

# RADIO

*and  
Television*

# RETAILING

AUGUST • 1940



LATEST TRADE GOSSIP

FOUR PHOTOSHORT PAGES

RECORDING DISC LIST

NEW STRAIGHT PHONOS

RECORD RETAILING

SOUND FOR POLITICIANS

BUDGET FOR BUSINESS

CAMPAIGN TO TIE TO

BUILDING STORE TRAFFIC

FLUORESCENT LIGHTING

SERVICING RECORDERS

LATEST CIRCUITS

PERSONAL PORTABLES Set Fast Summer Sales Pace

A  
McGRAW-HILL Publication

Price 25c

# Character Reading of a MALLORY *Vibrator*...



## *an insight into the qualities of LEADERSHIP*

It isn't necessary to actually examine a Mallory made Vibrator to know that it leads the field in efficiency and long life. Its record of performance in the auto radio sets of the nation's leading manufacturers tells you that.

But in order to know *why* it has earned its reputation you should know something of the unseen factors that go into every Mallory Vibrator whether it's for use as original equipment . . . or in the replacement field.

**CONTACT MATERIALS**—The special grade tungsten contacts which contribute so greatly to the efficiency and life of Mallory Vibrators are a development of the metallurgical division of P. R. Mallory & Co., which supplies 85% of the automotive ignition contacts used in the United States.

**VIBRATOR SPRINGS**—Another outstanding development of the metallurgical division of P. R. Mallory & Co. The special alloy used for these springs must withstand a vibration rate that makes and breaks contact 12,000 times a minute.

**OTHER CHARACTERISTICS**—Heavy, corrosion-resisting cadmium plating on frame. Unbreakable wire leads. Complete, sponge rubber sound insulation.

Mallory Vibrators are giving efficient service to the owners of millions of auto and other battery operated radios. Let this be your guide to customer satisfaction. Depend on Mallory Replacement Vibrators . . . they cost no more.

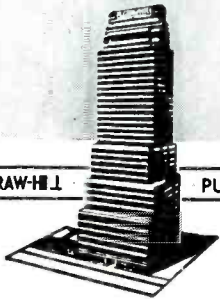
Use  
P. R. MALLORY & CO., Inc.  
**MALLORY**  
APPROVED  
PRECISION PRODUCTS

**P. R. MALLORY & CO., Inc.**  
INDIANAPOLIS INDIANA

Cable Address—PELMALLO

# RADIO

# and Television RETAILING



A McGRAW-HILL

PUBLICATION

AUGUST 1940

W. MacDONALD . . . . . Editor  
 W. CARL DORF . . . . . Associate Editor  
 VIN ZELUFF . . . . . Technical Editor  
 A. XIQUES . . . . . Assistant Editor  
 HARRY PHILLIPS . . . . . Art Director



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FRONT COVER SETS: . . . RCA Victor, Automatic, Emerson, Sonora, Majestic, Philco



SALES STATIC . . . Four dollars to repair it, eh . . . Tell you what I'll do. I paid seventy five only eight years ago . . . I'll trade you even for a new midjet!

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JAMES H. MCGRAW  
 Founder and Honorary Chairman

Publication Office  
 99-129 North Broadway, Albany, N. Y.

Editorial and Executive Offices  
 530 West 42nd Street, New York, N. Y.

JAMES H. MCGRAW, JR., President  
 Howard Ehrlich, Executive Vice President

Mason Britton, Vice Chairman

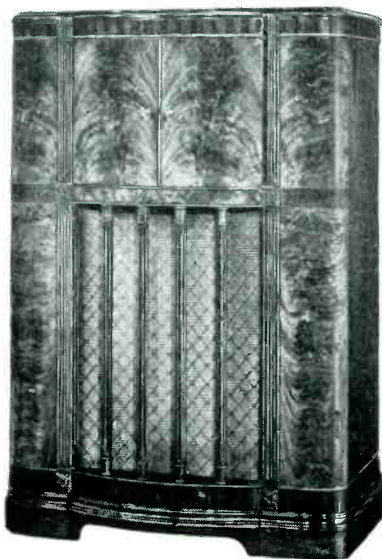
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**NEW FM**  
**STROMBERG-CARLSONS**  
**BOOST UNIT SALES and**  
**UNIT PROFITS!**



**No. 535-M** with the Labyrinth and Special FM Carpinchoe Speaker. FM, Standard and Short Wave reception. Walnut cabinet.

All Stromberg-Carlson FM Receivers are licensed under Armstrong Wide-Swing Frequency Modulation patents.

When radio dealers *telegraph* their approval of a radio line, **THAT'S NEWS!** And even more important is their report that FM Stromberg-Carlsons are *increasing unit sales and profits.*

If you want **MORE SALES . . . BIGGER SALES . . .** and **BETTER PROFITS,** push Stromberg-Carlson—the line that includes Frequency Modulation . . . backed by over a year's field experience. And remember—Stromberg-Carlson *alone* brings you the exclusive Labyrinth and Carpinchoe Speaker System that captures the utmost of Staticless Radio's extended musical range.

For complete details of the radio that's *a year ahead,* see your distributor today—or write direct to **STROMBERG-CARLSON TELEPHONE MFG. CO.,** Rochester, N. Y.

*They say . . .*

"May we express our appreciation for the opportunity Stromberg-Carlson has afforded us through the introduction of FM receivers. For the first time in years we are making profitable high unit sales. We feel the coming season will bring real prosperity to every radio dealer who hitches his wagon to the Stromberg-Carlson star."

Sam Garard, Sun Radio Co.  
New York City

"Our nearest FM station is fifty miles away but the public is convinced that FM is radio's greatest achievement in years. Have sold twenty Stromberg-Carlson receivers to date. Boston soon to have two FM stations and then we will really go."

F. T. White, Radio Manager,  
Chickering and Sons Division  
Boston, Mass.

"Frequency Modulation has given us the finest reception we ever had and is a great improvement over standard broadcasting. New FM Stromberg-Carlson models have stimulated business tremendously."

E. F. Cass, President,  
Broadway House of Music, Inc.  
Milwaukee, Wis.

"My radio business advanced forty percent selling Stromberg-Carlson FM receivers since January first. Second Frequency Modulation transmitter recently opened in Worcester area and my sales will skyrocket during next few months. Units up, profits up with Stromberg-Carlson."

Howard Amidon, Worcester, Mass.

"Effect of FM sales on our business during past six months most satisfactory. Expect to double our volume on your line with more than double profit because unit sale is greatly increased. Stromberg-Carlson FM pioneering appreciated."

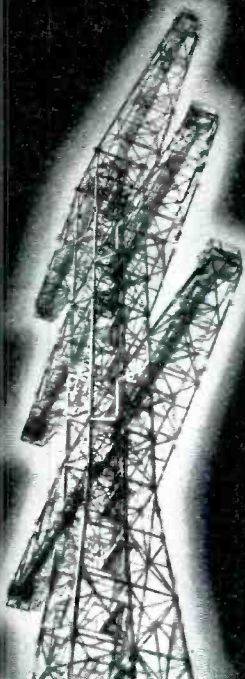
Heins & Bolet, New York City

*There is nothing finer than a*

**Stromberg-Carlson**

FOR NEW TEST REQUIREMENTS OF

# Frequency Modulation

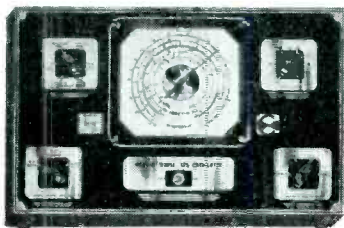


1. F.M. assigned channels 40 to 44 mc.  
— band width 100-200 kc.
2. F.M. intermediate frequencies 2 to 5 mc.  
— each stage aligned at exactly the same point.
3. Checking limiter and discriminator circuits.

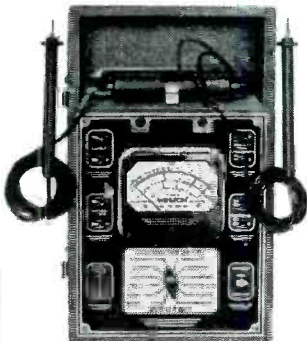
## HERE ARE THE ANSWERS:



WESTON Model 787  
U.H.F. Oscillator



WESTON Model 776  
direct-reading Oscillator



WESTON Model 772  
Super-Sensitive Analyzer

1. The WESTON Model 787 is the only service Oscillator which reads 40 kc. per division at 40 mc. This precise tuning is absolutely essential to test the band width of F.M. receivers. Each instrument is individually hand calibrated at 2 mc. intervals. (The broad frequency coverage of Model 787...from 22 to 150 mc. fundamental frequencies...safeguards against obsolescence in the event of changes in assigned channels.)

2. The WESTON Model 776 Oscillator supplies an absolutely stable signal source. Laboratory tests have shown that the frequency drift is less than .05% at 5 mc. for an operation period of several hours. This stability is the result of newly improved control circuits. With Model 776, too, an individually hand calibrated scale insures dependable accuracy over its entire frequency range of from 50 kc. to 33 mc., fundamental frequencies.

3. Because of frequency limitations of present visual aligning equipment, current measurements down to 1 microampere offer the only means of checking I.F. alignments, cut-off point on limiter tube, and adjustment of discriminators. WESTON Model 772 Super-Sensitive Analyzer offers all ranges necessary to make these sensitive measurements; plus additional ranges for all customary voltage, current and resistance measurement needs.

Full particulars on the above instruments are available in bulletin form, and will gladly be sent on request. Weston Electrical Instrument Corporation, 581 Frelinghuysen Avenue, Newark, New Jersey.

# WESTON Instruments

# Now ROCK-OLA

World's Greatest  
Phonograph Maker

# The Biggest.



Here's the  
**ROCK-OLA**

Console Recorder MODEL RA-4

1 of 6

**GREAT VALUES THAT WILL**

Make Records    Play Records  
Receive Radio

List Prices Range from  
\$59.95 to \$149.95

(Model shown, \$99.95)

**LOOK TO ROCK-OLA FOR LEADERSHIP - AND FOR  
THE FEATURES THAT MAKE THEM WANT TO BUY**

*Distributors:*

A few choice territories are still available. Write or wire at once for complete details.

Rock-Ola Recorders are backed by Rock-Ola's nation-wide reputation as makers of the "greatest phonograph produced in the greatest factory in the industry", as one of the Nation's 10 leading furniture manufacturers. These points are essential in producing home recorders with sales-making features like these:

- Built Specially for Home Recording
- Single Button Switch-Over
- Separate Crystal Arms for Recording and Playing
- Simplified Level Indicator for Recording
- Tone Control
- Convenient Microphone Outlet on Instrument Panel
- Wide Angle Sound Distribution
- Automatic Light in Cabinet
- Built-in Record Storage Cabinets
- Luxurious Cabinets—Designed and built in our own great furniture factory





## For Really "Big-Time" Profits from Home Recorders . . . Back Rock-Ola

● *Home record-making is here*—the thrill and fun sensation of the century. Are you ready for it?—ready to capitalize on this lushest market since radio itself? Think of it in terms of the thousands, the millions, who will find a tremendous irresistible appeal in the suggestion "make records at home as simply as you switch on a light"—and plan now to get your share.

Now, as you read these words, the huge Rock-Ola factory is turning out 6 great models—and the Rock-Ola organization is developing a merchandising plan to help you move them in big volume.

Rock-Ola, as the world's greatest phonograph maker, and as one of the 10 furniture manufacturers with national distribution, has the background, the experience and the ability to help you put across this grand new, eagerly awaited instrument.

So, expect to find in Rock-Ola Recorders *all* the *engineering points* required for simple, satisfactory, care-free operation; plus *all* the *convenience features* that such an instrument needs to have mass consumer appeal.

And be prepared for *cabinet styling and design* that will mark Rock-Olas outstanding on that one point alone.

Get set for prices in a range that mean mass sales—from a bottom list of only \$59.95 to \$149.95 for the finest model—with full discounts on every set.

Above all, look for the backing that only an organization like Rock-Ola can give—for advertising, sales promotion and merchandising all aimed at selling an exclusive home recorder line.

Does it read like a worthwhile proposition? Then do this: Get the complete Rock-Ola story—now—before the big Fall and Winter season. Find out how a Rock-Ola dealership puts you in line for big, quick profits from this exclusive home recorder line. Mail the coupon today.

**IMPORTANT:** *Be sure to ask about Rock-Ola's sensationally-priced home recording discs.*

**Dealers —GRASP THIS OPPORTUNITY NOW!**

Take advantage of the rapidly rising trend toward home recorders in your locality. Find out how Rock-Ola backs you with a liberal, profitable dealer set-up.

**MAIL COUPON TODAY!**

# ROCK-OLA

MANUFACTURING CORPORATION  
800 North Kedzie Avenue • Chicago, Illinois

ROCK-OLA MANUFACTURING CORPORATION,  
Dept. R. R. 9, Recorder Division,  
800 N. Kedzie Ave., Chicago, Ill.

- Please send us the complete Rock-Ola dealer story, including details on merchandising plans, discounts, etc.
- I am interested in Rock-Ola Discs.

Name .....

Firm .....

Address .....

City.....State.....

# TWO GREAT

## JOIN COLUMBIA'S LIST



### Leopold Stokowski conducting the All-American Youth Orchestra

**A** GAIN Columbia announces one of the greatest scoops in record history! Two more of the world's most famous musical names—names that really build sales—have now been added to Columbia's unbeatable list of exclusive classical artists and orchestras!

But that's not all! Besides one of the most amazing arrays of talent ever assembled, Columbia offers you 3 OTHER SPECTACULAR SALES ADVANTAGES: *First*, Columbia's new low prices open vast new markets for sales of fine recordings! *Second*, Columbia "Masterworks" are today the finest records ever made. They give your customers *greater fidelity . . . less surface sound . . . and longer wear* than ever before! *Third*, Columbia "Masterworks" at the new low prices are now backed by the biggest, hardest hitting advertising campaign in the industry's history!

## NOW THE WORLD'S GREATEST ARTISTS ARE ON COLUMBIA "MASTERWORKS"

Leopold Stokowski Conducting  
The All-American Youth Orchestra  
The Philharmonic-Symphony  
Orchestra of New York  
John Barbirolli, Conductor  
Artur Rodzinski and the  
Cleveland Orchestra  
Frederick Stock and the  
Chicago Symphony Orchestra  
Dimitri Mitropoulos and the  
Minneapolis Symphony Orchestra

Sir Thomas Beecham  
Felix Weingartner  
Igor Stravinsky  
Howard Barlow  
Andre Kostelanetz  
Joseph Szigeti  
Nathan Milstein  
Alfredo Campoli  
Walter Gieseking  
Egon Petri  
Edward Kilenyi

Robert Casadesus  
Nelson Eddy  
Nino Martini  
Don Cossack Chorus  
Bartlett and Robertson  
Gregor Piatigorsky  
Emanuel Feuermann  
Ernst Victor Wolff  
Charles Kullman  
Josephine Antoine  
Budapest String Quartet

Roth String Quartet  
Pasquier Trio  
Lener String Quartet  
Stuyvesant String Quartet  
Curtis String Quartet  
Dorian String Quartet  
Maurice Evans  
Orson Welles  
Roland Hayes  
Kathryn Meisle  
Carlo Morelli

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*Columbia*



# NEW NAMES OF EXCLUSIVE ARTISTS



The Philharmonic-Symphony  
Orchestra of New York

Feature these Sensational  
new September Releases!

**Leopold Stokowski**

CONDUCTING THE ALL-AMERICAN  
YOUTH ORCHESTRA

THE STAR SPANGLED BANNER  
GOD BLESS AMERICA  
10-inch record No. 17204-D

.75

SYMPHONY NO. 5 IN E MINOR  
("From the New World")  
(Dvorak). Set M-AM-MM  
416. Six 12-inch records.

\$6.25

THE PHILHARMONIC-SYMPHONY  
ORCHESTRA OF NEW YORK  
JOHN BARBIROLLI, CONDUCTOR  
SYMPHONY NO. 2 IN D MAJOR  
(Brahms). Set M-AM-MM  
412. Five 12-inch records.

\$5.50

For Big Volume Keep these 2  
Best Selling "Masterworks"  
always in stock

SCHEHERAZADE (Rimsky-  
Korsakov). The Cleveland  
Orchestra, Artur Rodzinski,  
Conductor. Set M-AM-MM  
398. Five 12-inch  
records.

WERE	NOW
\$10.00	\$5.50

NUTCRACKER SUITE (Tchaikovsky). Chicago Symphony  
Orchestra, Frederick Stock,  
Conductor. Set M-AM-MM  
395. Three 12-inch records.

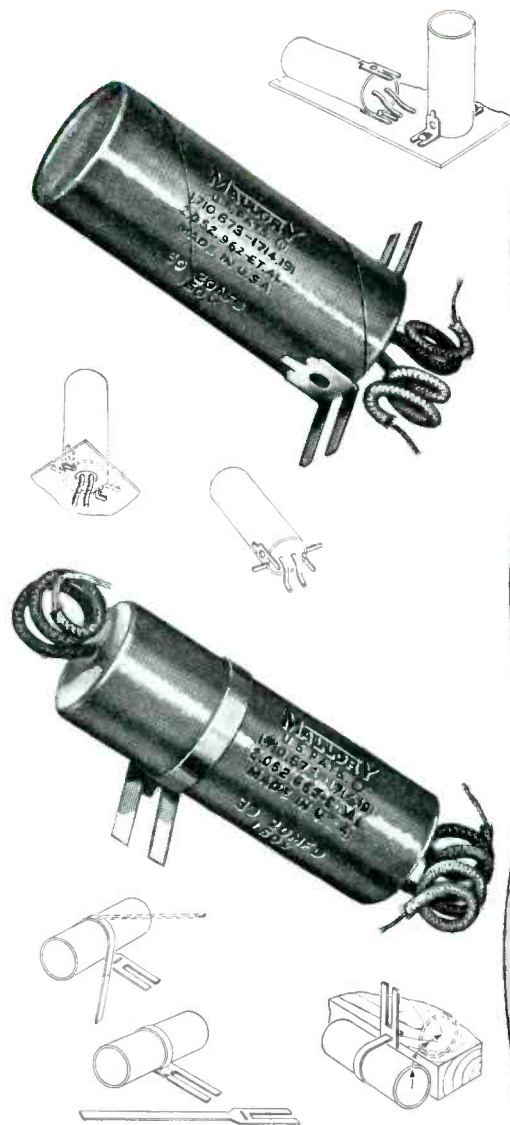
\$5.00	\$3.50
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 "MASTERWORKS" *Records*

**COMPLETE  
COVERAGE**  
for  
**Your Condenser  
Requirements**

**P.R. MALLORY & CO., Inc.**  
**MALLORY**



**“TUBULARS”**

**for every replacement need**

Here's the answer to replacements on millions of condensers now in use . . . and the only adequate answer to the problem of replacements on inexpensive compact receivers.

On every point, the Mallory line of Tubular Condensers assures you of faster, more efficient replacement . . . at a better profit. The line is complete. You never have to compromise on replacement needs. And each individual unit reduces mounting problems to the simplest possible form.

Remember . . . Mallory Tubular Condensers have been developed around an exhaustive study of *all* original equipment types. You can be sure of the exact replacement you need every time.

**Over 50 Ratings to choose from**

Mallory Tubular Condensers include, wherever sizes permit, multiple separate section units. The complete line is furnished in attractive, neat, permanently marked tubes . . . definitely sealed against humidity and moisture. All condensers are provided with 6-inch flexible leads for installation convenience.

Use

**P.R. MALLORY & CO., Inc.**  
**MALLORY**  
APPROVED  
PRECISION PRODUCTS

**2000 to 1  
Odds  
Against  
Comebacks**

# Replacement CONDENSERS

**\*FP (Fabricated Plate) CONDENSERS**  
TRADE MARK REG. U. S. PAT. OFF.  
made by **MALLORY**

Nothing cuts into profits so deeply as customer comebacks. That's why so many radio service engineers are standardizing, wherever possible, on FP Condensers, made by Mallory. They have found that here is the final answer to this troublesome problem.

An accurate check on field returns from representative manufacturers covering the performance of 1,000,000 FP Condensers, made by Mallory, showed the startling fact that *only 512 had been returned as defective*. That's only 5/100ths of 1%! 2000 to one odds against a comeback!

In replacement service, FP Condensers, made by Mallory are turning in equally high performance records. Radio service engineers, as well as radio manufacturers, hail them as the greatest advance ever made in condenser construction and performance. Specify FP Condensers on your next order and be sure you get the genuine. You'll recognize them in the sets you service by the name MALLORY or by the number (i) enclosed in a circle.

**\*FP (Fabricated Plate) Tubular Condensers (Type BB)**

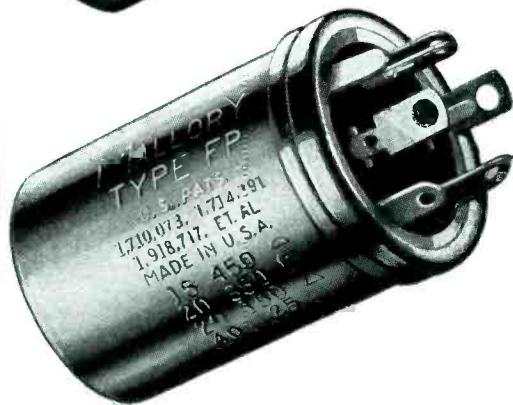
Every advantage of FP construction is afforded in these small, metal encased tubulars. Made with one piece drawn aluminum can and insulated with an attractive cardboard cover clearly marked for rating identification. Strong internal construction eliminates troublesome open circuits.

**P. R. MALLORY & CO., Inc.**  
INDIANAPOLIS INDIANA  
Cable Address—PELMALLO

See Your Mallory Distributor for Complete Information Today!

*Include*

VIBRATORS • VIBRAPACKS • CONDENSERS • VOLUME  
CONTROLS • ROTARY SWITCHES • SINGLE AND  
MULTIPLE PUSH BUTTON SWITCHES • RESISTORS  
RADIO HARDWARE



\*Not etched construction

# For Record-Making Profits—Feature These Home-Recording RCA Victrola Models

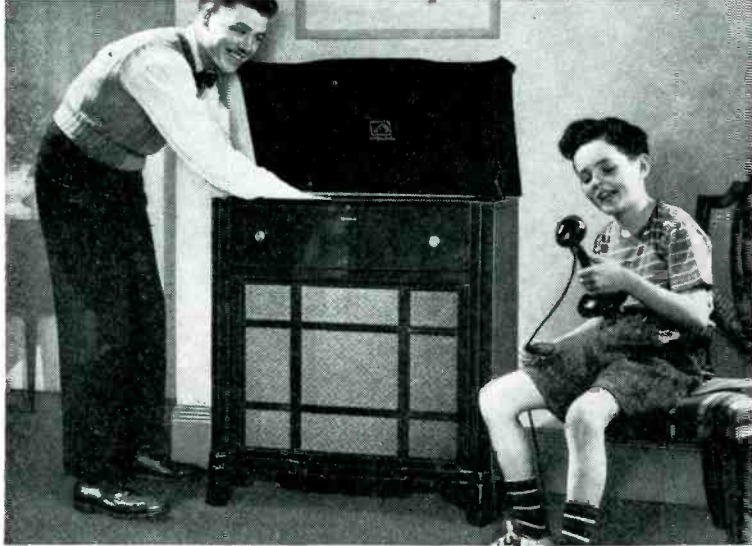


Yes, sir—they're the profit-pullers you've wanted to sell—with the big feature your customers have wanted to buy—home recording!

