX-280 tubes, also high plate voltage of 600 volts center-tapped for UX-280 tube.

Especially suitable for making up an AC Set, or the Wise Dealer can convert his battery sets now on hand to A.C. sets by using this Power Transformer.

This large, heavy duty, shielded Power Transformer is exceptionally well built. Weight 6 1/4 lbs.

Special \$3.25 ea.

Lots of \$2.85 ea.
25 or more



2 STAGE AUDIO TRANSFORMER PACK

RCA Part No. 5667. Ratio of Each Transformer 3-1.



SIZE: 3 1/2 x 2 1/2 x 1 1/4"
List Price \$6.75

Used in the Radiola 33, 18 and 17, Replacement Part No. 5667.

Consists of a first and second stage Audio Transformer shielded in a metal container. Can also be used with any A.C. or D.C.

Radio Set where two good audio stages of audio amplification are desired.

This Audio Transformer Pack is well designed. Its compactness permits installation either above or below the panel.

Special \$1.70 per pack

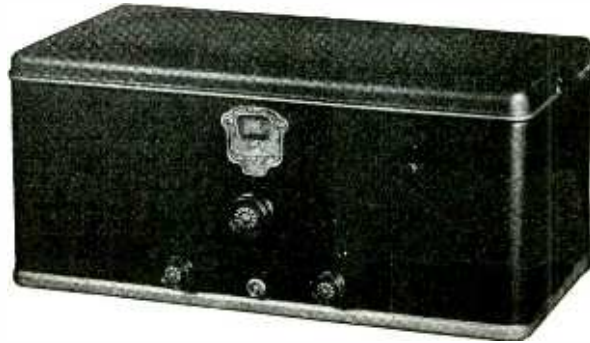
Lots of \$1.50 per pack
25 or more

(2% Discount for Full Remittance with order.)

19-21 Warren Street, New York, N. Y.

RUSH Your Orders for these Bargains
SACRIFICED "Buys" of Manufacturers Salvage Corporation

400 of the Famous
Earl Radio
TABLE MODEL 21



A powerful 8-tube set, utilizing two type 227's, two 271's, three 226's, one 280. Handsomely finished cabinet is 20 in. wide, 10¼ in. deep, 9½ in. high. Can be used in any of the Berkey & Gay cabinets shown on next page.

List Price, \$75.00

YOUR SPECIAL PRICE **\$ 25**
WHILE THEY LAST

TERMS: 20% with Order. Balance C. O. D.

MANUFACTURERS SALVAGE CORPORATION
637 Sixth Avenue, NEW YORK, N. Y.

We carry a complete stock of
Replacement Parts
for Freed-Eisemann
and Freshman Sets.

*Ask Us for Prices
on Anything You Need*
BALTIMORE RADIO CO.
45 West Broadway, New York City

Surplus
Stocks

When you have surplus stocks of radio equipment to sell—coils, tubes, sets, speakers, cabinets, insulators, etc., or when you are in the market to purchase such surplus stocks of other dealers—

Use a "Searchlight" Ad.

RR-5

IF YOU do not find what you want in the Searchlight Section of **RADIO RETAILING** then advertise for it!

RR-1

25 CYCLE TRANSFORMERS

NOW AVAILABLE

For 60 Cycle Receivers without any change in the design of your Receiver.

Send us your specifications and get in on the 25 Cycle business.

They're Smaller, Perfect Regulation and Made in a 25 Cycle City.

DYMAC RADIO
2169 Bailey Ave., Buffalo, N. Y.

A. C. TUBES

All tubes guaranteed—full replacement within 10 days. Manufacturing close out.

UX 226
UY 227
UX 280
UX 171 A

35c EACH

20% with Order. Balance C.O.D. Lots of 50.

RELIABLE RADIO CO.
46 Brattle St., Boston, Mass.

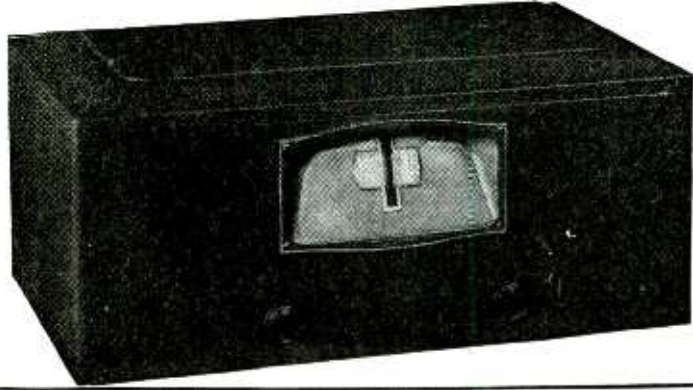
Marvelous "Buys" for Quick Sales

Stimulate Business NOW with Nationally Known Products

BALKITE Radio

8-Tube Table Model A3

Utilizes five R.C.A. UY227's, two UX112A's, one UX280. Handsome dull finish metal cabinet. 21½ in. wide, 13 in. deep, 9½ in. high.