And it's built-in home recording—not just an "attachment." It is built by RCA Victor engineers who designed the high fidelity recording equipment used for Victor Records and in leading Hollywood studios. With it, both bass and treble frequencies are faithfully recorded, and your customers will find their home recording will compare with standard records!

In addition, these superb instruments offer both records and radio entertainment at its best, and the magnificent styling of cabinets gives you an extra plus in sales appeal!

Call your distributor right now for full information—and don't forget to ask about the special extra value offer with each of these great instruments!



### 1. RCA VICTROLA MODEL VHR-202

RCA Victor Gentle Action automatic record changer . . . American and foreign reception . . . 8 RCA Victor Preferred Type Tubes plus Magic Eye . . . stabilized tuning (6 stations) . . . built-in antennas for domestic and shortwave reception . . . complete facilities for home recording! Also available without home recording as Model V-200.



### 3. RCA VICTROLA MODEL VHR-407

Authentic period cabinet . . . RCA Victor Gentle Action Record Changer . . . exclusive RCA Victor Tone Guard . . . stabilized electric tuning (6 stations) . . . 10 RCA Victor Preferred Type Tubes plus Magic Eye . . . American and foreign reception . . . built-in antennas for domestic and shortwave reception . . . complete facilities for home recording! Available without home recording as Model V-405.



### 2. RCA VICTROLA MODEL VHR-207

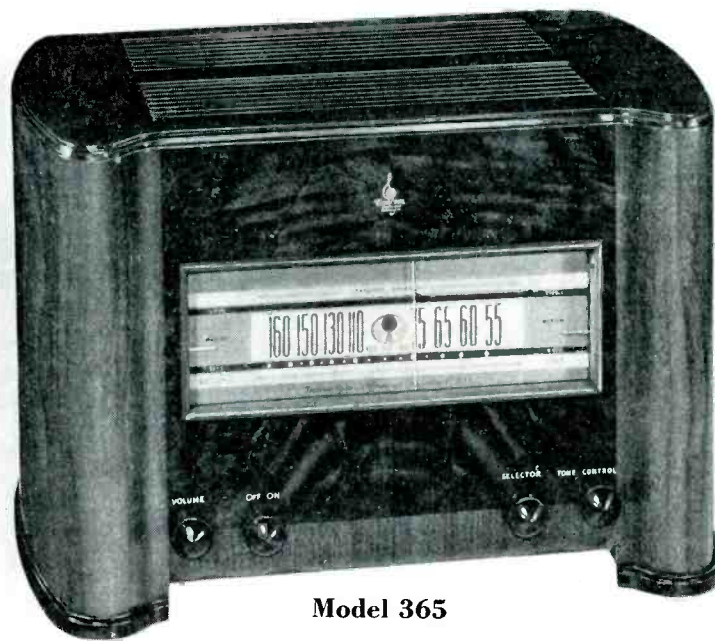
RCA Victor Gentle Action automatic record changer . . . exclusive RCA Victor Tone Guard . . . stabilized electric tuning (6 stations) . . . 10 RCA Victor Preferred Type Tubes plus Magic Eye . . . American and foreign reception . . . built-in antennas for domestic and shortwave reception . . . complete facilities for home recording! Available without home recording as Model V-205.

For finer radio performance, RCA Victor Preferred Type Tubes. Trademarks "RCA Victor" and "Victrola" Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc. Ask about the new RCA Victor Long Life Needle.

*Introducing* A NEW KIND OF RADIO

*Emerson*

HIGH FIDELITY . . . 20 WATTS OUTPUT



Model 365

IN A DE LUXE TABLE MODEL

*The Studio Grand \$59.95*

*(Slightly higher West and South)*

**O**NLY golden words can describe the breath-taking tone—its matchless beauty—its all-embracing performance . . . Here, for the first time in a table model, is ACTUAL High Fidelity with perfect “3-dimensional” tone, from a whisper to a completely fulfilling reception of a symphony . . . Here is reproduction for which a true music-hungry public has long been waiting . . . 20 watts output—four to eight times the power output of average radio. It remained for EMERSON to create and to price this masterpiece within buying reach of thousands.

8-Tubes plus Electron-Ray tuning . . . 20 watts Push-Pull

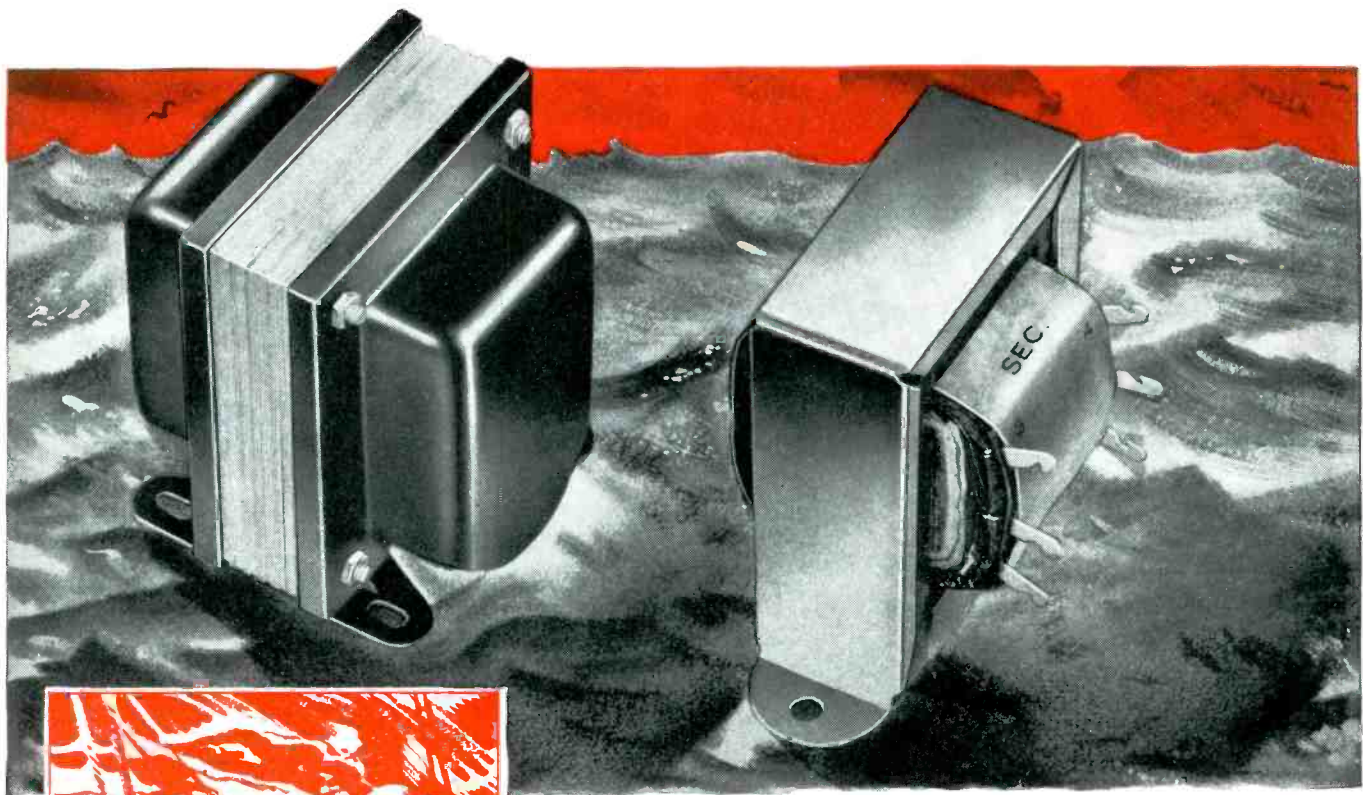
Beam Power Output . . . 8-inch Heavy Duty Electro Dynamic Speaker . . . Inclosed-improved Super-Loop Antenna . . . Acoustically Constructed Cabinet: Sta-Bent Construction. Center-matched butt-walnut and vertical grained striped walnut veneers. Hand-rubbed finish.

**77 New 1941 Emersons . . . \$9.95 to \$199.95**

Ask your Emerson distributor for descriptions, prices, discounts, and local and national promotion of the complete new 1941 Emerson line. See HOW AND WHY Emerson dealers are again piling up new sales “highs.”

EMERSON RADIO AND PHONOGRAPH CORPORATION • NEW YORK, N. Y.

*World's Largest Maker of Home Radio*



# UTAH TRANSFORMERS ARE *"Dressed"* FOR ROUGH WEATHER!

"The weather-resistance of a skipper on a fishing smack"—that's what they say about Utah Transformers.

A non-corrosive, protective film of cellulose acetate provides absolute insulation—prevents breaking down, even under extremely high humidity and other atmospheric conditions which are so frequently destructive to ordinary transformers. The high safety factor of their insulation is proved by the extra hours of satisfactory performance of the Utah Transformers which are standard equipment in millions of receivers throughout the world.

Precision manufacturing and the use of other scientifically selected materials such as high silicon content

steel, used in all laminations, make Utah Transformers uniformly dependable. These fully guaranteed transformers are individually boxed, with complete instruction sheets.

Utah Transformers are sold through parts jobbers everywhere. If you do not have your copy of the new Utah illustrated catalog containing complete information about the transformer line and other Utah products—write for it today—there is no obligation. UTAH RADIO PRODUCTS COMPANY, 810 Orleans Street, Chicago, Illinois. Canadian Sales Office: 560 King Street West, Toronto. Cable Address: Utaradio, Chicago.



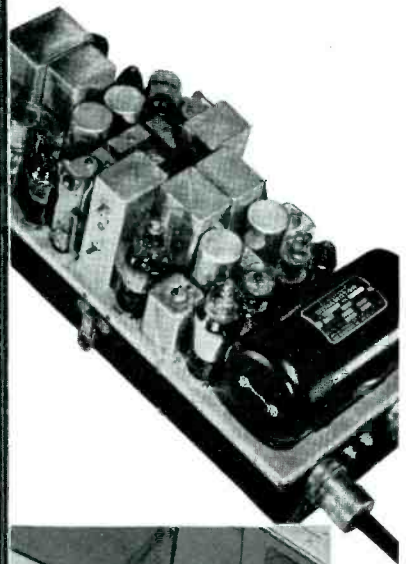
## TRANSFORMERS

SPEAKERS • VIBRATORS • UTAH-CARTER PARTS

U. S. GOVERNMENT

APPROVED

AVIATION DIRECTION FINDER IS RAYTHEON EQUIPPED!



An acknowledged leader in the field of aircraft radio direction finders, is Learradio. Their equipment bears the official mark of approval of the Civil Aeronautics Authority and is used not only by the United States Government but also by the Governments of Canada, China, England, Japan, Peru, Sweden and many others.

It is not surprising that an independent survey by the Lear engineers of available tubes for these delicate and vital instruments showed RAYTHEONS to be the best for the work and most reliable.

Yet these are the same tubes from the same production that you might be using as replacements in an ordinary home radio receiver! Is it any wonder that the best engineers of Set Manufacturers and most successful Servicemen use RAYTHEONS in their work? Especially since RAYTHEONS actually cost no more!

Raytheon Production Corp., Newton, Mass., New York, Chicago, Atlanta, San Francisco.



**RAYTHEON**  
MAKES THEM ALL

WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS

# FARNSWORTH DEALERS GET THIS EXTRA PROFIT!



## WITH THIS CAPEHART-FARNSWORTH AUTOMATIC RECORD CHANGER

This startling, new Capehart-Farnsworth Automatic Record Changer (Model BP-2) cracks the radio market wide open . . . gives you an opportunity to make *another* sale — a *profitable* sale — to customers who have already bought a radio. • It will increase sales in your record department. A dramatic home or showroom demonstrator, it gives you a chance to **SELL-UP** these record customers to a Farnsworth phonograph-radio.

### FOR A BOOMING MARKET!

Realizing the promotional possibilities to the dealer of an Automatic Record Changer attachment, Farnsworth introduced this startling value at its June convention. It went over big—has continued to be a great sales producer, outstanding even in the broad Farnsworth line.

### THEY TRY IT—THEY BUY IT!

Model BP-2 is the famous Capehart-Farnsworth Record Changer housed in a beautiful cabinet that will harmonize with the design of any quality radio receiver. It plays fourteen 10-inch or ten 12-inch records automatically. One of the quietest changers ever built, its mechanism is simple and fool-proof. A demonstration always means a sale.

### ★ ACT NOW! ★ ★ ★

The Capehart-Farnsworth Record Player, like the entire Farnsworth line, is priced to *move*. It's competitive . . . and **HOT!** Get the profit-producing facts from your Farnsworth distributor this very week! Farnsworth Television & Radio Corporation, Fort Wayne, Indiana.

### FARNSWORTH...MAKERS OF RADIO AND TELEVISION TRANSMITTERS AND RECEIVERS, THE CAPEHART, THE CAPEHART-PANAMUSE AND FARNSWORTH PHONOGRAPH-RADIO COMBINATIONS



**THE GAINSBOROUGH** is typical of the style, performance, and value of the broadest combination line in the industry—Farnsworth.



**DISTINCTIVE STYLES**—Outstanding values in every console price bracket — providing real demonstrable, sales-making features.



Farnsworth also combines styling with performance and outstanding value in a complete table model line of both wood and plastic cabinets.



Another Farnsworth innovation — an Automatic Phonograph-Radio Combination in Chairside model that has *everything*—including a low list price.

### ★ TYPICAL FARNSWORTH VALUE LEADERS ★



**"BUY NOW!  
AND  
Save \$15"**

**MAGIC WORDS that are selling  
FEDERAL RECORDING RADIOS**



Check this for tops in Dollar Value. Model 301 Federal Console,—Microphone Recording, Off-the-Air Recording, Electric Phonograph with automatic record changer, Recording Circuit Radio, Home Broadcaster, all in one beautiful cabinet for only \$129.95

Radio Dealers Can Now Offer Their Prospects a Saving of \$15 on a Console Model Federal, a Great Big Added Advantage in Selling This Superlative Home Recorder.

**ONLY FEDERAL DEALERS CAN  
MAKE THIS OFFER!**

Here's your opportunity to turn these waiting prospects into cash customers *quickly*. Offer them a saving up to \$15 on the purchase of a Federal Recording Radio,—if they buy Now. See for yourself what a powerful inducement you have in the exclusive Federal Deal. It is working magic everywhere. It will work magic for you.

**WRITE OR WIRE FOR DETAILS**

**BRINGS PROSPECTS  
TO YOUR STORE**

**SELLS FEDERAL  
RECORDING RADIOS**

**BRINGS CUSTOMERS  
BACK 1 TO 30 TIMES**

**GIVES YOU CON-  
TINUOUS DISK AND  
NEEDLE BUSINESS**

**FEDERAL RECORDER CO., INC.**  
50 West 57th Street Dept. 8110 New York, N. Y.

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**FEDERAL RECORDING RADIOS ARE THE WORLD'S GREATEST RECORDER VALUES  
MOST DEPENDABLE PERFORMANCE. WIDEST RANGE OF MODELS**



**Federal Perma Disks**  
Non-inflammable, shavings will not burn; heavy metalbase, non warp, non slip; hundreds of high fidelity playbacks; perfect recordings without surface noise. Priced 23, 30, 40, and 50 cents. Sell Federal Perma Disks if you want that sweet and lasting repeat business.

Portables, Table Models, Consoles with or without record changers, professional models too, all priced to yield the highest dollar value. Beautiful cabinets, finely designed and finished, distinguish the entire Federal line. Federal Performance in faithful recording, in fine radio reception and phonograph reproduction stands unexcelled, acknowledged the world's best.

**Help! Help! for Dealers**

Folders to hand out or mail to prospects —colorful attention-getting window cards to bring passersby into your store —free newspaper ad mats — Use them all to boost your sales of Federal Recording Radios and Perma Disks!



No. 116 Portable Model \$72.50



No. 111 Table Model \$69.95



No. 306 Console, Rec-ord Changer \$159.95

# WESTINGHOUSE *21st Birthday* RADIOS



**YOU CAN'T MISS  
WITH THIS 1941  
CELEBRATION LINE!**

"You know, 1941 is the 21st Birthday year of American radio—because back in 1920 Westinghouse made the first radio program broadcast and the first commercially built radio receivers for home use. In celebration of these events the 1941 Westinghouse Radio Line offers the public something finer in radio beauty and performance than ever before. I've been in the radio business a good many years, and this is a fast-selling, money-making line if I ever saw one!"

**YOU COULDN'T ASK  
FOR MUCH MORE...  
EYE-CATCHING STYLES! REAL PER-  
FORMANCE! FAST-MOVING PRICES!  
AND HANDSOME PROFITS, TOO!**

"Two leaders at the moment are models WR-484 and WR-388, but you'll find every number in the Westinghouse 21st Birthday Series a triumph in tone quality, cabinet construction and design. Every set is priced to enable you readily to meet competition. And you'll like the profit margin!"

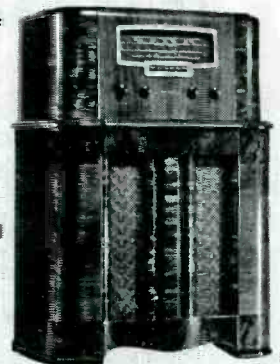


**WHY NOT PHONE YOUR NEAREST WESTINGHOUSE DISTRIBUTOR NOW?**



**MODEL WR-484**

A radio-phonograph combination of distinctive design. Walnut or mahogany. Automatic Record Changer.



**MODEL WR-388**

A commanding "dome" design console. Six feather-touch tuning buttons. Big 12" speaker.

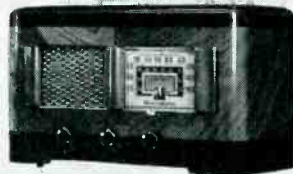
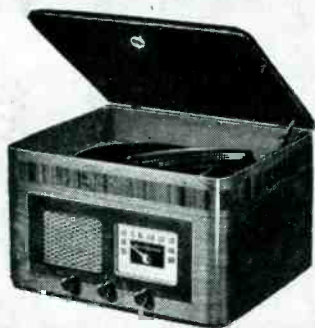


**MODEL WR-288**

The Aristocrat of table models! Three band superheterodyne. Five tuning buttons.

**MODEL WR-480**

A radio-phonograph table model. "Easy-Lift" Lid. Six tuning buttons.



**MODEL WR-182.** A truly handsome ensemble of rich walnut woods. Electro-dynamic speaker.

**MODEL WR-478.** A radio-phonograph combination offering exceptional value! Plays 10" or 12" records. Built-in Loop Antenna.



**Westinghouse** *Precision* **RADIO**

## AUDIO and VIDEO

**P**EEWEE PORTABLES, small and light enough to be worn like candid cameras, have caught the public fancy. Introduced in some instances by manufacturers not too certain they would move in view of relatively high lists, such sets have proven once again that merchandise filling a definite need and properly styled takes the consumer's eye off the dollar sign. This is a lesson the industry has been a long time learning.

**FALL CAMPAIGN PLANS** (*we'll have much more to say about them in the September issue*) of radio retailers should most certainly include promotion of the "Listen Before You Vote" idea. Heretofore, listener interest in presidential campaign speeches has swelled set, accessory and service sales very noticeably despite the fact that the trade itself made little effort to foster such listening. Results should be even greater if we all take hold of the theme suggested by broadcasters and really push.

**PHONO - COMBINATIONS** involve a big enough unit sale to warrant home demonstration. And home demonstration can be profitable. Merchandise manager of one of the nation's largest music houses tells us he wrote all customers, offering to give a concert of ten records in their own homes. One out of every seventy-five invited him out to the house and one out of every ten private concerts resulted in sales. *What one man can do other men can duplicate.*

**TELEVISION STANDARDS** have been dumped squarely into the lap of receiver manufacturers to agree upon. Formed through the initiative of RMA but not yet part of that body, a television committee is now at work on the problem, has been assured that the FCC will welcome its findings and recommenda-

tions. Washington will, we hear, refuse to move until the industry itself is in reasonable accord but is urging that facts be placed in its hands by mid-winter. The complexity of the job facing the committee is such that this is little enough time. So definite action by the Communications Commission is scarcely possible before 1941.

**FREQUENCY MODULATION** got a boost in the New York area when W2XOR opened up August 1 with 15 hours daily. This is more than twice what the FCC now demands of a licensee and, if the stuff heard is a fair sample of what listeners are to be fed regularly, is certain to swell the sales of merchandise capable of receiving the ultra-highs. Management claims this is the heaviest regular schedule to date but we suspect the station won't hold this unique honor long.

**COIN MACHINES** of some makes include built-in gadgets that print a running record of the number of times each disc is played. Get next to the operator and you have a swell guide for your own record purchases. Incidentally, true story of the month was told to us by a coin machine manufacturer who says sales went up by leaps and bounds when a model was designed with the pushbuttons up top and at a convenient angle. Ladies frequenting "jook joints," it seems, dislike to bend over!

**FAR BE IT** from us to recommend new sidelines outside the business, especially at this time when there are so many more electronic products and electrical home specialties to sell than ever before. But in the interest of news we must report the following: Quite a number of parts jobbers and some dealers are successfully moving model airplane supplies, particularly for machines using flea-power gasoline

engines. In some sections the hobby is running photography a close second. One New York newspaper now devotes a half-page to the subject.

**RADIO INTERFERENCE** is becoming no lighter as the years go on. Out in some rural districts just wired with REA funds strange noises never heard before are coming in over farm radios. Is this a necessary penalty of progress? And in some big cities the skyrocketing popularity of certain types of fluorescent lighting is doing reception no good. There's always something!

**SAYS POLICEMAN H. F. Wareing**, radio engineer of Milwaukee's municipal station, writing about complaints of interference from his transmitter in the very interesting bulletin of the Associated Police Communications Officers: "I have often wondered if, supposing somebody should buy a car with solid tires and no springs, they would complain to the Highway Department about the roughness of the roads." That's a pretty strong indictment of the performance of cheap competitive radios and one which we hope new trends toward higher quality design will this year remove.

**SPEAKING OF TRANSMITTERS**, we have . . . as one of the nation's many licensed amateurs . . . just complied with the FCC's latest order aimed at possible "5th Column" activities in this country. To Washington went our photo (only a mother could love that mug), birth certificate (proving that we were, indeed, born) and fingerprints (hitherto stained only by printer's ink).

*We'll be good, Uncle . . . . .*

*Mac*  
W. MacDonald  
EDITOR

# PHOTO *Shorts*

Pictures from the News  
to help you SELL



## WHY DISC DEALERS MAKE MONEY

Over 10,000 jitterbugs jammed their way into the RCA exhibit area at the New York World's Fair the other day when Larry Clinton and his Victor recording orchestra staged a personal appearance. "Hep cats" danced holes in the pavement

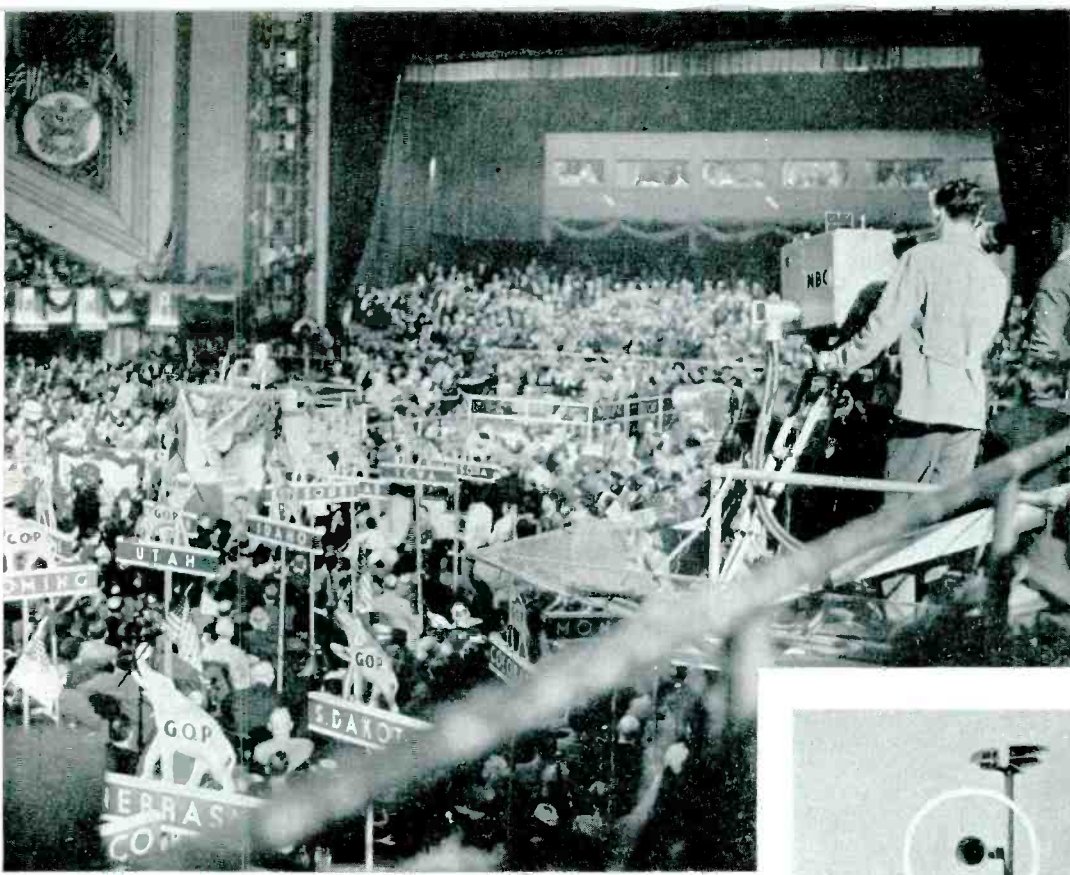
## GROWTH, IN THE GROOVE

Rapidly proving itself an important adjunct to the filming of children by parents is home recording. Dealers everywhere report that machines such as this Philco tilt-front combination virtually do for home movies what sound did for commercial flickers back in the twenties. Pressing need in many homes will soon be disc storage space



## PAGING MR. PSMITH

Built into a familiar portable radio carrying case for test at the recent Parts Show in Chicago was this novel battery operated pedestrian sound system. Sheepish guinea pig was "town crier" Henry Mirrow, alternately hooted and applauded but rarely ignored. So the device will soon be seen commercially

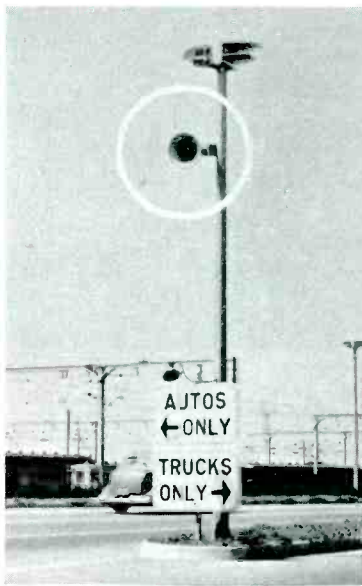


### HOW G.O.P. WAS TELEVISED

From a special platform built out from the balcony of Convention Hall in Philadelphia like a swallow's nest (note wire screen protecting heads below against hammers et. al.) NBC's television cameras scanned Republican delegates who nominated Willkie for president late last month

### FOR DRIVERS WHO CAN'T READ

Passenger cars and trucks are double-directed (right) into separate lanes on the San Francisco-Oakland bridge approach. An arrowed sign starts the traffic split and the voice of a policeman emanating from an Atlas speaker mounted just above completes the job



### PLACE TO SELL PROGRAMS

Motorists, pedestrians of Wichita depend upon this illustrated bulletin board maintained by Swan-Woolsey Radio for best broadcast bets. Removable "shingles" hang from cupboard hooks, are locked in place by vertical chain



### GLAMOR GIRL SELLS DITTO TONE

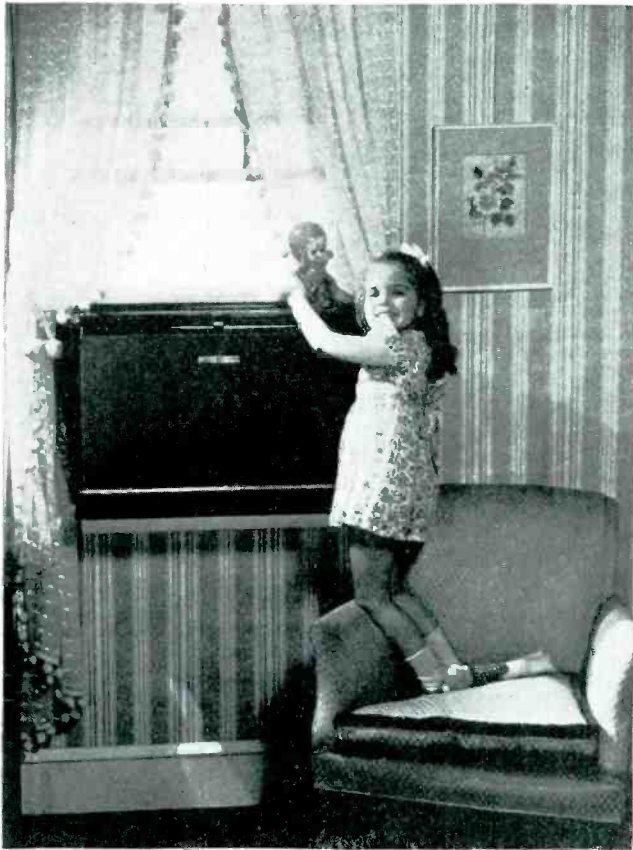
Publicity stunt of the month is the placing of pretty Audree Warner on the Cincinnati Crosley distributor's payroll. She promotes the firm's 1941 Glamor-Tone radio line, travelling from store to store in a red and white car of the same make



### TELE'S BIGGEST SCREEN?

Snapped in mid-Manhattan's Hotel Wellington shortly after installation was this new television receiver providing an image measuring 11 1/4 by 15 inches. DuMont claims the picture is the largest at present available for home and public center use





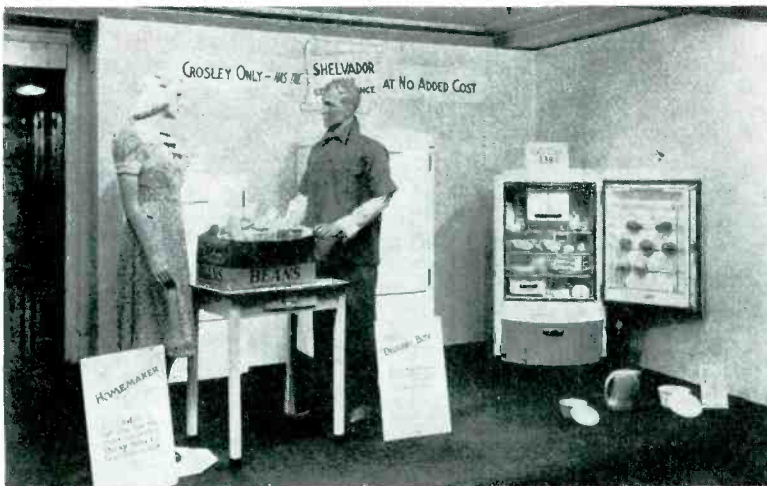
### SEASON FOR CONDITIONING

This is the big month for the sale of air-conditioning equipment, as you no doubt realize in that hot store. Not the least effective customer approach is the comfort and health of children. G-E photo effectively illustrates point



### DESK TOP KEPT CLEAR

Just installed in New York Mayor Fiorello H. LaGuardia's desk is this Pilot portable. It turns on when the drawer is opened. Standing, ex-Mayor Jimmy Walker, a highly interested spectator in the operation of this compact set

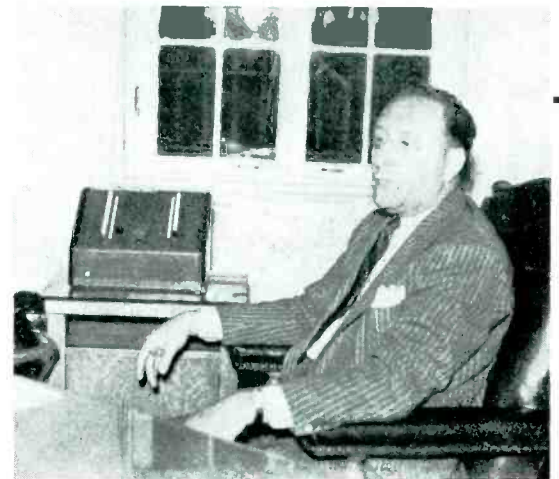


### NOT SO DUMMY

Here's the way Spear's of Pittsburgh dramatized the quantity of food a Crosley Shelvador refrigerator holds. The window pictured was used during a campaign, contained figures representing housewife and grocery boy

### MECHANICAL STOOL PIGEON

Out in Cook County Prison Warden Frank G. Sain uses this Webster-Chicago Amplicall unit in his office, listens in on goings-on in the kitchen, reception room, garage and store room. You can't win!



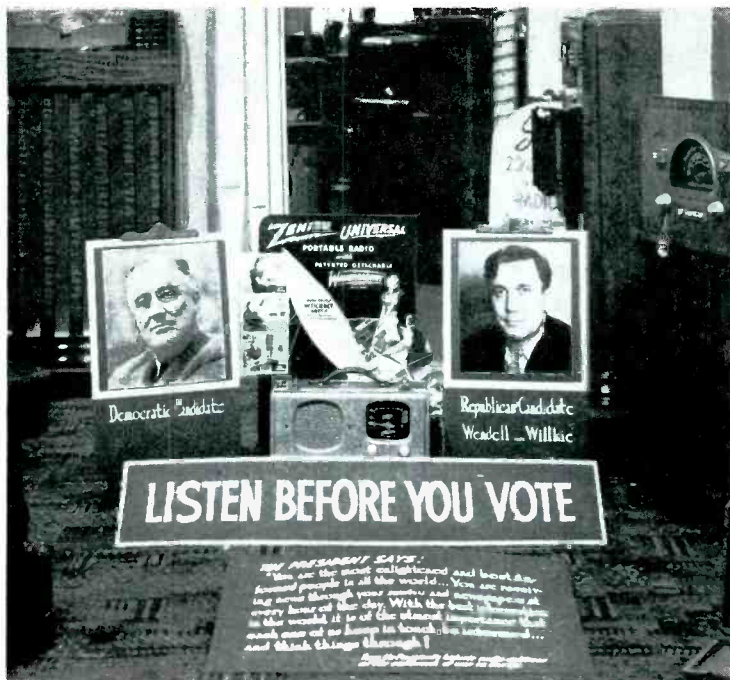
**EFFECTIVE, CHEAP,  
COMPACT**

It need not be expensive to install an effective record-selling and demonstration counter nor need the counter take up much room. Central Electric of Horseheads, New York, proves it with this photo



**OTHER DEALERS  
PLEASE COPY**

Here's the way the F. Cappel Furniture Company of Middletown, Ohio, promotes the "Listen Before You Vote" campaign idea (read "Campaign To Tie To" in this issue) in its window. How many more dealer displays have already been wrapped around that important theme?



**CURE FOR HOTHEADS**

Wilbur Shaw, ace entrant in the Indianapolis 500-mile Speedway classic, removes his chilled crash helmet from a Norge refrigerator in the pits before winding up his racer for a run. Says it helps him keep a cool head in the broiling heat on the track



**TOO HOT TO READ? . . . MAYBE SO. BUT  
NEVER TOO HOT TO LOOK AT PICTURES . . .**

**That's Why We've "Doubled-Up"  
This Month On the Number of**

**PHOTOShorts From the News to Help You Sell**

# RADIO RECORDING

## *Goes to a Party*

SOMETHING DIFFERENT in home entertainment, the new machines have captured the amateur entertainer's fancy

*By* HOWARD BARMAN

**R**ADIO RECORDER SELLING calls for specialized effort, say Missouri radio retailers who have made substantial sales in this market. Outside canvassing and telephone solicitation where the recorder may have a distinct appeal is part of the job.

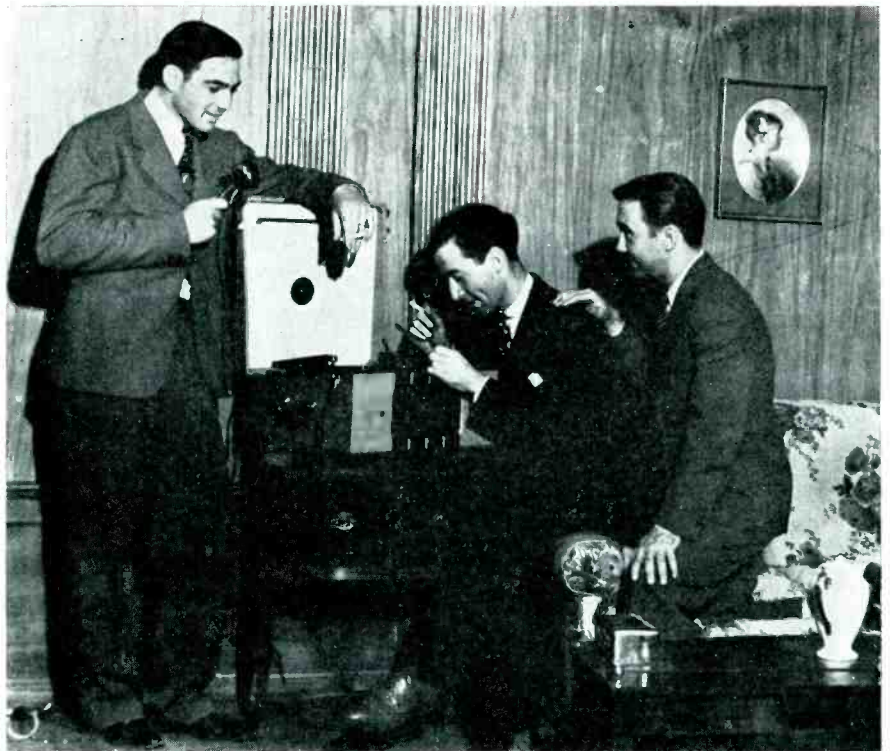
Many delved through their card index files of home appliance customers when inexpensive instruments were made available and tried to determine who would be potential prospects for an investment in this type of home entertainment.

*Do you have customers who like to entertain friends? Give stag affairs or parties at which both sexes are represented? Are they active in club or social affairs of any kind? Do they have children whose voices they would like recorded as surely as they want pictures made of their hopeful childhood days? Do they have children who appear frequently in amateur entertainments?*

The card index file will usually answer these important prospect questions, plus another: "Can the customer afford it?" It then remains for the retailer to try and arrange for a demonstration. The wedge for a demonstration is driven along this line: "Will you let us make a recording of your children's voices, or of yourself?"

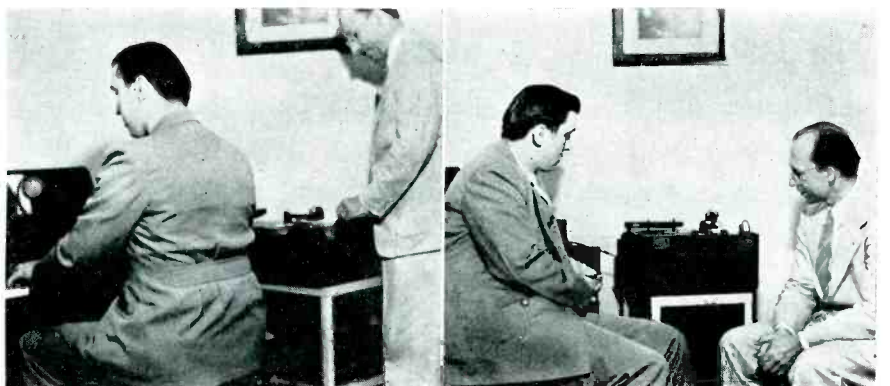
### *New Form of Fun*

"Do you ever have friends come in for a party?" is a favorite question which Gus Conrad of Dau, The House Furnisher, Inc., in Wellston, Mo., poses to people who visit this furniture store. If the prospect shows interest, he gives a demonstration of the thrill of hearing "your own voice." This store and also one operated by the firm in South St. Louis has sold many recording radios. The hit made by recorders at private and birthday parties has sent new customers to the Dau stores and even brought purchasers back into the store simply to tell the salesman about the excitement his recorder created the



**STAGS AT PLAY**—Abner Bleich, a customer of the Famous-Barr Company, entertains a few friends at his home in Clayton, Missouri. They'll soon be hot prospects for additional recording machines

**ANOTHER MARKET**—Gus J. Hynek records a piano selection by one of his pupils at the Hynek School of Music in St. Louis, plays it back to point out mistakes in technique





# Recording DISC Specifications

LABEL	BASE	MATERIAL	SIZE	PRICE \$0.00
<b>Allied Recording Products Co.</b> , 2109-43rd Ave., L. I. C., N. Y.††				
Cleen Cut	Aluminum	Plastic	6, 8, 10, 12, 16"	.40, .55, .80, 1.00, 1.80
<b>Audio Devices, Inc.</b> , 1600 Broadway, New York, N. Y. ( <i>Audiodes</i> )††				
Yellow	Aluminum		6, 8, 10, 12, 16"	.40, .55, .80, 1.00, 2.00
Blue	Aluminum		6, 8, 10, 12"	.30, .45, .65, .85
Bond-Base	Spec. Bond		6, 8, 10"	.15, .20, .25
Red	Aluminum		{ 6, 8, 10" 12, 16"	.50, .70, 1.00 1.25, 2.50
<b>Carron Mfg. Co.</b> , 415 So. Aberdeen St., Chicago, Ill., ( <i>Carrotone</i> )	Paper	Plastic	6½, 8, 10"	
<b>Electrovox Co.</b> , 424 Madison Ave., New York, N. Y., ( <i>Walco</i> )†	Comp.	Non-Inflammable Lacquer	6½, 8, 10"	.15, .22, .30
<b>Emeloid Co., Inc.</b> , 287 Laurel Ave., Arlington, N. J., ( <i>Emeloid</i> )				
Emeloid	Fibre	Non-Inflammable	6"	6 for 1.00
Flexloid		Laminated Style	8"	4 for 1.00
			10"	3 for 1.00
<b>Emerson Radio &amp; Phonograph Corp.</b> , 111 Eighth Ave., New York, N. Y., ( <i>Emerson</i> )†	Rope-Bond	Plastic Sheet	6, 8, 10"	6, 4 and 3 for 1.00
<b>Fairchild Aviation Corp.</b> , 8806 Van Wyck Blvd., Jamaica, L. I., N. Y.				
Sound Equip. Div.				
Fairchild	Aluminum	Cellulose-Nitrate	8, 10, 12, 16"	.55, .80, 1.00, 2.00
<b>Federal Recorder Co., Inc.</b> , 50 W. 57th St., New York, N. Y., ( <i>Federal Recorder</i> )†				
Red	Steel	Acetate-Non-In- flammable	6½, 8, 10, 11, 12"	.20, .30, .40, .50, .60
Black	Aluminum	Acetate	6, 8, 10, 12, 16"	.40, .55, .80, 1.00, 2.00
<b>General Electric Co.</b> , Bridgeport, Conn., ( <i>G-E</i> )		Non-Inflammable Cellulose	6½, 8, 10"	.20, .30, .40
<b>Home Recording Co.</b> , 11 W. 17th St., New York, N. Y., ( <i>Home Recordo</i> )				
Home Recordo	Cardboard	Cel-Nitrate	6, 8, 10"	.10, .17, .29
	Aluminum	Cel-Nitrate	6, 8, 10"	.15, .25, .40
<b>Howard Radio Co.</b> , 1735 Belmont Ave., Chicago, Ill., ( <i>Howard</i> )†				
6C, 8C, 10C	Soft Metal	Flame Proof	6½, 8, 10"	.20, .30, .40
<b>Mirror Record Corp.</b> , 58 W. 25th St., New York, N. Y., ( <i>Mirror</i> )††				
Mirror	Aluminum	Acetate	6, 8, 10, 12, 16"	.40, .55, .80, 1.00, 1.80
	Cardboard	Acetate	8, 10, 12"	.25, .40, .50
	Cardboard	Non-Inflammable	8, 10, 12"	.25, .40, .50
<b>Muscraft Records, Inc.</b> , 10 W. 47th St., New York, N. Y., ( <i>Duralite</i> )†	Aluminum	Acetate	6, 8, 10"	.25, .35, .50
<b>Peerless Album Co., Inc.</b> , 38 W. 21st St., New York, N. Y., ( <i>Peerless</i> )				
Peerless	Non-Metallic	Non-Burning Gums	6½" 8" 10"	6 for 1.00 4 for 1.00 3 for 1.00
<b>Philco Radio &amp; Television Corp.</b> , Philadelphia, Pa., ( <i>Philco</i> )†	Cardboard	Acetate	6½" 10"	2 for .25 3 for 1.00
<b>Presto Recording Corp.</b> , 242 W. 55th St., New York, N. Y., ( <i>Presto</i> )††				
Green Seal	Aluminum	Cel-Nitrate	{ 6, 8, 10" 12, 16"	.40, .55, .80 1.00, 2.00
Orange Seal	Aluminum	Cel-Nitrate	6, 8, 10, 12, 16"	.40, .55, .80, 1.00, 2.00
Blue Label	Aluminum	Cel-Nitrate	6, 8, 10"	.25, .40, .60
Monogram	Comp.	Cel-Nitrate	6, 8, 10, 12"	.25, .40, .60, .75
<b>RCA Mfg. Co., Inc.</b> , Camden, N. J., ( <i>RCA Victor</i> )†				
Regular	Steel	Spec. Lacquer	6, 8"	.25, .40
De Luxe	Aluminum	Spec. Lacquer	{ 6, 8, 10" 12, 16, 16"	.40, .55, .80 1.00, 1.80, 2.00
Personal	Flex Paper	Spec. Lacquer	6½"	1.05 (Pkge. 7)
<b>The Recordisc Corp.</b> , 395 Broadway, New York, N. Y., ( <i>Recordisc</i> )				
Red	Aluminum	Nitrate	6½, 8, 10, 12"	.20, .30, .40, .75
Red	Aluminum	Non-Inflammable	6½, 8, 10, 12"	.20, .30, .40, .75
Green	Steel	Nitrate	6½, 8, 10"	.20, .30, .40
Green	Steel	Non-Inflammable	6½, 8, 10"	.20, .30, .40
Yellow	Bond	Non-Inflammable	6½, 8, 10"	.12½, .20, .30
<b>Remler Co., Ltd.</b> , 2101 Bryant St., San Francisco, Cal., ( <i>Remler-Micordio</i> )	Aluminum	Acetate	8, 10"	.35, .50
<b>Speak-O-Phone Recording Co.</b> , 23 W. 60th St., New York, N. Y.	Cardboard	Acetate	6, 8, 10"	.20, .25, .40
<b>Universal Microphone Co., Ltd.</b> , 424 Warren Lane, Inglewood, Cal., ( <i>Universal</i> )††				
Uni-Cord	Cardboard	Non-Inflammable	{ 6, 8" 10, 12"	6, 3 for 1.00 1.00, 1.25 (for 2)
Professional	Aluminum	Acetate Cel-Nitrate	{ 6, 8, 10" 12, 16"	7.20, 9.60, 12.00 } per 15.00, 30.00 } doz.
<b>Wilcox-Gay Corp.</b> , Charlotte, Mich., ( <i>Recordio</i> )†				
A26½	Paper		6½"	.10
A28	Paper		8"	.17
A210	Paper		10"	.25
B210	Metal		10"	.38
<b>Zephyr Products Co.</b> , 67 West 44 St., New York, N. Y., ( <i>Zephyr</i> )				
Blue	Aluminum	Nitrate or Acetate	6, 8, 10"	.20, .30, .40
Red	Steel	Nitrate or Acetate	6½, 8, 10, 12"	.20, .30, .40, .65
Green	Aluminum	Nitrate or Acetate	6½, 8, 10, 12"	.20, .30, .40, .65
	Paper	Acetate	6½, 8, 10"	.12½, .20, .30

†Also manufacture recording and playback needles  
 †Also manufacture other recording discs, such as pre-grooved and master blanks for processing

"other night at his home."