YOUR SPECIAL PRICE **\$27.50**



Leicester. Model 108

Walnut and other woods. 26½ in. wide, 49 in. high, 16½ in. deep. List price, \$105.00

\$20 **\$23.50**
WITHOUT SPEAKER With R.C.A. 100A Speaker

BERKEY & GAY

Consoles Cut to Fraction of List



Hucknall. Model 107

Walnut and other woods. 39 in. wide, 37½ in. high, 17½ in. deep. List price, \$85.00

\$8 **\$11.50**
WITHOUT SPEAKER With R.C.A. 100A Speaker



Stewart. Model 106

Walnut and other woods. 38½-in. high, 26 in. wide, 16½ in. deep. List price, \$65.00.

\$11 **\$14.50**
WITHOUT SPEAKER With R.C.A. 100A Speaker

PEERLESS A.C. DYNAMIC SPEAKERS



Model 19A. Beautifully carved walnut. 16⅞ in. high. With power transformer and rectifier to operate on 110 volt. 50-60 cycle. A.C. List price, \$75.

YOUR PRICE **\$14.50**

Model 17A. Carved walnut. 14¼ in. high. With power transformer and rectifier to operate on 110 volt. 50-60 cycle. A.C. List price, \$65.00.

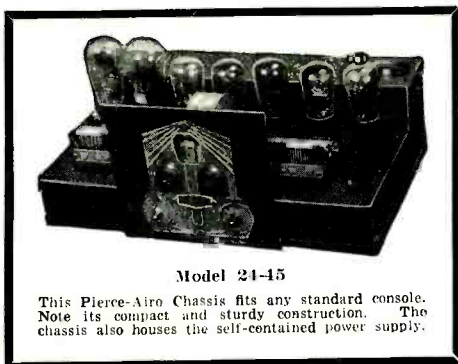
YOUR PRICE **\$13.50**



TERMS: 20% with order. Balance C.O.D.

MANUFACTURERS SALVAGE CORPORATION
637 Sixth Avenue, NEW YORK, N. Y.

Beware of Distress Merchandise Performance vs. Power-Pack Troubles



Model 24-45

This Pierce-Airo Chassis fits any standard console. Note its compact and sturdy construction. The chassis also houses the self-contained power supply.

SATISFIED customers throughout the country report no trouble whatever with the power-packs and filters in the Pierce-Airo. They further report the Pierce-Airo chassis model 24-45 gives less trouble than any set they handle.

Pep up your sales
and keep your profits with
THE SCREEN GRID



AT NEW LOW NET PRICES

Freedom from service trouble and our new low net prices for the Pierce-Airo Chassis make a winning combination that should appeal to wise radio dealers.

Sell the Pierce-Airo and you make the biggest profit in the long run because the Pierce-Airo stays sold. Your service expenses are negligible. Every Pierce-Airo sale makes a satisfied customer and a booster for your store.

Write or wire for our new low net prices. We shall also be glad to send you a sample Pierce-Airo Chassis for test in your own store

PIERCE-AIRO, INC., 113R Fourth Ave., New York

	Page
Acme Wire Co.	108
American Weekly	99
Anrad Corp.	111
Anaconda Wire & Cable Co.	112
Arcturus Radio Co.	16-17
Associated Factory Distributors	86
Atwater Kent Mfg. Co.	74-75
Audak Co.	13
Bakelite Corp.	109
Beede Elec. Instrument Co.	108
Bremer Tully Mfg. Co.	92
Browning-Drake Corp.	103
Brunswick-Balke-Collender Co. Inside Front Cover	
Cable Radio Tube Corp.	78
CeCo Mfr. Co.	95
Central Radio Lab.	106
Colonial Radio Corp.	80
Copeland	101
Cornish Wire Co.	112
Crosley Radio Corp.	100
DeForest Radio Co.	77
Edison Co., Inc., Thos. A.	96
General Elec. Co.	14-15
Gold Seal Elec. Co., Inc.	4
Grebe & Co., Inc., A. H.	2
Grisby-Grunow Co.	98
Hygrade Lamp Co.	87
International Resistance Co.	110
Janette Mfg. Co.	106
Jewell Elec. Instrument Co.	93