A young man walked into the Loew Furniture & Appliance Co., University City, Mo., and said he wanted a recorder without delay. A few days later he told the Loew salesman that his mother had made a recording of the full radio account of the last college football game in which her son had played on the Washington University eleven. This convinced Loew's that fathers and mothers who have sons and daughters making public appearances are excellent potential prospects for recorders.

### For Serious Work Too

The recorder is extremely valuable in voice and instrumental practice, and as a result is selling fast among people who have schools of music.

At the Hynek School of Music, St. Louis, which uses a recorder bought from a South St. Louis radio retailer, it was said that a pupil's musical efforts are recorded every 10 lessons. The discs are dated, played back and the pupil can listen to his own playing or singing.

Listening to his own efforts is more convincing to the pupil than merely telling him of his mistakes, says Gus J. Hynek of the school. "Weak fingers are quickly detected," he explained. "We then build up the weak muscles. We can quickly note wrong phrasing. We can readily tell whether he is using the shoulder or arm wrong. Or sustaining the piano pedal too much. Or if expression is too loud or too soft.

"We make a recording of the work of new pupils who have never had any lessons, after six to eight lessons. We give duplicate disc to take home and play on a radio-phonograph, and if the student has none we suggest he get a record player.

"Recorded discs are very effective in practice work. The recorder is to a teacher of music what the x-ray is to a physician."

# RECORD RETAILING

POPULAR MUSIC easy to keep tabs on if you know where to watch for probable hits

By G. T. MOWBRAY

**H**UNDREDS OF RADIO DEALERS, attracted by the active market and many inherent advantages of the business, have become retailers of phonograph records. They were intrigued by the freedom from price-cutting, the absence of trade-in and service problems, the prospect of increased store traffic.

In spite of this abundance of advantages a surprising percentage have not produced a satisfactory profit. The chief reason seems to be that in their anxiety to cash in on a booming business, some dealers overlooked the basic knowledge required for successful competition in this highly specialized field.

### Must Know More than Customer

A background of fundamental facts is essential for success in any field, yet many of the merchants who set up record departments lacked even a superficial musical knowledge.

A record dealer should at least be familiar with the types of music favored in his own community, and know the names of the most popular artists, orchestras and composers. Without such a foundation, the dealer knows much less of the subject than most record buyers, therefore he cannot expect their confidence or their trade. More serious, however, is the inability of the uninformed merchant to order intelligently, the inevitable consequences of which are poor service, loss of trade, dead stock, and slow turnover.

### COMING

What you should know about  
**HILLBILLY, RACE, SACRED, STANDARD,  
CLASSICAL and FOREIGN Numbers**

Popular music, consisting of torch songs, ballads, dance tunes, and novelty numbers, is distributed and promoted by established publishers who receive it either directly from the writers, or indirectly through the producers of sound films and musical shows.

### Planned Radio Listening Best Bet

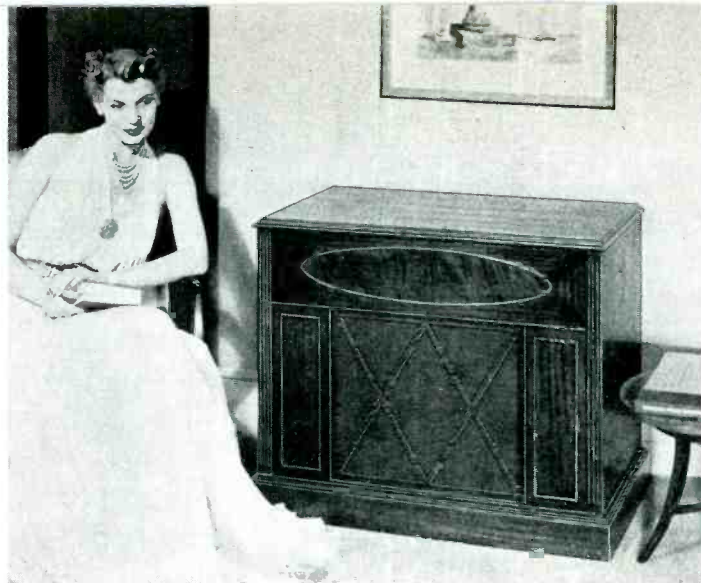
The mediums used to popularize new compositions are many, but the most important is radio. A publisher induces enough of the leading bands, singers, and radio shows to use his numbers to insure repeated broadcasting.

The enthusiasm with which these selections are received after several performances and the number of requests for repetition, determine which will be included in future programs. A number in the regular radio repertoire of the leading bands is virtually assured of disc success. The record dealer who listens consistently and attentively to the leading musical broadcasts, can therefore follow the progress of the new tunes, learn with which artists they are most closely identified, and which bands give them the smoothest treatment. This information is of great value in ordering new discs and as a basis for advice to buyers.

### Other Straws In the Wind

The Lucky Strike Hit Parade is effective in prolonging the life of a number, and as a reference list for casual buyers, but the "smart" buyers have had these records long before they reach the Parade. In many instances record buying has passed the peak when the title is listed, therefore the Parade is probably more useful as a means of moving remaining stock, than as a

(Continued on Page 62)



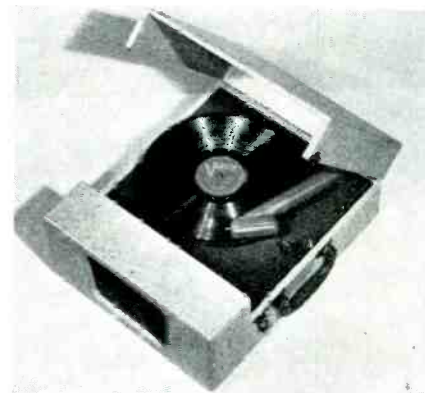
ANSLEY DYNAPHONE

D16A



RCA VICTOR

R98 (F.O.B. Camden) \$69.95



TROY

PI23

\$24.95



BIRCH

110

\$31.00

# Just PHONOGRAPHS

\* Complete and Ready to Play Electrically,  
these Modern Machines are Ideal for

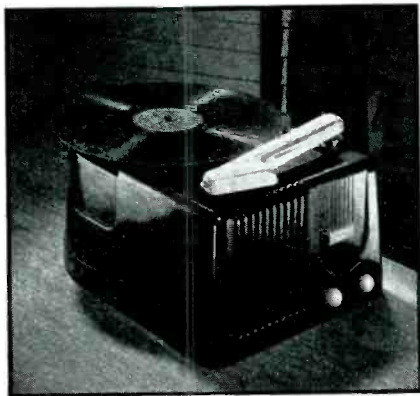
STORE Booths

HOME Use

SCHOOL Classrooms



MAGNAVOX 4G \$129.50



SONORA KW78 \$16.95



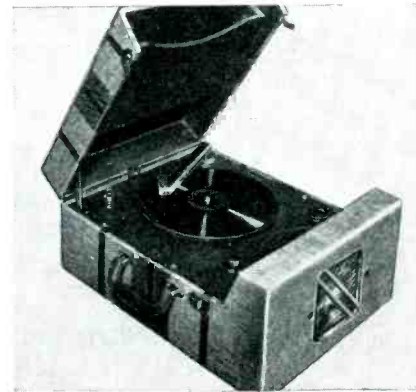
DECCA DP15 \$19.95



REGAL F84 \$16.95



ANDREA-GRAM G40 \$24.95



BOGEN PE5 \$49.50



DYNAVOX AC500 \$29.95



DE WALD 411 \$26.95



ESPEY AWC \$25.50



PLAZA 602 \$19.95

\*Prices are retail list. None of the machines pictured include radio tuners. All employ electric motors, electric pickups, tubes and amplifiers.

# Everything UNDER

## HOW TO anticipate volume of future business

**B**UDGETS are for Big Business only." That's what many people think. Actually, even the smallest business needs, and can have, Budgetary Control.

Budgets evaluate facts in their true relation to each other. Budgets prevent trouble before it arrives. Through use of a Budget, management may make decisions based on intelligent interpretation of facts.

The Budget should be simple. It can be prepared with surprisingly little clerical work. The results should be presented in such concise manner as to enable management to size up situations at a glance. With practical examples, we will demonstrate how budgets work:

Stripped to its essentials, Budgetary Control involves five steps:

1. Anticipate volume of future business.
2. Estimate the probable gross profit on such business.
3. Estimate the expenses necessary to operate at the expected volume. Deduct estimated expenses from estimated gross profit to obtain net profit or loss.
4. Compare constantly the actual business done and actual expenses with the budget. Whenever material discrepancies occur, take immediate action to keep sales and expenses in proper relation to each other. This is where the Control feature of Budgeting comes in.
5. When discrepancies occur which indicate a change in trend, adjust the budget for the remainder of the period to prepare more accurately for it.

This article will be confined to demonstrating Step No. 1.

### Setting Up the Sales Budget

The first step is to:

#### 1. Tabulate Past Experience:

Table "A" represents the actual monthly total sales experience of a group of radio stores in the New York area, for 1938 and 1939. In planning a sales budget for 1940, we use this experience as a base. In your locality, additional guides should be obtained to reflect local conditions.

Similarly, sales for each department should be tabulated. For example, Table "B" presents the actual experience of the same group of stores for the Radio Department alone.

The next step is to:

#### 2. Forecast Sales for 1940:

Note in Table "A" that the early part of 1939 already represents substantial gains over 1938. A leveling-off point may have been reached. Therefore, in forecasting sales for 1940, the rate of increase used should be lower

than that of 1939. For purpose of illustration, we will budget Total Sales at 5% over 1939. If results prove this too low, upward revision may be made later.

TABLE A

### COMPOSITE MONTHLY TOTAL SALES OF THIRTEEN RADIO STORES

Month	TOTAL SALES		% Change	Two-Year Total Sales	Each Month's % to Total Year
	1938	1939			
January	\$ 46,397	\$ 55,861	+20.4%	\$ 102,258	4.62%
February	50,082	59,069	+18.0%	109,151	4.94%
March	76,924	93,835	+22.0%	170,759	7.73%
April	96,665	107,203	+10.9%	203,868	9.22%
May	87,716	116,332	+32.7%	204,048	9.24%
June	89,152	113,808	+27.7%	202,960	9.19%
July	81,986	93,251	+13.8%	175,237	7.93%
August	90,239	95,631	+6.0%	185,870	8.41%
September	94,106	102,324	+8.6%	196,430	8.89%
October	110,534	109,730	-0.8%	220,264	9.96%
November	89,953	104,028	+15.6%	193,981	8.78%
December	109,590	135,576	+23.7%	245,166	11.09%
<b>Total</b>	<b>\$1,023,344</b>	<b>\$1,186,648</b>	<b>+15.96%</b>	<b>\$2,209,992</b>	<b>100.00%</b>
<b>Average Store</b>	<b>78,719</b>	<b>91,281</b>	<b>+15.96%</b>	<b>170,000</b>	.....

Two facts should be noted in Table "B": In 1939, Radios represented a smaller portion of total sales than in 1938. Also, the percent of increase in Radio sales was less than in total sales.

Because in 1939 Radio sales increased only half as

TABLE B

### COMPOSITE MONTHLY RADIO SALES VOLUME OF THIRTEEN STORES

Month	RADIO SALES		% Change	Two-Year Total Radio Sales	Each Month's % to Total Year
	1938	1939			
January	\$ 19,449	\$ 21,141	+ 8.6%	\$ 40,590	6.24%
February	20,720	21,208	+ 2.4%	41,928	6.45%
March	22,406	25,956	+15.8%	48,362	7.44%
April	18,281	18,475	+ 1.1%	36,756	5.65%
May	17,311	17,725	+ 2.4%	35,036	5.38%
June	14,259	18,002	+26.3%	32,261	4.96%
July	17,557	17,728	+ 0.9%	35,285	5.42%
August	27,458	25,473	- 7.2%	52,931	8.14%
September	32,234	34,351	+ 6.6%	66,585	10.24%
October	42,698	37,072	- 8.1%	79,770	12.26%
November	31,574	35,815	+13.5%	67,389	10.36%
December	49,287	61,224	+24.4%	110,511	17.46%
<b>Total</b>	<b>\$313,234</b>	<b>\$337,170</b>	<b>+ 7.61%</b>	<b>\$650,404</b>	<b>100.00%</b>
<b>Average Store</b>	<b>24,095</b>	<b>25,936</b>	.....	<b>50,031</b>	.....
<b>% Radio Department to Total</b>	<b>30.61%</b>	<b>28.42%</b>	.....	<b>29.43%</b>	.....

much (percentage-wise) as total sales, we will budget 1940 Radio sales at 2½% over 1939.

The next step is to:

#### 3. Compute the Sales Budget:

The budget period should be one year, subdivided into monthly periods. Table "C" shows for the average store the budgeted Total Sales and Radio Department

# CONTROL

By **ROBERT LEE COSHLAND**

With Sirota, Kraus & Gleason, C.P.A.  
New York

Sales for each month in 1940. The method of computing these is as follows:

- To the annual totals for 1939 we add the planned increases; that is, 5% added to total sales, 2½% added to total Radio Sales.
- To these 1940 budgeted annual totals we apply the monthly percentages shown in the right-hand columns of Tables "A" and "B".

**TABLE C**

**AVERAGE BUDGETED MONTHLY TOTAL AND RADIO DEPARTMENT SALES**

Month	TOTAL STORE — ALL DEPARTMENTS		RADIO DEPARTMENT	
	AVERAGE SALES PER STORE		AVERAGE SALES PER STORE	
	Actual 1939	Budget 1940	Actual 1939	Budget 1940
January	\$ 4,297	\$ 4,428	\$ 1,626	\$ 1,659
February	4,544	4,735	1,631	1,715
March	7,218	7,409	1,997	1,978
April	8,246	8,837	1,421	1,502
May	8,949	8,856	1,363	1,430
June	8,755	8,808	1,385	1,318
July	7,173	7,600	1,364	1,441
August	7,356	8,061	1,960	2,164
September	7,871	8,521	2,642	2,722
October	8,441	9,546	2,852	3,259
November	8,002	8,415	2,755	2,751
December	0,429	10,629	4,940	4,642
<b>Total</b>	<b>\$91,281</b>	<b>\$95,845</b>	<b>\$25,936</b>	<b>\$26,584</b>
<b>Budgeted Increase Amount</b>		<b>4,564</b>		<b>648</b>
<b>Per cent</b>		<b>5%</b>		<b>2½%</b>

**Following-Up the Sales Budget**

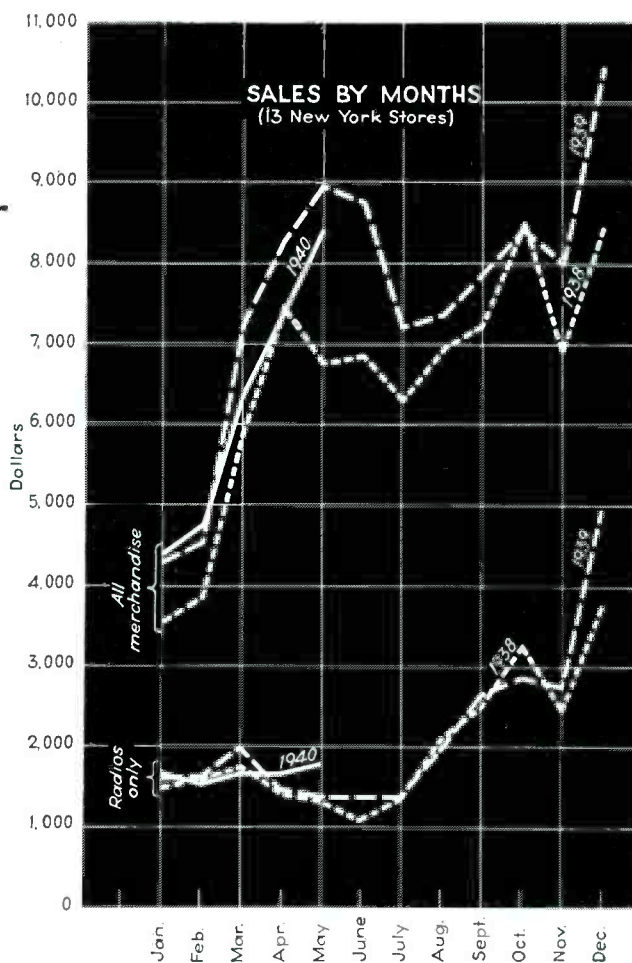
Having prepared our budget, let us now compare it with actual results for the first five months of 1940, as shown in Table "D":

**TABLE D**

**COMPARISON OF BUDGETED MONTHLY SALES WITH ACTUAL SALES**

1940	TOTAL STORE — ALL DEPARTMENTS				RADIO DEPARTMENT			
	Budgeted Sales	Actual Sales	Difference		Budgeted Sales	Actual Sales	Difference	
			Amount	%			Amount	%
January	\$ 4,428	\$ 4,392	-\$ 36	- 0.8%	\$1,659	\$1,658	-\$ 1	- 0.1%
February	4,735	4,758	+ 23	+ 0.5%	1,715	1,558	- 157	- 9.2%
March	7,409	6,383	- 1,026	- 13.8%	1,978	1,654	- 324	- 16.4%
April	8,837	7,413	- 1,424	- 16.1%	1,502	1,658	+ 156	+ 10.3%
May	8,856	8,403	- 453	- 5.1%	1,430	1,771	+ 341	+ 23.8%
<b>Total — 5 Months</b>	<b>\$34,265</b>	<b>\$31,349</b>	<b>-\$2,916</b>	<b>- 8.5%</b>	<b>\$8,284</b>	<b>\$8,299</b>	<b>+\$ 15</b>	<b>+ 0.2%</b>

You will note that in March, April and May, Total Sales were substantially below expectations. This must have been caused either by something unforeseen and temporary, or by a change in the trend. If the trend has changed, the budget for the rest of the



year should immediately be altered. Let's investigate:

The average Radio Department shows a good recovery in April and May. Clearly the shortage must be found elsewhere. And since Radios recovered, probably the trend has not fundamentally changed, and is still headed higher.

The solution probably lies in the unusually cold Spring in the New York area, which retarded sales in the Refrigerator Department. A budget for this department would have corroborated this. By May the effect of the unseasonable weather should have passed, and it is quite possible that a portion of the lost business may have been recovered in June. If June results do not reflect this, and if by then no other new factors have arisen, the budget should then be reduced for the balance of the year.

Similarly, if the Radio Department continues its improvement of April and May, it may be necessary to increase the estimates for Radios. For example, if for June Radio sales exceed the budget by 20%, the budgeted Radio Sales for the next six months should be increased 10%. We would not favor a full 20% revision of the budget because June is the slowest month of the year and therefore most easily influenced by a condition which may prove temporary.

# Admiral FOR '41

## THE hottest LINE IN RADIO SAY ADMIRAL DISTRIBUTORS FROM COAST TO COAST



Ludwig Hommel  
President  
**LUDWIG HOMMEL & CO.**  
Pittsburgh, Pa.



E. O. Hunting  
Vice-President & Gen.  
Mgr.  
**AUTO EQUIP. CO.**  
Denver, Colo.



Maurice Despres  
President  
**ADMIRAL RADIO & TELE. CO.**  
New York City, N. Y.



Herbert H. Horn  
President  
**HERBERT H. HORN CO.**  
Los Angeles, Calif.



Enloe McClain  
President  
**McCLAIN DISTRIBUTING CO.**  
Charlotte, N. C.



G. W. Dickel  
President  
**DICKEL DISTRIBUTING CO.**  
Philadelphia, Pa.

### ADMIRAL DISTRIBUTORS

AUTO EQUIP. CO.  
Denver, Colo.  
AUTO ELEC. SERVICE CO.  
Manchester, N. H.  
GEO. D. BARBEY CO.  
Reading, Pa.  
BARRETT HDWE. CO.  
Joliet, Ill.  
C. E. BECKMAN CO.  
New Bedford, Mass.  
BOETTICHER & KELLOGG CO.  
Evansville, Ind.  
BOWMAN & COMPANY  
Grand Rapids, Mich.  
WARREN E. BRENNAN CO.  
Detroit, Mich.  
BRICKMAN-SAIZOW CO.  
Kansas City, Mo.  
THE BRIDGE TIRE & SUPP. CO.  
Pawtucket, R. I.  
BURSTEIN-APPLEBEE CO.  
Kansas City, Mo.  
HARRY W. CAMERON, INC.  
Chattanooga, Tenn.  
DALE RADIO CO.  
New Haven, Conn.  
ADMIRAL RADIO & TELE. CO.  
New York, N. Y.  
DALLAS ELECTRIC SUPPLY CO.  
Dallas, Texas  
DICKEL DISTRIBUTING CO.  
Philadelphia, Pa.  
THE DINE-DEWEES CO.  
Canton, Ohio  
DYMAC RADIO CO.  
Buffalo, N. Y.  
ELECTRIC SUPPLY CO.  
Oakland, Calif.  
ENGLEWOOD ELECTRICAL CO.  
Chicago, Ill.  
FT. ORANGE RADIO DIST. CO.  
Albany, N. Y.  
HARBISON & GATHRIGHT  
Louisville, Ky.  
M. A. HARTLEY & CO.  
Staunton, Va.  
M. A. HARTLEY & CO.  
Gettysburg, Pa.  
HERRLINGER DISTR. CO.  
Cincinnati, Ohio  
HIGGINBOTHAM-PEARLSTONE CO.  
Dallas, Texas  
HERBERT H. HORN  
Los Angeles, Calif.

HOUSE-HASSON HDWE. CO.  
Knoxville, Tenn.  
JENKINS MUSIC CO.  
St. Louis, Mo.  
THE LEWIS MOTOR MART CO.  
Dayton, Ohio  
LUDWIG HOMMEL & CO.  
Pittsburgh, Pa.  
McCLAIN DIST. CO.  
Charlotte, N. C.  
MARSHALL-WELLS CO.  
Billings, Mont.

MARSHALL-WELLS CO.  
Duluth, Minn.  
MARSHALL-WELLS CO.  
Portland, Oregon  
MARSHALL-WELLS CO.  
Spokane, Wash.  
MILHENDER-AFES ELEC. CO., INC.  
Boston, Mass.  
MITCHELL-POWERS HDWE. CO.  
Bristol, Tenn.  
MORLEY RADIO & MUSIC CO.  
Sarasota, Fla.

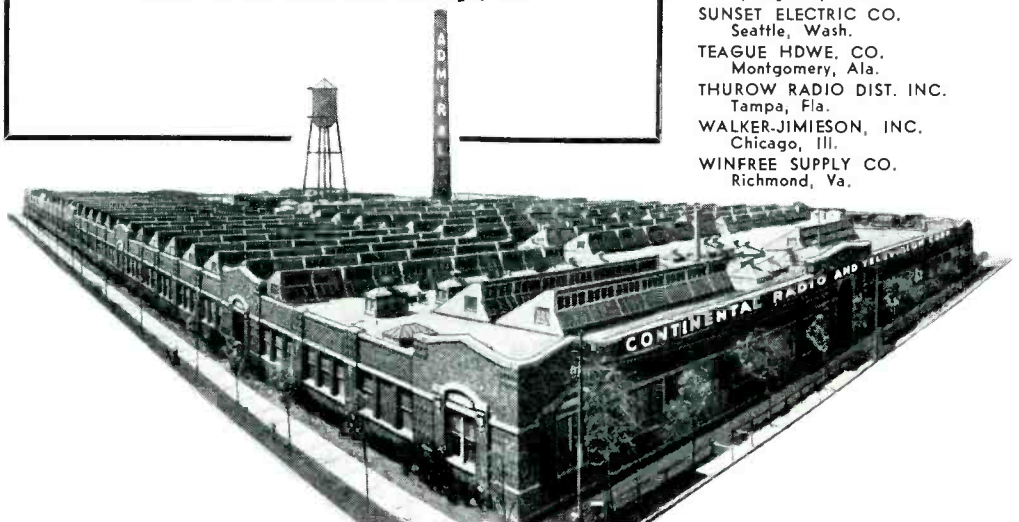
PACIFIC WHLSE. CO.  
San Francisco, Calif.  
PENTON SHEPARD TIRE CO.  
Miami, Fla.  
G. M. POPKEY CO.  
Marinette, Wis.  
RADIO DISTRIBUTING CO.  
Harrisburg, Pa.  
RADIO ELECTRIC SERVICE CO.  
Baltimore, Md.  
RADIO ELECTRIC SERVICE CO.  
Philadelphia, Pa.  
RADIO MAINTENANCE SUPPLY CO.  
Worcester, Mass.  
RADIO SUPPLY CO.  
Norfolk, Va.  
RADIO TUBE MDSE. CO.  
Flint, Mich.  
SACRAMENTO ELECTRIC CO.  
Sacramento, Calif.  
SAGER ELEC. SUPPLY CO.  
Boston, Mass.  
SPECIALTY DISTRIBUTING CO.  
Atlanta, Ga.  
SPRINGFIELD RADIO CO.  
Springfield, Mass.  
SUNSET ELECTRIC CO.  
Seattle, Wash.  
TEAGUE HDWE. CO.  
Montgomery, Ala.  
THURLOW RADIO DIST. INC.  
Tampa, Fla.  
WALKER-JIMIESON, INC.  
Chicago, Ill.  
WINFREE SUPPLY CO.  
Richmond, Va.

### ATTENTION DISTRIBUTORS

Several desirable territories still open to aggressive organizations in a position to take full advantage of our extensive merchandising support. For further details, write

### CONTINENTAL RADIO & TELEVISION CORP.

3800 W. Cortland St., Chicago, Ill.



# CAMPAIGN

## To Tie To

**B**EGINNING SEPTEMBER 16, broadcast stations everywhere will begin pounding into the consciousness of a presidential election year public the suggestion "Listen Before You Vote."

Already widely approved by nationally influential civic organizations (RR 32 April) and by industry groups such as the RMA, RSA and NRPDA, the campaign cut its first teeth late in July when the National Association of Broadcasters mailed member radio stations 100 sample posters and offered to supply quantities at \$8.50 per thousand. Recommended was distribution without charge or at cost to candidates running for office, electric Leagues, power companies and especially *radio distributors and dealers*.

Printed "heart" of the campaign, the posters were nevertheless just one part of the drive urged upon broadcasters.

### What Stations Will Do

Individual radio stations planned to:

(A) Secure statements on the importance and desirability of the Listen Before You Vote campaign from State and County chairmen of major political parties, from selected leading citizens and organizations.

(B) Edit such statements, mail excerpts, posters to all local organizations and business leaders, suggesting that the idea be further promoted in publicity releases, talks.

(C) Bring prominent people before their microphones to outline the advantages of listening before voting.

(D) Conduct listener competitions involving statements concerning the advantages of listening to candidates' stories over the air before November.

Certain stations were also planning to have staff members speak on the theme "Radio and the Election" before women's clubs and other similar groups. Others planned to suggest inclusion of the

Listen Before You Vote slogan in broadcasts of sponsors, in the newspaper advertising of these same sponsors.

Said the NAB, emphasizing the all-around soundness of the campaign:

"The coming presidential election is going to be fought out over the airways. As one newspaper columnist expressed it, 'whatever happens in this campaign, the country is going to see a real radio battle.'

"Months ago we began figuring how the industry might best capitalize on this situation, how it could 'naturally' use this tremendous public interest in its own behalf. The suggestion was made, and, later approved by the Board of Directors, that an institutional campaign be wrapped around the theme chosen.

"Listen Before You Vote" are four potent words. They carry with them many implications favorable to broadcasting. Today, broadcasting has the ear of the nation to such an extent that it reaches a larger number and moves its listeners more effectively than any other method of dissemination. Radio is, in fact, the very cornerstone of Democracy.

"Believing this, we sought the opinion of a cross section of nationally important, non-political groups. There is not a single discordant note in their replies."

### What The Trade Can Do

The radio trade has a cooperative job to do—*Help broadcasters put this campaign over.*

The trade should:

1. Obtain a sufficient supply of posters (illustrated on this page) to at least display these prominently in window, on store walls, on delivery trucks.

2. If possible, obtain an even larger poster supply and, imprinting them with name, address and phone number in the white-space deliberately provided just below the

Radio Serves the Nation

LISTEN..

... before you

VOTE

Check Your Newspaper for Time!

POSTER WITH A PUNCH—Printed in red and blue, 10½ by 15 inches overall, it should be placed immediately in every radio store window

word "Listen," use them as direct-mail promotional stuffers.

3. Feature the slogan "Listen Before You Vote" in all advertising, broadcast or newspaper, from this time through election.

4. Cooperate in every possible way with whatever local broadcast stations plan in the way of campaign promotional effort. (Phone them for information).

5. Carry the message of this campaign to the consumer in every possible way, to civic bodies such as clubs in very much the manner recommended to broadcast stations in earlier paragraphs.

6. Meet with other retailers and with distributors where possible to discuss methods of cooperative promotion.

Past experience has proven that presidential election campaigning over the air, an event that occurs only once every four years, is a "natural" for promoting both radio sales and service. With an estimated 44 million radios now in use in the United States (about 1½ receivers per home) the influence of radio upon the election will this time be more potent than ever.

Put up those posters *now!*

# Political Campaigning with



By  
**SOLBERT J.  
WHITE, E. E.**  
*White Sound Service*

**P**RESIDENTIAL ELECTION YEARS give the sound dealer an opportunity to make a "killing". These occasions should not slip by without heavier entries in the bank-book.

Politicians *must* have sound, and you don't have to be a nephew of the ward leader to get this business. Like business men, they recognize *value* for their money, because "getting elected" is a serious, determined business.

#### **How to Reach Prospects**

All political organizations of counties, election and assembly districts, are listed in the telephone books and in the Red Book. There is also a directory known as a Blue Book of political organizations, which show the names and addresses of all officers. Campaign managers of small districts are generally appointed temporarily. But the names and home addresses of candidates are filed with the Board of Elections in each city. There is no excuse for the sound man to fail to reach every candidate and official involved in a political campaign.

Don't just sit back and say:

#### **BUILDING Your SOUND BUSINESS**

Fourth of a Series About  
**DEVELOPING NEW MARKETS**

**YOUR OWN TRUCKS —**  
These should naturally be rented first but *don't stop there*. If you work it right you can get enough business in this season to tide you over the next six months

"There's no use . . . I ain't got the connections". First, get out a form letter or circular to every political worker who might have a say in the rental of sound. Second, about eight weeks in advance of election day, visit the principal organizations. Third, keep yourself busy at the telephone, selling your services.

When visiting campaign managers, by all means take along photos and testimonial letters of similar work you have done in the past.

#### **Choosing Equipment, Extras**

Regarding the equipment, it is in my opinion preferable to utilize amplifiers operating from storage batteries. Even with limited output power, you can deliver a mean sock if utilized with the new types of PM driver units. It is safe to say that 15 watts handled by high efficiency units can deliver as much sock as 30 watts into old fashioned driver units. A 51-plate battery is good for about three hours of operation, therefore three batteries should be carried for a full day's work.

Since recorders are so popular

nowadays, offer to throw in a free recording of two 3-minute speeches made on a 10-inch disc. This is very attractive to your customer, as it gives him a chance to put over a more living message, and also eliminates the need of the campaign office sending along a speaker in many instances.

In the case of sound trucks, try to learn the type of truck your competitor offers, and then offer one that is smarter and bigger, and provides more sign space. Of course, if you already own a truck, you should see that it is rented out first. Then, for additional orders, rent trucks on a daily or weekly basis from agencies. In such cases it is up to you to equip and decorate.

Another form of service is to rent out the basic equipment for installation on *passenger* cars belonging to campaign workers. Instead of supplying trucks, drivers, insurance, you merely slap a simple 6-volt amplifier into their passenger cars (see accompanying circular). This will relieve you of a whale of a lot of headaches which might be encountered if you were to attempt to equip a large fleet of trucks. Of course, the profit is somewhat smaller, but if you go after enough jobs of this kind you can come out of the election with a neat profit and very little aggravation.

#### **Charges, Contracts**

My rate for a sound truck of the panel body type, up to 1½ tons, is in the neighborhood of \$175.00 per week of six days, seven hours per day. For large rack trucks and



# SOUND

**GETTING ELECTED** is a serious business in which amplifiers now play an important part. Dealers can make a killing in presidential years if they know their way around



**HIRED TRUCKS**—Make the most of the campaign by *renting rolling stock* from agencies that supply such equipment. You prepare and mount decorations and signs



vans which carry signs about 20 feet long, the rate is about \$250.00 per week. However, try to provide something special, such as lights, or a speaker's platform, and tack on another fifty dollars. If your truck is equipped with a gasoline generator, sell the idea of a neon light illuminating the candidate's name.

Finally, a word about contracts and terms of payments. All work should be handled on a contract basis, and contracts should be prepared beforehand with the assistance of a lawyer or someone who can write a good, water-tight, agreement. The signature of the campaign manager should be countersigned by the candidate himself if possible. Or the party signing the contract should be made responsible as an individual, not as an officer of a committee, which will often liquidate itself after election day.

Try to secure your payments in

**PORTABLE EQUIPMENT**—Outside halls to handle overflow crowds as well as within speakers can be used, as in this instance at Madison Square Garden

**SPECIAL OFFER** — Unique circular mailed by the author's firm hooked much extra business with little extra investment. Circular itself gives details

advance. Our experience has taught us to secure three-days payment in advance. When supplying service for one week, we secure half a week's payment at the beginning of the first day, and the second half

of the payment is made at the beginning of the fourth day's work. Unless the sound dealer shows a firm front on the matter of payments, he may be weeping into his handkerchief after election day.

*Make this a SMASHING ELECTION CAMPAIGN!*

YOU OPERATE IT YOURSELF

DRIVE THE PROGRAM & CANDIDATES OF YOUR PARTY INTO THE CONSCIOUSNESS OF THE PUBLIC.

You can now rent for any type of passenger car or truck, a high-power sound system. It will not scratch or injure the car in any way. Anyone can install or remove this equipment in less than a minute's time.

NO TECHNICAL KNOWLEDGE OR EXPERIENCE IS NECESSARY

This equipment is foolproof and exceedingly simple to operate. You may keep this loudspeaking system permanently on your car, or you may store it in your own headquarters, or you may return it to us each night for storage and checking.

CAN BE USED INDOORS \* \* WILL FURNISH MUSIC FROM PHONOGRAPH RECORDS.

A service station and garage will be maintained at a convenient location which will be open at all hours to give you speedy service. Repairs or replacement of equipment which becomes defective will be made immediately with no questions asked so long as equipment does not show signs of physical abuse. Storage batteries will be recharged without cost.

Space will be provided where equipment, signs, campaign posters and other literature may be stored.

RENTAL PRICE FOR THIS SERVICE IS \$25.00 FROM NOW UNTIL ELECTION DAY.

**WHITE SOUND SERVICE**

151 WEST 63<sup>RD</sup> ST. NEW YORK, N.Y. SCHUYLER 4-4444

Union Service

BRAND NEW  
RADIO  
CIRCUIT

NEW  
KIND OF  
OVERSEAS  
WAVE-  
BAND

NEW  
NOISE-REDUCING  
XXL  
CONVERTER  
TUBE

BUILT-IN  
AMERICAN  
AND  
OVERSEAS  
AERIAL SYSTEM

# Only PHILCO NEW SALES

## Radios that set New Standards of Performance and Value!

For 1941—the “hottest” line in Philco’s long history of leadership . . . that’s the universal verdict of the trade! A brand-new circuit . . . a New Kind of Overseas Wave-Band . . . more tubes for the money . . . bigger speakers . . . a complete variety of beautiful cabinets to suit every taste and price. Yes, in every bracket, the greatest values, the most *saleable* line in Philco history!

MORE TUBES  
FOR THE  
MONEY

BUILT FOR  
TELEVISION  
SOUND  
AND FM



# PHILCO ALL YEAR 'ROUND FOR

HOME RADIO • PHONOGRAPHS • TELEVISION • AUTO RADIO • RADIO

# 10 gives you these FEATURES FOR 1941!

NEW  
PHOTO-ELECTRIC  
RADIO  
PHONOGRAPH

NEW  
TILT-FRONT  
CABINET

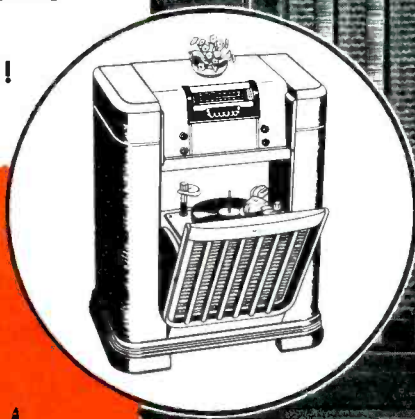
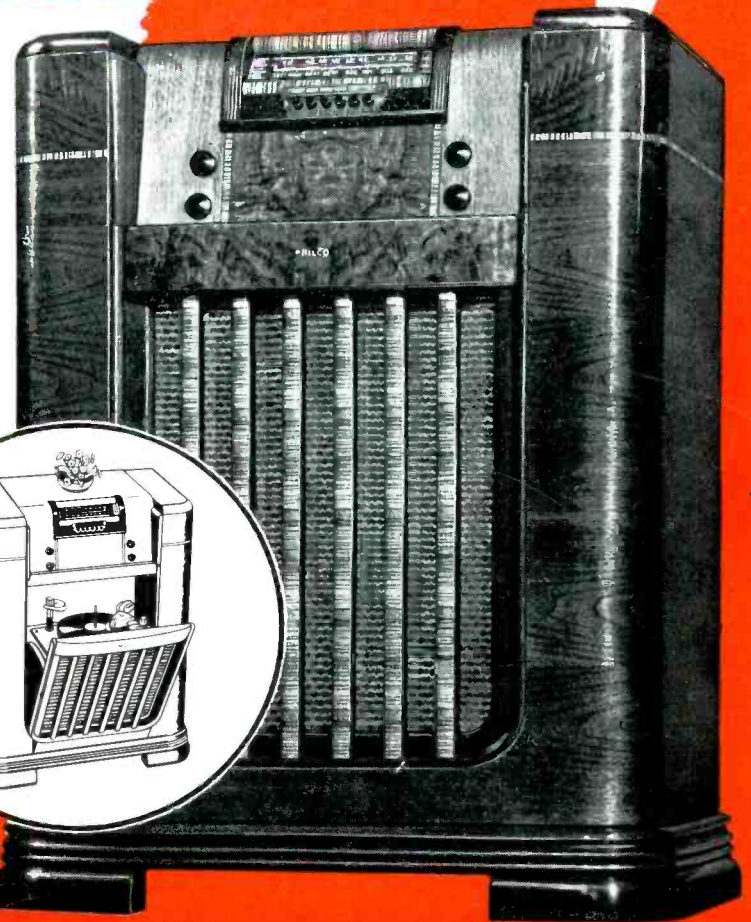
RECORDS LAST  
10 TIMES  
LONGER

NO  
NEEDLES  
TO  
CHANGE

## Radio-Phonographs that Play Any Record on a Beam of Light!

Philco offers the one and only NEW radio-phonograph on the market today. Music on a beam of light! No needles to change... record wear and surface noise reduced by 10 to 1... glorious new purity of tone. *Tilt-Front cabinet*; no lid, no dark, clumsy compartments. These are the features the public demands in 1941. *Only Philco has them!*

It's Philco again for 1941... get set to CASH IN!



CABINET DESIGNS  
FOR EVERY  
TASTE

NEW  
PURITY OF  
TONE

# OUR PROFITS ALL YEAR 'ROUND

TUBES • PARTS • REFRIGERATORS • AIR CONDITIONERS • DRY BATTERIES

# How to Build Appliance STORE TRAFFIC

By **M. G. O'HARRA**, V. P. in Charge of Sales, Norge Div., Borg-Warner Corp.

**I**N TODAY'S COMPETITIVE MARKET the dealer who does not employ house-to-house selling methods must either operate in an area of natural traffic density or must *create* traffic.

Natural traffic density represents the ideal, although the dealer often pays too high a rental premium for it. But even in the most favorable locations *street* traffic must be turned into *store* traffic.

Fundamental in such operations, of course, is a stock of nationally-advertised merchandise. It should be a well-rounded stock and major items should associate intimately with minor items for which there is frequent call.

## Windows

The necessity for strong window displays is obvious. And a window which offers a definite "come inside" invitation rates top rank. I don't care what form the invitation takes—whether folks are asked to attend a cooking or appliance demonstration or to get candy, kites or toys for the kids (accompanied by parents), or to receive kitchen plans or booklets on "How to Do This" or "How to Do That"—just so long as the window gives them some logical urge to open the door.

An effective window display that has been widely used by dealers whose line included electric ironers is the situation where a woman is given a towel or handkerchief if she actually irons it on an electric ironer. An ironer is placed in the

window together with a display of towels and handkerchiefs. A placard invites women to receive a lesson in operating the machine. The handkerchief or towel which they iron is presented to them as a souvenir of the occasion.

## Advertising

Local advertising is a "must." National advertising creates public acceptance of the product while local advertising directs traffic into the dealer's store.

Local advertising can be keyed directly to all traffic building promotions. Its power to create traffic usually is greatest when the ad carries an inquiry hook such as special seasonal terms or special seasonal openings with favors for guests; pre-showings of new merchandise; off season "new for old" trade-in promotions; "two for one" sales in which two companion items such as a washer and an ironer, or a refrigerator and a range are offered for a single down payment and single monthly payments; "one-cent sales" with a small article such as a household utensil, butter dome, etc., offered for a penny when bought in combination with some home appliance.

## Promotions

Other traffic building plans can be developed by offering club room facilities. "Playing host" is an old and highly respected favorite. The dealer invites bridge clubs, church societies, charitable organizations

to use his establishment as a meeting place. If he lacks adequate facilities, he rents the nearest vacant quarters and arranges merchandise display.

A luncheon, expertly prepared on one of his ranges, and a brief "commercial" planted with the chairman, usually brings a pay-off in traffic and good will. Not long ago one of our dealers worked with the personnel director of a large factory in sponsoring a home talent entertainment for several thousand employees. Guest registration cards (Please Check Appliances on List Which You have in Your Home) gave him a fresh prospect list. Follow-up efforts, pointed by the list of appliances which the guests did *not* check, produced a fruitful volume of traffic.

In the larger outlets where sufficient space is available, variants of this "playing host" technique might include special entertainments such as marionette shows, flower or hobby shows and displays of stamp collections.

## Service

Regardless of location or selling methods, there remains one angle of the appliance business which merits careful attention by every dealer whether in suburbs or metropolis.

I refer to the service department. It has "made" many dealers and broken others. An efficient service department can help create lasting good will, and develop a constant source of leads.

An amusing and amazingly successful service-sales tie-up has been worked out by a Mid-west dealer. He advertises an extremely low price on replacement wringer rolls for washing machines. In order to install the rolls it invariably is found necessary to take the machine to the dealer's service department. In its place is installed a demonstrator which returns to the dealer only over the dead body of a top-flight salesman.