ALPHABETICAL INDEX TO ADVERTISEMENTS

	Page
Kennedy, Inc., Colin B.	8
Ken-Rad Corp., Inc.	73
Leutz, Inc., C. R.	76
Magnavox Co., The.	107
Mayo Lab's	106
McGraw-Hill Book Co.	112
National Carbon Co.	97
National Carbon Co., Raytheon Div. 69-70-71-72	
National Union Radio Corp., Televoal Div.	104
Paent Elec. Co.	85
Perryman Elec. Co.	91
Philadelphia Storage Bat. Co., 9-10-11-12, Front Cover	
Pierce Airo, Inc.	120
Radio Corp. of America. 50-51, Back Cover	
Radio Prod. Co.	110
Readrite Meter Works	102
R-V Mfg. Co.	112
Samson Electric Co.	68
Silver-Marshall, Inc. Inside Back Cover	
Sparks-Withington Co.	90
Stromberg-Carlson Tel. Mfg. Co.	5, 6, 7
Summerill Tubing Co.	108

	Page
Supreme Instr. Corp.	79
Sylvania Prod. Co.	20
Televoal Corp.	104
Thordarson Elec. Mfg. Co.	192
Toman & Co., E.	94
Transformer Corp.	18
Triad Mfg. Co.	105
Utah Radio Prod. Co.	3
Ward Leonard Elec. Co.	110
Wasmuth-Goodrich Co.	112
Webster Elec. Co.	19
Westinghouse Elec. Sup. Co.	81-82-83-84
Weston Elec. Instrument Co.	104
Zenith Radio Corp.	88-89
SEARCHLIGHT SECTION	
Classified Advertising	
BOOKS	
Radex Press	113
BUSINESS OPPORTUNITIES	113
EDUCATIONAL	
National Radio Institute	114
R. C. A. Institutes, Inc.	115
EMPLOYMENT	113
RADIO STOCKS	
American Sales Co.	116-117
Baltimore Radio Co.	118
Brooklyn Radio Co.	113
Dymac Radio	118
Manufacturers Salvage Corp.	118-119
Reliable Radio Co.	118
S. S. Jobbing House	113



Announcing

The Appointment of

Stern & Company, Inc.

As Exclusive Distributors of

SILVER RADIO

For New England

• EXTRAORDINARY •

With Offices at

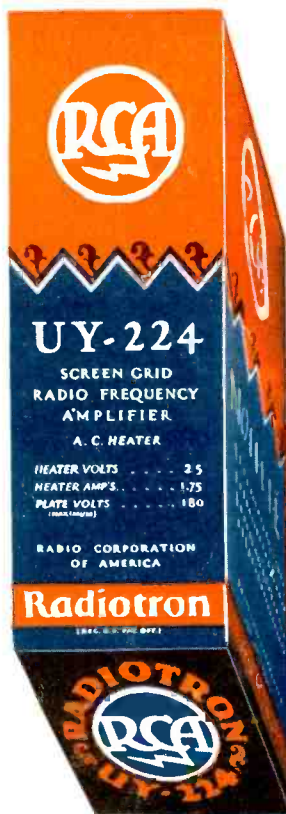
Hartford-Boston-Providence-Portland

Silver-Marshall, Inc. takes especial pride in the significance attaching to the choice of SILVER RADIO by Stern & Company, Inc., New England's largest and most successful radio distributors.

SILVER-MARSHALL, Inc., 6441 West 65th St., Chicago, U. S. A.

SILVER · ON · RADIO · IS · LIKE · STERLING · ON · SILVER

WHY experiment with your customers' good-will by selling unproved vacuum tubes? Why expose your "bread and butter" trade to the mercies of tubes that hum, howl, squeal and burn out power units? Protect your business against profit-losing alibis...by refusing to carry any but the highest quality and most uniform vacuum tubes known in the radio art...RCA Radiotrons. Day-in-and-day-out dependability in millions of sets has made Radiotrons the standard of the industry. And years of continuous advertising have made Radiotrons the easiest to sell. That's why RCA Radiotrons are the most consistently profitable item you could sell...and your greatest assurance of customer satisfaction.



Look for and insist upon the  famous RCA trade-mark

RCA RADIOTRON