**CANVASSING** is still effective in small towns.

- Even in big cities prejudiced against it the telephone unearths much new business.
- But there are locations in which a sizeable volume may be done without employing either method of solicitation.

for Every Application

Series II

# Centralab SOUND PROJECTION CONTROLS

## CENTRALAB SERIES II

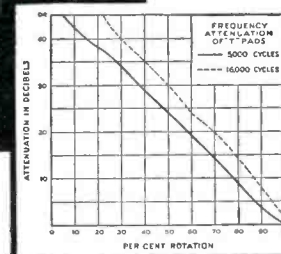
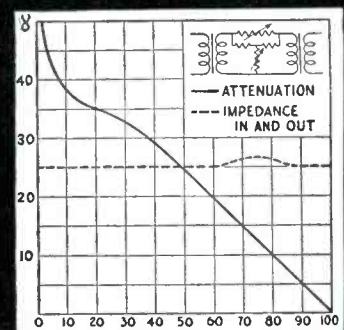
Controls are the finest for input circuits in broadcast stations, public address systems, and recording apparatus of new or old design. Will prove faultless in the most critical service.

The curve chart above shows the change in impedance and attenuation plotted against clockwise rotation for a "T" pad attenuator. The impedance characteristic (dotted line) is substantially the same at any setting. The attenuation curve (solid line) varies from infinity at zero rotation to zero Db. at full rotation. No insertion loss.

Electrostatic and electromagnetic shielding provided by a black finished steel case. Bakelite screw type terminal strip on back of case. All resistance elements insulated from shaft and bushing. Single hole mounting. Mounting bushing  $\frac{3}{4}$ " long with 2 locknuts and lockwashers. Case diameter  $2\frac{3}{4}$ ". Depth back of panel "T" Pad —  $2\frac{3}{8}$ "; Gain Control —  $1\frac{3}{8}$ ". Maximum load dissipation 1 watt.

For detailed information, write for technical booklet.

**CENTRALAB: Division of Globe-Union Inc.**  
MILWAUKEE, WISCONSIN



## ECONOMY P/A CONTROLS

These controls are intermediate to the series II line and the older series I types. As their name implies, they are economy controls designed primarily for inexpensive sound equipment, where original cost is a limiting factor. They are designed for all types of fading and mixing systems. All units have soft aluminum shaft  $2\frac{1}{4}$ " from end of  $\frac{3}{8}$ " brass bushing. Small diameter bakelite case same dimension as Standard Radiohm. Non-rubbing contact for smooth, quiet operation. Limited to input applications. Maximum power rating for all units one watt.

# FLUORESCENT Lighting . . .

## What it's all about

ED. NOTE—Many subscribers are asking us questions about fluorescent lighting, for their own shops and for possible re-sale. In response to this obviously widespread interest we here attempt to answer, briefly, questions most frequently asked by the radio trade.

**C**ONSIDERABLE CONFUSION appears to exist among radiomen concerning fluorescent lighting.

For one thing, comparative lack of practical application data on this new product has caused many to hesitate until more enterprising dealers demonstrate uses and markets and, perhaps, skim the early cream.

For another, it is obvious that the very operating principle of fluorescent lighting is not too widely understood. One typical misinformed dealer of our acquaintance responded to the suggestion that he might be interested with the statement: "I don't want any. I've got a neon sign."

### What Is It?

Although fluorescent lighting involves a gas-filled tube there is more than just gas inside.

A chemical coating, called a "phosphor," lines the inside surface of the tubing and is the actual source of visible light. The gas used is mostly composed of a drop of mercury and a dash of argon. This gas "cocktail," when excited by line voltage, generates ultra violet light that is almost invisible. The phosphor coating absorbs this energy and re-radiates light that has a broad color range from violet to dark red.

Exciting voltage cannot initially be applied between opposite electrodes at the ends of a cold bulb, but is automatically applied after the gas is "conditioned" by heating of these electrodes. This takes a few seconds and is accomplished by a thermostatic switch which opens the filament circuit and applies voltage between the electrodes, the reactor

or choke supplying a high inductive peak voltage for the necessary initial kick when the contacts open.

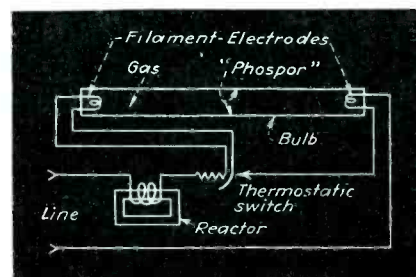
### What Does It Do?

Because of the wide color range of the light produced, fluorescent lighting supplies nearly the equivalent to "north sky daylight." Bulb diffusion area alone is about ten times that of a similar light output incandescent bulb so almost shadowless illumination is provided.

As far as economy of operation is concerned, a fluorescent bulb consumes about half the current re-

quirements of a similar light output incandescent bulb. Fifty percent cooler operation may also be talked up to small-room as well as air conditioning users.

We have hinted so far about auxiliary equipment so don't go out and buy a bulb and hook it on the line. Fixture manufacturers include the necessary gadgets in their units and



**BASIC ELECTRICAL CIRCUIT**—Essentials include the bulb itself, thermostatic switch and choke but other accessories such as condensers for power factor correction and minimizing of switch arcing are desirable

unless you have a pioneering spirit better stick to standard fixtures. The picture diagram shown includes only the absolute essentials. Besides these, capacitors for power factor correction and to minimize thermostatic switch arcing are desirable.

In the subdued colored lighting field no set rules are available since thousands of color combinations are possible. Best prospects for resale here would be beauty shops, dress shops, fancy bars, hotel or club lounges and private homes, to mention only a few.

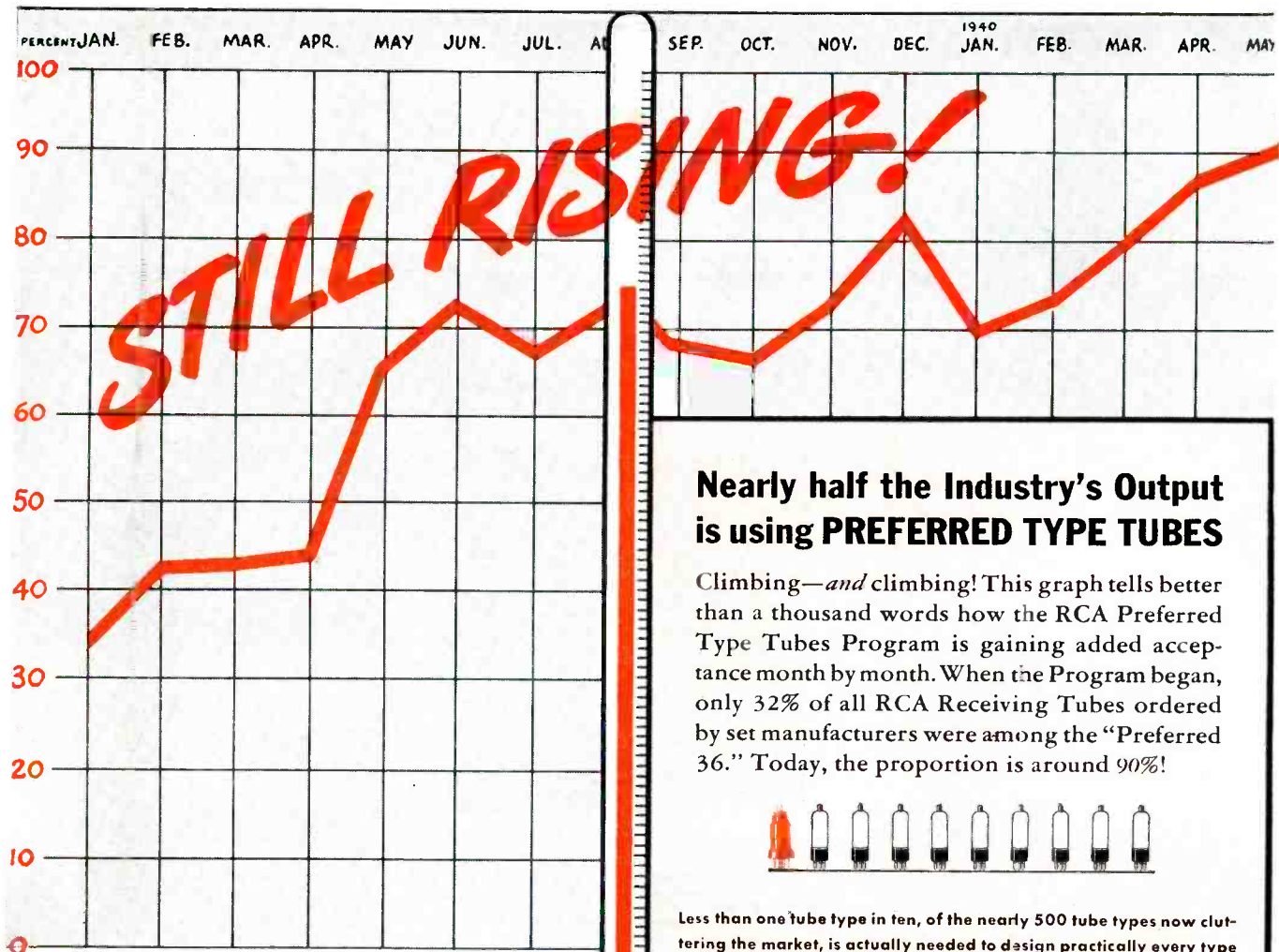
### Where To Get?

The fact that accessories needed for the operation of the lamp include bases, sockets, thermostat switches, capacitors, chokes, reflectors and mountings, makes it doubtful that many dealers would care to buy these separately and assemble into

(Continued on page 62)

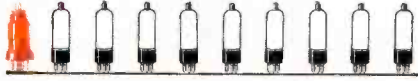
### Fluorescent Fixture Makers

- ARROW-HART, HEGEMAN ELEC. CO.  
103 Hawthorne St., Hartford, Conn.
- ARCHITECTURAL LIGHT CO.  
2765 St. Mary Ct., Chicago, Ill.
- BENJAMIN ELEC. MFG. CO.  
Des Plaines, Illinois
- BRIGHT LIGHT REFLECTOR CO.  
Metropolitan Ave., Brooklyn, N. Y.
- CURTIS LIGHTING, INC.  
1123 W. Jackson Blvd., Chicago, Ill.
- DAY-BRITE LIGHTING, INC.  
5401 Bulwer Ave., St. Louis, Mo.
- EFCOLITE CORP.  
Trenton, N. J.
- FLEX-O-LITE CO.  
St. Charles, Ill.
- FLUORES-O-LITE MFG. CO.  
99 Lincoln Park, Newark, N. J.
- FROST, SAMUEL  
41 W. 14th St., New York, N. Y.
- GARDEN CITY MFG. CO.  
1430 S. Talman Ave., Chicago, Ill.
- GENERAL ELECTRIC CO.  
Bridgeport, Conn.
- GOODRICH ELEC. CO.  
2935 N. Oakley Ave., Chicago, Ill.
- GRUBER BROTHERS  
72 Spring St., New York, N. Y.
- GUTH CO., EDWIN F.  
2615 Washington Blvd., St. Louis, Mo.
- HOLDEN, DEAN H.  
2341 Carnegie Ave., Cleveland, Ohio
- HYGRADE SYLVANIA CORP.  
60 Boston St., Salem, Mass.
- KELLY, INC., FRANK  
8115 Forrest Ave., Elkins Park, Pa.
- KENT METAL MFG. CO.  
490 Johnson Ave., Brooklyn, N. Y.
- MILLER CO.  
101 Center St., Meriden, Conn.
- MITCHELL MFG. CO.  
1550 Dayton St., Chicago, Ill.
- MOZART SPEC. CORP.  
1533 N. Ashland Ave., Chicago, Ill.
- NAT'L STORE FRONT CO.  
57 Cliff St., Boston, Mass.
- OVERBAGH-AYRES MFG. Co.  
411 S. Clinton St., Chicago, Ill.
- REFLECTORS, Inc.  
3225 Frankfort Ave., Philadelphia, Pa.
- SMOOTH-HOLMAN CO.  
Inglewood, California
- WAKEFIELD BRASS CO.  
731 W. River St., Vermillion, Ohio
- WESTINGHOUSE ELEC. MFG. CO.  
Edgewater Park, Cleveland, O.
- WHEELER REFLECTOR CO.  
275 Congress St., Boston, Mass.
- WIREMOLD CO.  
Hartford, Conn.



**Nearly half the Industry's Output is using PREFERRED TYPE TUBES**

Climbing—and climbing! This graph tells better than a thousand words how the RCA Preferred Type Tubes Program is gaining added acceptance month by month. When the Program began, only 32% of all RCA Receiving Tubes ordered by set manufacturers were among the "Preferred 36." Today, the proportion is around 90%!

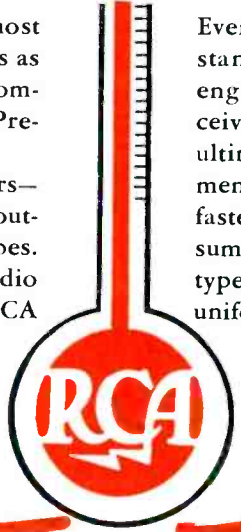


Less than one tube type in ten, of the nearly 500 tube types now cluttering the market, is actually needed to design practically every type of radio receiver for finest performance at the lowest ultimate cost.

**More than 5,000,000 SETS IN 1940 will use Preferred Type Tubes!**

**I**NTO new 1940 receivers are going almost as many of the 36 Preferred Type tubes as the total of all the 400-odd other types combined! And the curve of acceptance for Preferred Types is still skyrocketing up!

*Acceptance:* Five Million 1940 Receivers—approximately half the industry's total output in 1940—will use Preferred Type Tubes. *Acceptance:* 18 of the country's leading radio set manufacturers have endorsed the RCA Preferred Type Tubes Program—have endorsed it, followed it, and adapted it to their production because they believe it a benefit to the industry... to themselves... to you.



Everyone gains, when the road is cleared for standardization. Manufacturers gain because engineers can design virtually every type of receiving set for a desired performance at lowest ultimate cost. Distributors, dealers and servicemen gain—and will gain increasingly—through faster turnover and fewer stock items. The consumer gains, because more production of fewer types means less costly production of better, more uniform tubes—more tube value for his tube dollar.

The way has been pointed. The road is open. Streamline your problems with the RCA Preferred Type Tubes Program!

*Over 380 million RCA Radio Tubes have been purchased by radio users.*

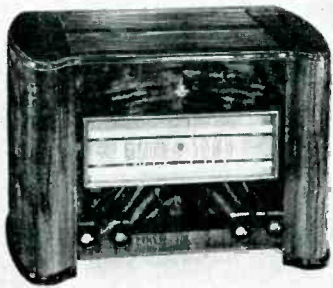
*Preferred Type Tubes*

**RCA Manufacturing Co., Inc.**  
Camden, New Jersey • A Service of Radio Corporation of America

## EMERSON



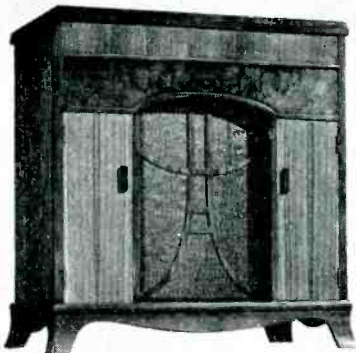
**PERSONAL RADIO**—Model No. 379 a new pocket size, self-powered radio measuring 8 x 5 1/2 x 2 1/2 inches, weighs less than five pounds and lists for \$19.95 complete. Features new miniature tubes and 4-inch speaker. Comes equipped with shoulder strap for convenient carrying.



**MODEL 365**—Handsome table type receiver, with cabinet acoustically constructed, is an 8-tube plus electron ray tuning superhet. Features an 8-inch speaker, and large straight line "eye-ease" dial. Encased in cabinet with curved ends of figure striped walnut, front of buff walnut and vertical grained striped walnut. Emerson Radio & Phono. Mfg. Co., 111 Eighth Ave., New York, N. Y.

## ROCK-OLA

**RECORDER**—This attractive console DeLuxe model is a combination radio, recorder and phonograph, equipped with an automatic record changer. Other models in Rock-Ola's new line (all combinations) include one portable, one table and three more console sets. Consoles, characterized by fine furniture styling, are available in modern and traditional design. Rock-Ola Mfg. Corp., 800 N. Kedzie Ave., Chicago, Ill.



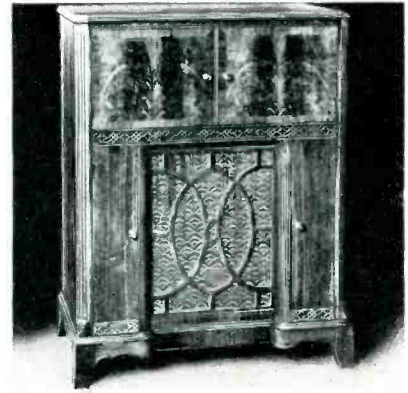
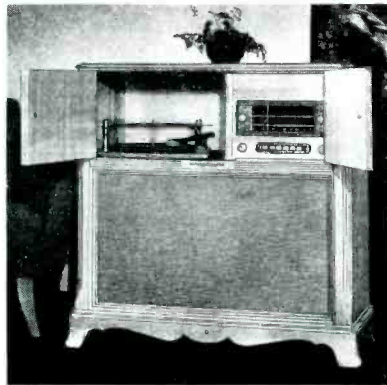
# Preview of

## G-E

**MODEL J-808**—Automatic phonograph-radio combination in 18th century period style is equipped with 8 tubes, tone selector, 3 tuning bands, 6 pushbuttons with drift proof station settings. Phonograph compartment lights up when phonograph control is turned on.

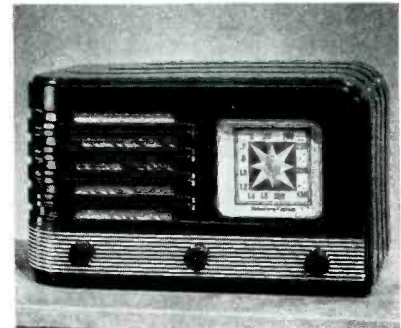


**MODEL J-728**—This automatic-phonograph-radio combination is available in blond mahogany veneers. Receiver has 8 tubes, 14-inch speaker, automatic tone compensation and 3 tuning bands. Phonograph plays eight 10-inch or seven 12-inch records. General Electric Co., Bridgeport, Conn.

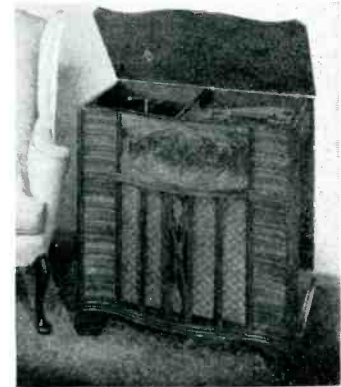


**MODEL 103FI**—Automatic phono-radio-recorder in walnut veneer period cabinet has 10-tubes, 12-inch speaker, 3 tuning bands. Equipped with storage compartments for microphone and record albums, located at the bottom of cabinet either side of speaker grille. Galvin Mfg. Corp., Chicago, Ill.

## STROMBERG-CARLSON

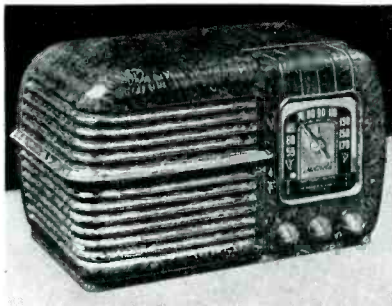


**MODEL 500-H**—Table model radio equipped for standard broadcast reception. Has airplane-type pointer dial. Modern, streamlined cabinet of blue plastic with horizontal white stripes. Measures 8 1/8 x 13 3/8 x 8 1/4 inches.



**MODEL 535-PS**—Automatic phonograph radio combination with the Labyrinth and special FM Carpinchoe speaker. Plays 10 and 12-inch records. Has built-in knob controlled loop, push-button tuning. Walnut or mahogany cabinet measuring 34 x 34 3/4 x 18 1/4 inches. Stromberg-Carlson Tel. Mfg. Co., Rochester, N. Y.

## MOTOROLA



**MODEL 4081**—Farm radio in brown plastic cabinet with large clear dial. Receiver has 4 tubes, 5-inch speaker and uses 1 1/2-volt battery pack. Measures 11 1/2 x 6 3/4 x 7 1/2 inches.



# New Products

## PHILCO

**MODEL 250-T**—New table type receiver in walnut cabinet is an 8-tube superheterodyne with two i-f stages. Features 3 tuning bands, 8-push-buttons, illuminated dial, and built-in antenna. Measures 11 x 19 x 13 inches.



**MODEL 611P**—New radio-phonograph combination featuring the *Photo-Electric* reproducer. Radio is a 10-tube superhet. Phonograph plays fourteen 10 and 12-inch records, fifteen 10-inch or thirteen 12-inch at one loading. Has 8-push-buttons, 3 tuning bands. Home recording unit is optional. *Tilt-front* period cabinet of authentic *Chippendale* design. Philco Radio & Tele. Corp., Philadelphia, Pa.



## AUTOMATIC

**PORTABLE**—New *small Tom Thumb* battery portable utilizing the new *miniature* tubes with built-in antenna. Has 4 tubes, 4-inch speaker. Weighs 5 pounds and measures 9 x 7 x 5 inches. Comes in striped airplane luggage with convenient leather handle. List price \$9.95. Automatic Radio Mfg. Co., 122 Brookline Ave., Boston, Mass.



## RCA

**MODEL VHR-207**—A 9-tube radio-phonograph incorporating a home recorder is available in either walnut or mahogany cabinet. The recording mechanism is built into the instrument with a special chassis. Features the *Tone Guard* and 3 band radio reception. Measures 36 x 35 x 17 inches.



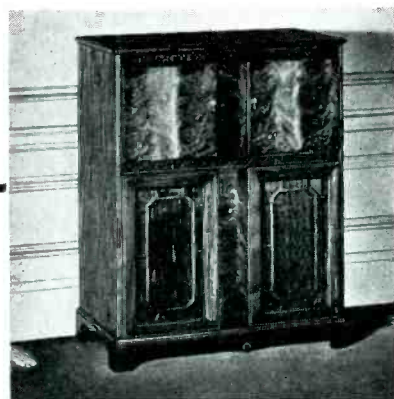
**MODEL V100**—Table type radio-phonograph combination is a 5-tube superheterodyne featuring built-in antenna, two point phono and radio tone control. Phonograph plays 10 or 12-inch records with the lid closed. Front instrument panel is made of solid birch. Measures 11 x 16 1/4 x 13 1/2 inches. RCA Mfg. Co., Camden, N. J.

## DE WALD

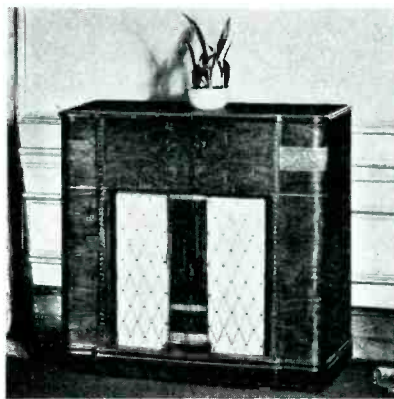


**MODEL 908**—*Recordomat*, a radio, phonograph and recorder, is housed in a table type cabinet of walnut veneers with zebra paneling. DeWald Radio Mfg. Corp., 440 Lafayette Ave., New York, N. Y.

## CAPEHART-PANAMUSE



**GEORGE I**—Cabinet is designed from the transitional period between the Queen Anne and Georgian style. This model comes in 15, 11 and 10 tube chassis. The 15 tube equipment with 3 rectifiers and a cathode ray tuning eye, delivers 20 watts of output through two 12-inch speakers.



**20TH CENTURY**—This modern designed cabinet is made of figured and contrasting walnut. Available in 10-tube superhet with 12 watts output, speaker, drift compensated instant electric tuning. Capehart Div. of Farnsworth Corp., Ft. Wayne, Ind.

## ADMIRAL

**MODEL R58-B11**—Modern style walnut cabinet employing an 11-tube radio, automatic phonograph and home recording unit. *Magna-band* tuning covers five separate bands. Plays up to fourteen 10-inch and ten 12-inch records. Has 12-inch speaker. Measures 35 x 36 x 18 inches. Continental Radio & Tele. Corp., 3800 Cortland St., Chicago, Ill.



## STEWART-WARNER



MODEL 2A1—Wireless record player in table type cabinet of quarter sliced V-matched American walnut. This record player can be used with any radio in the home. Plays both 10 and 12-inch records. Measures 7¼ x 14½ x 13¼ inches. Price \$22.95.



MODEL 6T9—This table type Microphono model employs a 6-tube radio, a record player and home recording unit. Equipped with microphone. Cabinet is made of stump walnut and figured American walnut. Covers 3 bands and uses a 6-inch speaker. Stewart-Warner Corp., Chicago, Ill.

## WESTINGHOUSE

MODEL WR-480—Table type radio-phonograph combination is encased in walnut veneer cabinet featuring the *easy-lift lid* for more convenient handling of records. Comes equipped with 6-inch speaker, 6 pushbuttons, and moulded plastic tone arm. Weighs 29 pounds and lists for \$44.95.



MODEL WR-484—This 8-tube automatic phonograph-radio combination features 12-inch speaker, adjustable built-in loop. Plays 10 or 12-inch records. *Compartment space* for phonograph albums. Measures 33 x 34 x 16½ inches. List price \$119.95. Westinghouse Radio Headquarters, 150 Varick St., New York, N. Y.



MODEL BK-108—This figured walnut cabinet of *Chippendale* design contains a 10-tube chassis and an automatic record player. Covers 3 bands. Employs 7 pushbuttons, built-in antenna and 12-inch speaker. The cabinet measures 36¼ x 35½ x 17 inches. Farnsworth Tele. & Radio Corp., 3700 Pontiac St., Ft. Wayne, Indiana.

## HOWARD

MODEL 302-RT—Table type radio-recorder is housed in a walnut veneer cabinet. Recorder unit has crystal cutter and phonograph plays either 10 or 12-inch records. Equipped with crystal microphone, 8-inch speaker and built-in antenna. Howard Radio Co., 1735 Belmont Ave., Chicago, Ill.



## PILOT

MODEL LD-191—New automatic phono-radio recorder with 12-tube chassis having a 12-inch speaker. Phonograph plays eight 10-inch or eight 12-inch records at one setting. Set comes equipped with microphone. This modern *Lowboy* model lists for \$199.50. Pilot Radio Corp., 37-06 36th St., L.I.C., New York.

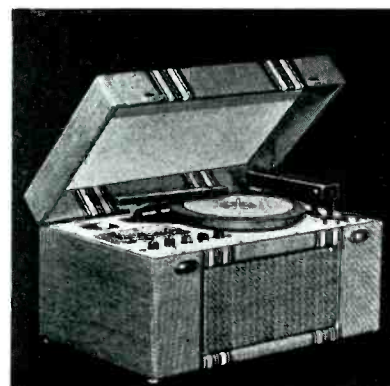
## FARNSWORTH



MODEL BT-68—*Snappy* looking portable encased in simulated pigskin with genuine leather handle. Front instrument panel is of heart-shaped American walnut; provides for a snap-on cover when not in operation. Receiver is a 6-tube superhet, designed for either battery or ac-dc.

## WILCOX-GAY

MODEL A-87—Convenient portable radio, recorder and phonograph combination housed in airplane luggage. Deluxe model also available in genuine leather covering. Radio has pushbutton tuning. Wilcox-Gay Corp., Charlotte, Mich.



# "OOMP!"

You can't find it in the dictionary . . . . but you can find it in **TODAY'S SIMPSON LINE**

If you saw Simpson Instruments at the show you saw something that ordinary words can't describe. In Hollywood they call it "oomph" . . . today's fast way of saying "more of everything".

The Model 400 Tube tester (opposite) is typical of these Simpson Testers that have more of everything . . . more class, more precision, more engineering against obsolescence. We studied your right-now testing problem; then solved it all the way in an instrument as modern as tomorrow.

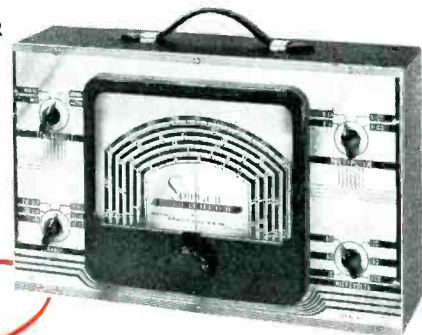
Right down the line Simpson Instruments have been designed by and for your needs. A few leaders in the 1940 Simpson hit parade are briefly described here. All are covered by the handsome new catalog.

Ask for your copy

**SIMPSON ELECTRIC COMPANY**  
5216-18 Kinzie Street, Chicago, Illinois

**MODEL 310  
SIGNAL GENERATOR**

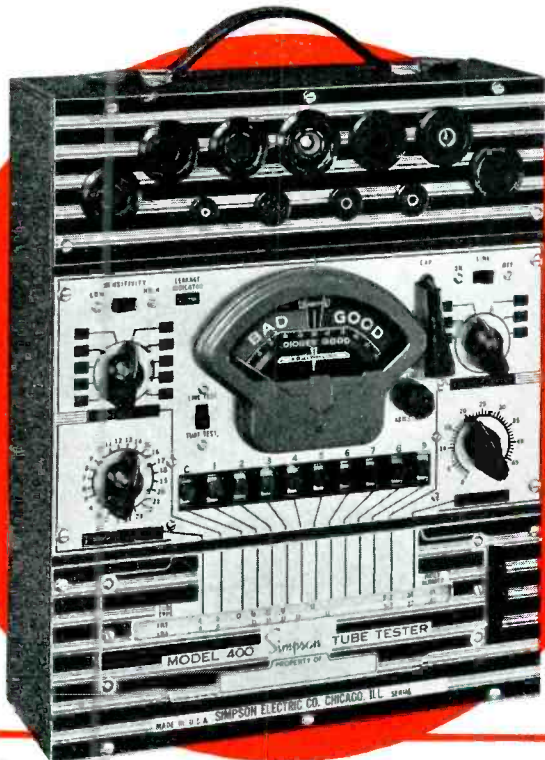
• Reports from independent laboratories prove this to be the most stable and accurate direct-reading signal generator ever offered at a price you can pay. **\$37.50**



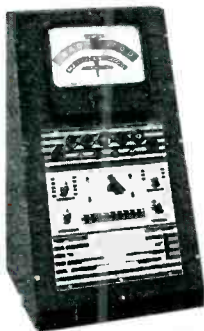
*See them at your jobber*

# SIMPSON

*Instruments that STAY accurate*



↑ **MODEL 400 TUBE TESTER**



Model 500

**VISUAL GUIDE**—Note guide lines that "tie in" roll chart with switches, preventing errors.

**THREE-WAY SWITCHING**—Each toggle switch has "off" position so that any prong can be left open. Valuable in testing tubes like 11NG or tapped filament tubes like 35Z5; also various sections of multipurpose tubes in present or future groupings.

**SPEED ROLL CHART**—Smoother, better operation than ever before. In addition to regular listing has numerical index which speeds up reading. Also has window for writing data for at least 50 new tubes on blank portion of roll chart. Entire chart easily and inexpensively replaced.

**YOUR NAME ENGRAVED ON THE PANEL**—Simply send us the plate. No charge whatever.

Your price on Model 400 **\$36.00**

**MODEL 500.** Same instrument in display cabinet with big, 9-inch meter (see illustration)—a remarkable tube merchandiser. **\$43.00**



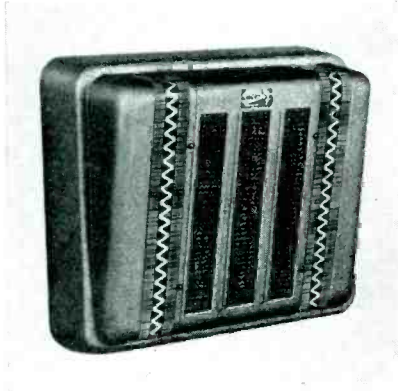
Model 450

**MODEL 450  
"TEST MASTER"**

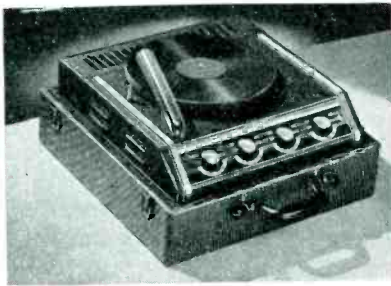
• Service men have called it more for the money than any all-service tube and set tester on the market. Has new Simpson 3-way switching as described above; sockets for 4, 5, 6 and 7-prong tubes, locals and bantams. As set tester has 8 A.C. voltage ranges; 5 resistance ranges; 5 milliamp ranges; 5 Decibel ranges. Your price **\$39.75** only

## UTAH

**REPRODUCER**—Latest additions to the Utah's line of speakers include the wall reproducer shown in the illustration. Tone quality has been improved by a molded, non-metallic housing. Angle of design and construction engineered to provide maximum coverage. Other new speakers are the Baffle reproducer, the Bi-Directional, three FM speakers and two permo-dynamic units. Utah Radio Products Co., 820 Orleans St., Chicago, Ill.



## ERWOOD



**AMPLIFIER**—Model 242B, a 28 watt combination 6-110 volt mobile and general PA amplifier. It is a self-contained portable unit. Has facilities for the use of two microphones, as well as the built-in record playing mechanism. Provision is made for continuously varying either high or low frequency response of amplifier. Erwood Sound Equipment Co., 224 West Huron St., Chicago, Ill.

## SELECTAR

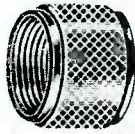
**CONNECTORS**—New Bruno "Baby" connectors, locking type, designed to improve contact and minimize interrupted circuits. Especially made for output or loud speaker connections. Come equipped with 1/2-inch 27 thread to prevent accidental mixing of cables with microphone input. Selectar Mfg. Corp., 30 West 15 St., New York, N. Y.



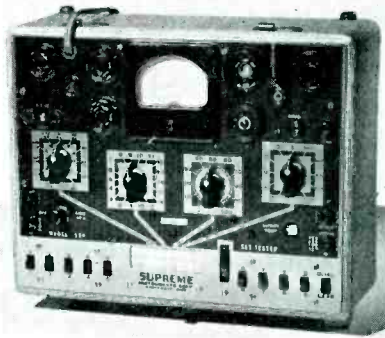
BF



BX



AB1

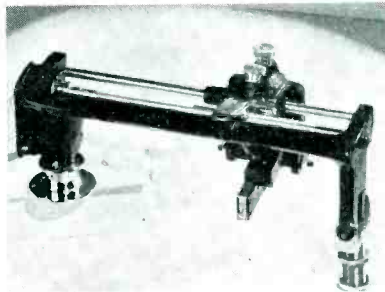


## SUPREME

**TESTER**—Model 599 is a combination tube and battery tester. Equipped with 5 ranges from 0.2 to 1500 d.c. volts, 4 ranges from 0.2 to 600 a.c. volts; 3 from 0.2 ma. to 600 ma.; and 4 ranges from 0.1 ohm to 20 megohms. Tests electrostatic and electrolytic leakages. Contains roll chart listing of tubes. Supreme Instruments Corp., Greenwood, Miss.

## BATEMAN

**RECORDING MECHANISM**—Announces the model CH16 overhead recording mechanism which includes the following features: provisions for cutting either inside out or outside in by shifting a lever; will cut either 112 or 140 lines per inch by gear change arrangement and can cut up to 16 inch masters. Mounting designed for standard magnetic and crystal cutters. List price \$89.50 (with Brush RC20, does not include motor or turntable). Also make a complete portable recorder and the model CUI2 recording assembly equipped to cut 12" masters at 110 lines per inch. Bateman Sound Systems, Inc., 680 Johnston St., Akron, Ohio.



## GREENLEE



**CHASSIS PUNCH**—Model No. 730 is a handy punch for cutting clean accurate holes in radio chassis and other metals. The cutting is done by simply turning the screw with an ordinary wrench, which forces the punch through the metal into the die. Ten sizes of punches are available for 3/4 to 2 1/4 inch holes. Greenlee Tool Co., Rockford, Ill.

## CLARION

**SOUND**—Model CS45 is a 31 watt sound system. Features built-in phono mechanism, master gain control, 12-inch speakers. Amplifier contains 8 tubes. Frequency response 40-12,000 cp. Hum level—20 db below .006 milliwatts. Output transformer is tapped at 2, 4, 8, 16 and 500 ohms. Lists for \$195.91, complete. Transformer Corp. of Amer., 69 Wooster St., N. Y. C.



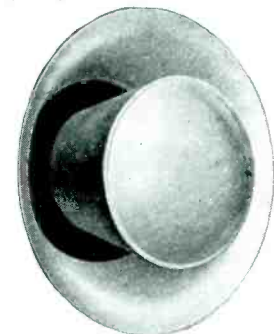
## TRIPLETT



**TUBE CHECKER**—Anti-obsolescence design, and a highly flexible switching system are features of Model 1620 tester. Four separate panel sections (socket, meter, roll chart, switching and power supply) can be entirely replaced at nominal cost with trade-in allowance for old section. List price \$56.75. Triplett Electrical Instrument Co., Bluffton, Ohio.

## WRIGHT-DECOSTER

**EXPONENTIAL HORN**—Steel, weatherproof, exponential type "Doenut" horn has been brought out for wide frequency range requirements. Annular shaped mouth spreads highs over a greater angle. Three models in 22 inch overall diameter are available, two have 15 watt, one 20 watt, power handling capacity. Wright-DeCoster, Inc., St. Paul, Minnesota.



## TURNER

**MICROPHONE**—Announces four "Challenger" microphones, designed to challenge comparison in performance, appearance and price. Two crystal and two dynamic models list at \$9.95, \$15.00 and \$12.50, \$16.50. All fit standard 3/8-27 thread stands. The Turner Co., Cedar Rapids, Iowa.

*Silk stockings*

## AND RADIO TUBES

**T**HE SMOOTH TRIMNESS that makes silk hosiery so attractive and alluring depends on clear, even silk threads. To insure a flawless product, quality hosiery mills carefully test the strength of their thread. The knitters, then, get only clean, unknotted silk from which they can make good hosiery.

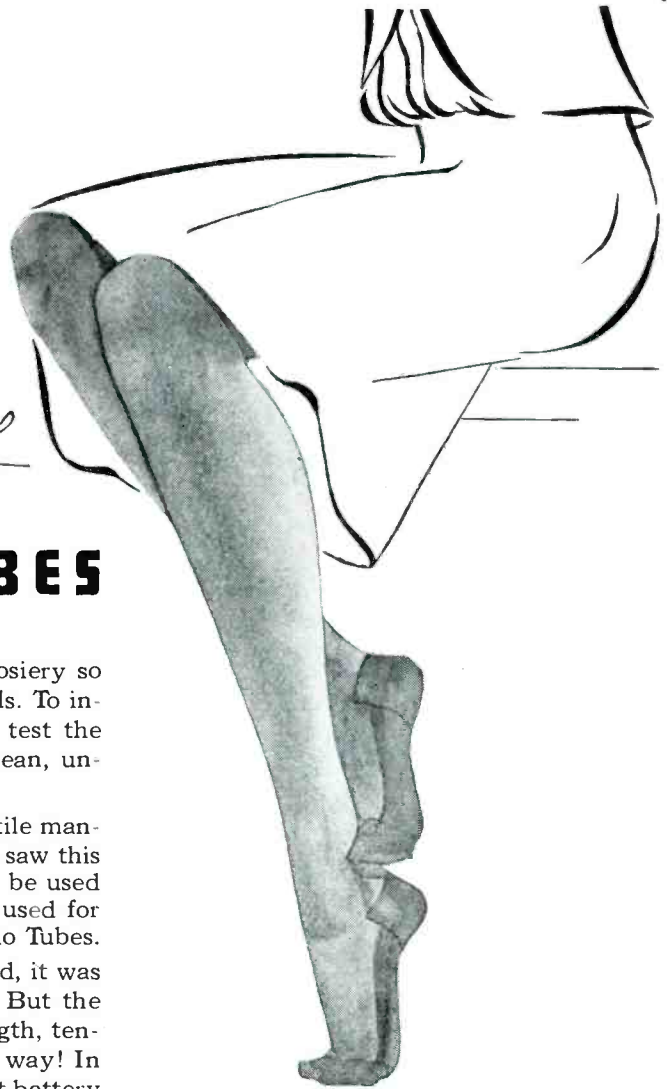
The "Scott Tester" developed for hosiery and other textile manufacturers, is used to test fine thread and cloth. Sylvania saw this same precision measuring device could just as efficiently be used for testing and measuring Molybdenum and alloy wires used for grids, filaments and other delicate parts in Sylvania Radio Tubes.

Before Sylvania enterprise led to this improved method, it was common practice to judge wire according to elongation. But the important criterion for determining wire is uniform strength, tensile strength and yield point—and Sylvania pioneered the way! In fact, research on the filament wire for the Sylvania 1.4 volt battery tubes was made possible through the accurate testing of this machine. The filament wire in these tubes is  $\frac{1}{3}$  the thickness of a human hair—so fine that the common method of judging wire could not be used.

Testing wire with the Scott Tester is only one of the hundreds of special operations that help to make Sylvania Radio Tubes better. To you who sell Sylvania, this care and precision means **SATISFIED CUSTOMERS**—the kind that give you profitable, repeat business.

*Hygrade Sylvania Corporation, Emporium, Pa.*

**SYLVANIA**  
SET-TESTED RADIO TUBES





**CROSLY'S NEW VP AND GSM—**  
*Robert I. Petrie* has just been made vice-president and general sales manager of The Crosley Corp. Petrie is well known throughout the household appliance industry. Used to be with the Nash-Kelvinator Corp.

## Rock-Ola Enters New Field

**New models ready for shipment first week in September**

CHICAGO—The Rock-Ola Manufacturing Corp., 800 No. Kedzie Ave., Chicago, Illinois, announces its entry into the radio-phonograph field with a complete line of combination radios and recorders. Instruments designed to make and play records and receive radio.

Rock-Ola enters this new field with the conviction that its extensive background in the manufacture of commercial phonographs will be of significant value not only to purchasers of its recorders but to dealers who have sensed the sales potentiality of this new form of radio entertainment.

A distinctive feature of its new line is the fact that it is, with a single exception, an exclusively recorder line. There will be six models, all of which are combination phono, radios and recorders. There is one portable unit, one table and four console models. Two of the console models will be equipped with automatic record changers. A seventh model in the line is a portable radio-phonograph with automatic record changer, the only set without facilities for making records. Prices start at \$59.95 for the portable to \$149.95 the list on the Super-Deluxe console recorder.

A complete sales and merchandising program with sales helps and mass advertising has been planned.

## NEWA Convenes in October

NEW YORK—E. Donald Tolles, managing director, sends word that the semi-annual convention of the National Electrical Wholesalers Association is to be held October 22-25, at the Hotel William Penn, Pittsburgh, Pa.

# On the Newsfront

## National Tele Meeting

**Subcommittees under Chairman Baker formed to study various problems**

NEW YORK—On July 31 at the Roosevelt Hotel, New York City, important steps were taken toward forming the National Television Systems Committee. Chairman James L. Fly and Chief Engineer E. K. Jett of the Federal Communications Commission participated in the initial organization meeting, sponsored by the Radio Manufacturers Association with the cooperation of the Commission.

"This is a demonstration of what can be done in cooperation between the industry and the government, said Chairman Fly and television is bound to move forward expeditiously and successfully."

Chief Engineer Jett expressed the hope that the new National Television Systems Committee, composed of the leading engineers and scientists of the industry, under the chairmanship of Dr. W. R. G. Baker of Bridgeport, Conn., director of the RMA engineering department, might be able to submit recommendations for television standards to the commission by this fall or mid-winter.

President James S. Knowlson of RMA opened the committee meeting with thanks to Chairman Fly and the FCC for its support in the RMA project sponsoring the industry committee on standards.

Chairman Fly expressed appreciation of the industry's determination to cooperate and offered all facilities and information of FCC.

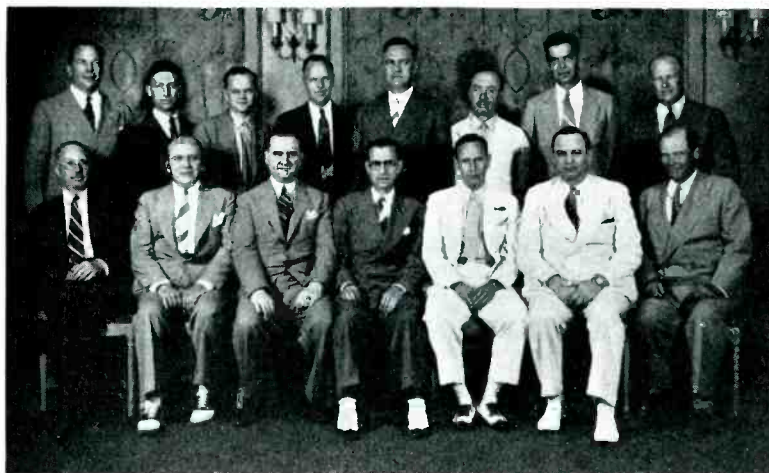
Chief Engineer Jett of the Commission stated that television standards are absolutely essential before television can be launched.

Chairman Baker stated that the Television Systems Committee "is charged with the responsibility of determining the basic standards for a system of communication capable of transmitting intelligence in a form which will, in the future, probably have more effect on the life of the American people than any system known today."

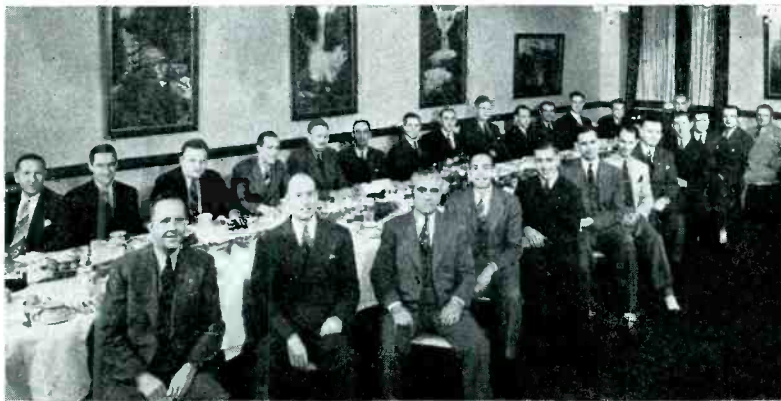
Dr. W. R. G. Baker is chairman of the committee and the members include:

A. A. Oswald	John V. L. Hogan
Adrian Murphy	Albert I. Lodwick
Harry R. Lubcke	Dr. A. N. Goldsmith
Allen B. DuMont	David B. Smith
B. Ray Cummings	E. W. Engstrom
E. F. W. Alexanderson	Frederic C. Young
Daniel E. Harnett	John R. Howland

Chairman Baker appointed and announced the organization of panels or subcommittees with their respective chairmen as follows: System Analysis, P. C. Goldmark; Subjective Aspects, Dr. A. N. Goldsmith; Television Spectra, J. E. Brown; Transmitter Power, E. W. Engstrom; Transmitter Characteristics, Philo T. Farnsworth; Transmitter-Receiver Coordination, I. J. Kaar; Picture Resolution, D. E. Harnett; Synchronization, T. T. Goldsmith and Radiation Polarization, David B. Smith.



**NATIONAL TELEVISION SYSTEMS COMMITTEE—**Left to right, bottom row: J. V. L. Hogan; B. Ray Cummings; Dr. A. N. Goldsmith; Chairman W. R. G. Baker; Harry R. Lubcke; Albert I. Lodwick; and Dr. E. F. W. Alexanderson; Left to right, back row: John R. Howland; Adrian Murphy; E. W. Engstrom; Frederic C. Young; Daniel E. Harnett; A. A. Oswald; David B. Smith and Allen B. Du Mont



**UTAH SALES MEETING**—At this “get together” and dinner of the Utah Radio Products Company’s sales organization, President *G. Hamilton Beasley* disclosed policy and organization changes instrumental in reaching new volumes and profit highs. *O. F. Jester* outlined sales and merchandising plans and *Peter L. Jenson* and *J. M. Hume* discussed the new reproducers

### New Tele Stations

WASHINGTON—The FCC is beginning to grant licenses for television stations under the new regulations recently announced. An application of the Allen B. DuMont Labs for a Washington television station was confirmed by the Commission July 20, with assignment to the new television channel No. 1. The Commission also authorized DuMont and Columbia Broadcasting System to start television broadcasts from their respective Passaic and New York stations. Coaxial cable will be used by DuMont in transmitting programs between Washington and New York.

The new authorizations follow Commission action earlier in speeding construction of the first television station at San Francisco, to be operated by the Don Lee Broadcasting system and at the same time giving the “go” signal for the Don Lee station in Los Angeles and also the National Broadcasting Company’s broadcasting station in New York, the latter to use the new television channel No. 1 similar to the San Francisco’s station assignment.

### Varnum Handles Okeh Campaign

NEW YORK—A triple play combination highlights the promotion campaign ushering in the new 35¢ Okeh label of Columbia Recording Corp. The Okeh tag is the new name for Vocalion records. Popular Hillbilly, Race, and Foreign records are being released.

Presentations were first prepared for CRC district managers and made by sales manager Paul Southard. In turn, district managers were given presentations for the forty Columbia distributors located in strategic sales area. Completing the triple play were presentations from distributors to dealers, coast to coast.

The campaign is under the direction of Wayne Varnum who is in charge of the Popular Division of the CRC Sales Promotion Department.

### RMA Service

WASHINGTON—In July the new RMA statistical service for parts and accessory manufacturers who are members of the association was inaugurated. The weekly reports give valuable figures on business trends in the parts industry, the initial report for July 6 showing an increase of parts sales to radio manufacturers of 11.7 percent over the comparative week in 1939, and an increase in jobber sales of 13.4 percent. The second weekly RMA report for the week of July 13, showed an increase in 16.9 percent of parts sales to radio manufacturers and an increase of 12.4 percent in jobber sales of the parts makers.

### Radiart Moves to New Plant

CLEVELAND—The Radiart Corp. announces that it is now housed in its new plant and office at West 62nd Street and Barberton Ave., Cleveland, Ohio. Former address 13229 Shaw Ave.

## Dist. Preview RCA Line

New instruments presented at Chicago and Atlantic City meetings

CAMDEN—The complete series of RCA Victrola instruments, including a new type of home entertainment instrument which combines radio and phonograph reproduction were recently previewed by RCA Victor distributors from all parts of the country.

Several hundred wholesalers and members of their staffs from the middle and far west attended a two-day session July 8-9 in Chicago’s Palmer House and those from the east met at a week end meeting July 13-15 at the Haddon Hall, Atlantic City.

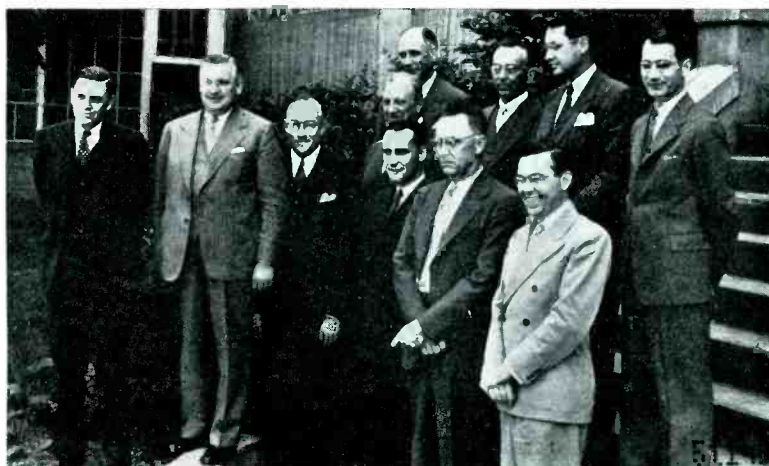
A number of outstanding improvements, which together achieve a tone quality new to record reproducing equipment for the home was presented as the highlights of the new instruments. Henry C. Bonfig, commercial vice-president made the presentations of table and console instruments in a variety of modern and authentic period styles.

Thomas F. Joyce, vice president and advertising director and David J. Finn, advertising manager gave the distributors details of the comprehensive advertising and sales promotion plans for the balance of 1940.

Frank B. Walker, vice president in charge of record activities, reviewed the consistent rise of record sales.

Other convention speakers included Fred D. Wilson, manager of field sales activities, Niles Trammell, newly elected president of the National Broadcasting Co., Wallace Early, manager of record sales, Allan B. Mills, Victrola sales manager, and John Vassos design consultant.

RCA Manufacturing Co. executives in attendance included George K. Throckmorton, president; Robert Shannon, vice president and general manager, and L. W. Teegarden, manager of tube and equipment sales.



**RCA MGM COMMITTEE**—During recent visit to Company’s plant at Indianapolis the Management Committee posed for this picture. In the front row, from the left, are *F. R. Deakins*, *Robert Shannon*, *Henry C. Bonfig*, *Vance C. Woodcox*, *J. M. Smith* and *Thomas F. Joyce*. *Harry L. Sommerer* stands in back of *Woodcox*, behind him, from the left are *N. A. Mears*, *F. H. Corregan*, *E. W. Ritter* and *Frank B. Walker*

## RMA Committees

WASHINGTON—Effective and prompt action on radio industry problems and work of RMA, is being accomplished under the new Executive Committee of the Assn. with President J. S. Knowlson of RMA as chairman. The Executive committee held its first meeting at the Roosevelt Hotel in New York on July 17, arranged for the new National Television Systems Committee to promote television in cooperation with the FCC and outlined national promotion campaigns for the ensuing year. The committee includes RMA directors Ben Abrams, Dr. W. R. G. Baker, H. C. Bonfig, James T. Buckley and A. S. Wells.

New RMA committees to handle the industry's affairs were appointed by President Knowlson at the July 17 meeting. Included was a new Industry Promotion Committee to which H. C. Bonfig was appointed chairman, which will handle the national cooperative campaign of RMA and the National Assn. of Broadcasters, and also other sales promotion and merchandising problems. The committee includes Directors Ben Abrams, W. R. G. Baker, James T. Buckley, Paul V. Galvin, chairman of the RMA Set Division and Director E. A. Nicholas. This committee will also handle merchandising affairs involved in the radio trade practice rules promulgated by the Federal Trade Commission.



**TAKEN AT MUSIC TRADE SHOW**  
—Executives of Lyon & Healy and of Farnsworth Television & Radio Corp. shown holding confab at Farnsworth exhibit space. Left to right: E. H. Vogel, G. Ward, E. A. Nicholas, and E. M. Klock. L. G. LaMair stands with his back to the camera

# RADIO'S FINEST Electronic VOLT METER



**\$39<sup>95</sup>**

**Dealer Net Cash Price**  
S.I.C. Time Payment Plan  
\$5.00 cash and 10 monthly  
payments of \$3.90.

In Metal Case

**MODEL 549**  
**ELECTRONIC VOLTMETER**

Model 549 is the result of a long period of research in designing a multimeter which will fulfill the serviceman's needs of today and tomorrow at a price he can afford to pay. The instrument will take care of all the serviceman's multimeter requirements since it has standard provisions for A.C. and output volts, direct current measurements, etc., in addition to the electronic circuit for D.C. voltage and resistance measurements.

**0.1 TO 6000 D.C. VOLTS**—covered by six overlapping ranges of 0.2/6/20/60/200/600 volts. These ranges may be extended to 6000 volts, at small extra cost, by use of a SUPREME Type 4875 Probe. The input impedance of all ranges up to and including the 600 volt range is 15,000,000 ohms. The input impedance of the 6000 volt range is 150,000,000 ohms. Both probes for measuring D.C. volts have a built-in resistance so that the D.C. volts developed across oscillator grid leak can be measured without materially affecting the oscillator. Also all plate, screen bias, A.V.C., and A.F.C. voltages can be measured without upsetting the operation of the receiver. Voltages of either negative or positive polarity with respect to chassis or ground may be measured by setting the circuit selector switch to "—" volts or "+" volts. The low range of 2 volt full scale gives a sensitive meter necessary in measuring small control voltages.

**0.5 OHMS TO 1000 MEGOHMS**—covered by 5 overlapping ranges of 0/1000/100,000/1 megohm/10 megohms/1000 megohms. This electronic circuit permits all resistance ranges, including the 1000 megohm range, to be operated by the self-contained 3 volt bat-

tery. Features incorporated are the extreme accuracy acquired by adjusting the ohmmeter at "zero" position and "full scale" position. After this is once set there are no adjustments to be made between ranges. The low range has a center scale resistance of fifteen (15) ohms which gives a good deflection in checking resistances of radio frequency coils. You will like this type of ohmmeter for its speed and accuracy. Being of an electronic type the meter is fully protected and accidental application of the voltage to the ohmmeter will not injure the instrument.

**0.1 VOLT TO 500 A.C. VOLTS**—covered by 5 overlapping ranges of 0.5/15/50/150/500 volts in a circuit whose calibration is guaranteed to  $\pm 3\%$ . Copper oxide rectifier is fully protected and carries the same guarantee as all other parts in the instrument. Temperature error of rectifier is corrected over a working range of 40° F to 100° F.

**10 MICROAMPERES TO 15 AMPERES D.C. CURRENT**—covered by 7 direct ranges of 0/500 microamperes; 0.5/15/50/150/500 M.A.; and 0/15 amperes. Such a wide selection of ranges was incorporated to meet all current measurements necessary—from the few microamperes found in control circuits to the ampere drain of automobile receivers.

**0.1 TO 500 OUTPUT VOLTS**—can be used with any good signal generator (SUPREME Model 571 or 561) for receiver alignment. Covered by five ranges of 0.5/15/50/150/500 Volts.

The Model 549 is also available in beautiful oak case as illustrated for \$42.50 cash or \$5.00 cash and 10 monthly payments of \$4.18.

**SUPREME**

SUPREME INSTRUMENTS CORP.  
GREENWOOD, MISSISSIPPI, U. S. A.

**SEND FOR NEW CATALOG**

—just off the press. Large, two color illustrations, complete descriptions of 22 new 1941 model SUPREME quality testing instruments. Write today!

## Capehart Shows New

### DeLuxe and Panamuse Lines

FT. WAYNE—Capehart's line of deluxe phonograph-radios for 1941, was introduced at the convention of the National Association of Music Merchants, July 30, 31 and Aug. 1 at the Stevens Hotel, Chicago. The line comprises three series and a total of nine models.

Also presented at the same time were the 1941 Capehart Panamuse combinations, including 12 models. Following the introduction at Chicago, Capehart held a special show in the Janson suite of the Waldorf Astoria, New York City on Aug. 7-9. I. C. Hunter, Capehart sales manager, also has scheduled showings at Los Angeles and San Francisco before the end of August.

The deluxe Capehart automatic record changer of the turn-over type is again the heart of the line. Among the new Capehart features this year are frequency modulation reception and operation by remote control. Cabinets in authentic period designs.

The exhibits were under the direction of I. C. Hunter, who was assisted by C. H. Davies, George Crossland, P. W. Palmgren, Howard Cushing, F. K. Gizax, C. W. Emley, R. C. Vaughan, Jack Yeager, and C. R. Ward.

Farnsworth executives who also attended the Chicago show included E. A. Nicholas, president; Ernest H. Vogel, vice-president; J. H. Pressley, chief engineer and John S. Garceau, manager of advertising and sales promotion.

## To Produce FM Sets

NEW YORK—Freed-Eisemann is returning to the radio receiver manufacturing field, according to announcement made by Joseph D. R. Freed, president of Freed Radio Corp. which will manufacture the new sets designed for frequency modulation reception.

Freed is joined in the new company by Max Adelberg as treasurer and Melvin Zalkin as secretary. The new organization is located at 39 W. 19th Street, New York City. The sets are to be shown to the trade within the next few weeks at which time full details of the line are expected.



**More power for  
your portables means  
more pleasure for  
your customers**



**... and more business for you!**

● As a radio dealer, *satisfied* customers are a priceless asset to you. But to keep *portable* customers satisfied, you must do more than just sell them good radios.

The quality of a portable's reception can be no better than the quality of its batteries! That's why more and more dealers are recommending and selling the new Willard Dry Batteries to their portable customers.

And they're finding that name "Willard" carries a lot of weight with a lot of people—makes this handsome line *easier to sell*. Willard always has been the greatest name in batteries and these new long life radio batteries are making it still greater.

Willard has a real proposition for radio dealers—one that will bring you a sweet profit. Mail the coupon below and we'll send you full information at once.

**EVERY TYPE YOU NEED!**

● All the types of batteries you need to do a profitable business. They all meet or exceed U. S. Bureau of Standards specifications—contain a very high percentage of active materials and are built with construction advantages that assure long, dependable service.



An attractively designed line of "A," "B" and "C" Dry Batteries.



Power Packs finished in a shade to harmonize with the radio cabinet.



New 1 1/2-volt "A" Dry Batteries for portable sets using 1.4-volt tubes.



2- and 6-volt "A" Storage Batteries for greater capacity.



Dry cells for ignition, doorbells, flashlights, all general purposes.

# Willard

*Batteries for Every Purpose*

**THERE'S MONEY HERE • MAIL COUPON TODAY!**

WILLARD STORAGE BATTERY COMPANY  
CLEVELAND, OHIO

I'm interested in your special radio dealer proposition.  
What's there in it for me?

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

907

## Rider Issues Eleventh Manual

NEW YORK—Complete servicing data on receivers marketed up to May 15, 1940, are in Volume XI, latest addition to Rider's "Perpetual Trouble Shooter's Manuals." The 1652 pages of the new edition are so arranged as to contain the maximum amount of information on as many receivers as possible.

A serviceman's Vest-Pocket Manual is supplied with the manual, also a complete set of diagrams of tube socket connections and other data invaluable to a serviceman.

Bound in with the Index to Volume XI is a new "How It Works" section. The index has a new typographical make-up, which simplifies reference.

## Dynavox in Larger Quarters

NEW YORK—The Dynavox Corp. moved to new and more spacious quarters at 55 East 11th Street, New York City. Formerly located at 16 East 18th Street. The additional space and facilities according to Joseph Dworken, sales manager, will enable the company to offer to the trade a complete up-to-date line covering the entire phonograph field.

## Worner Appoints S. M.

CHICAGO—Robert H. Campbell has been named general sales manager for the Worner Products Corp. according to L. L. Worner, president. Campbell is

well known in both the radio and electrical field, having been connected with it in various capacities for the past fifteen years.

## Heads Cincinnati Electric Assn.

CINCINNATI—Matt Williams of the Crosley Distributing Corp. and vice-president of the trustees of the Cincinnati Electric Association, is now president of that organization following the recent death of Frank Colville, of Westinghouse, who was president.

The Cincinnati Electric Assn. is unique in a number of ways. It is said to have the largest membership of any organization of its kind in the country and is noted for its annual appliance show.

# **BRIGHT STAR** PORTABLE RADIO BATTERIES

A dependable source of power supply for all types of Portable Receivers.

- The highly efficient "bag type" construction—long associated with BRIGHT STAR quality batteries—eliminates possibility of internal short circuits.
- Special inner casing safeguards battery life from harmful effects of moisture or dampness when receivers are used outdoors.
- Constant laboratory control over raw materials, manufacturing processes and finished product assures high quality, uniformity and top performance.

Build your battery sales with BRIGHT STAR—for profits and satisfaction.

**FREE!...**

A comprehensive Replacement Guide, showing recommended BRIGHT STAR Batteries for over 700 models of portable receivers, is available. Send for your free copy today.



## **BRIGHT STAR BATTERY CO.**

Executive Offices and Factory: Clifton, N. J.

Chicago

San Francisco

Houston

## Min. Tubes

### for Emerson's Personals

NEW YORK—Announcement has just been made by the Emerson Radio and Phonograph Corp., of the following 4 miniature type tubes for battery operation. Types, 1R5 pentagrid converter; 1S4 power amplifier pentode; 1S5 diode-pentode; and the 1T4 super-control r.f. amplifier pentode.

This series of tubes is used in the Emerson models 379 and 380 Personal self powered portable sets.

## H. E. Capehart Forms Packard

FORT WAYNE—Homer E. Capehart founder of the old Capehart Automatic Phonograph Corp. has just formed The Packard Manufacturing Co., of Fort Wayne, Ind. to manufacture a complete line of phonographs for home and commercial use. Temporary quarters have been set up in the Cal-Wayne building of this city. For the past several years Capehart has been with the Rudolph Wurlitzer Co., as vice president and head of its automatic phonograph department.



**COWARD JOINS KELVINATOR**—Charles J. Coward is the new director of advertising and sales promotion of the Kelvinator Division, Nash-Kelvinator Corp.



**POWERS CONFAB AT RCA PREVIEW**—At recent RCA Victor distributor's meeting at Atlantic City, *George K. Throckmorton*, president took time out to discuss plans and highlights of new instruments with *Niles Trammell*, newly elected president of NBC (left), *Henry C. Bonfig*, RCA commercial vice-president (seated center) and *Sheldon R. Coons*

## IRE Pacific Coast Convention

Plan big 3-day schedule

PASADENA—S. S. Mackeown, chairman of Program Committee, advises that a complete tentative 3-day program has been arranged for the Fourth Pacific Coast Convention of the Institute of Radio Engineers, which is to be held at the Ambassador Hotel in Los Angeles August 28-30. Morning and afternoon sessions are scheduled with addresses to be made by many well known radio authorities. Papers to be delivered at the convention will include such important subjects as: ultra-high frequency tubes, frequency modulation, locktal-tube design and manufacture, television receiver characteristics and others.

## Fausett Enters Supply Biz

JACKSON—Floyd Fausett announces his resignation from all active connections with the Radio Instruments Manufacturing Co., of Jackson, Miss., and his entry into the wholesale radio equipment and supply business under the name of Fausett's Radio Supply House. It is understood that the technical management of Rimco will be carried on by Harold Davis of the parts jobbing firm of Harold Davis, Inc.

## McMann Stages Westinghouse Showing

NEW YORK—R. H. McMann, Inc., distributor, recently conducted a two-day showing of the new 1941 line of Westinghouse receivers for the metropolitan New York dealers. The preview was held at the Jacob Ruppert Brewery display rooms. The presentation included the entire series of Westinghouse 21st Birthday radios, new portable Carryettes, consoles and console combinations, many attractive table models and several models housed in plastic cabinets.

# Give your customers a chance to make **GOOD HOME RECORDINGS**

... and they'll give you a lasting repeat business that will show you big **PROFITS** for years to come ...

START THEM OFF RIGHT WITH THIS **PRESTO HOME RECORDING KIT**

Containing . . .

(A) 9 PRESTO BLUE LABEL DISCS, the same high quality discs that Presto has furnished to leading recording studios and broadcasting stations for the last five years . . . except thinner, less expensive for the home user.

(B) 1 Presto Stellite long wearing alloy cutting needle, cuts as quietly as sapphire but more durable, outlasts 20 steel cutting needles, can be resharpened.

(C) 1 Presto Transcriptone semi-permanent playing needle, causes least wear on home recordings or commercial records, average playing life 1,000 records.



RETAIL PRICE COMPLETE KIT \$5.00

USE THIS HANDY PRESTO COUNTER DISPLAY

Holds complete dealer stock, contains 90 Blue Label Discs and 220 cutting and playing needles in proper assortment for quick turnover.

RETAIL PRICE \$56.00



GET THESE MERCHANDISING AIDS FREE WITH EACH COUNTER DISPLAY



2 Orange and Blue 17" x 22" window posters. 200 Disc order cards imprinted with your mail address. 3 Mats for newspaper advertising.

A COMPLETE MERCHANDISING PLAN READY TO GO TO WORK FOR YOU—ASK YOUR JOBBER OR WRITE TO—

**PRESTO RECORDING CORPORATION**  
242 West 55th Street, New York, N. Y.

World's Largest Manufacturers of Instantaneous Sound Recording Equipment

## Distribution News

**GENERAL TELEVISION** — *Arthur Freed of the Freed Company*, 230 Fifth Ave., New York City, has been appointed as metropolitan and northern New Jersey sales representative by General Television and Radio Corp.

**STEWART-WARNER** — *Lehr Auto Supply Co.*, 16 West 61st Street, New York City, have been appointed distributor for Stewart-Warner radios in Metropolitan New York.

**ELECTROVOX**—The following representatives have been appointed to

handle the line of blank discs, cutting and playback needles manufactured by Electrovox Company, 424 Madison Ave., N. Y.

Covering western Penn. and West Va., *H. W. Goetzinger*, 1500 Cooper Ave., Pittsburgh, Pa.; Washington and Oregon, *Dave Lee*, 1001 Westlake Ave., Seattle, Wash.; Illinois, *Bob Wahn*, 831 N. Wabash Ave., Chicago, Ill.; Ohio, *Albert Rapfogel*, 700 Prospect Ave., Cleveland, Ohio; eastern Penn., Maryland and Del., *Wilmer S. Trinkle*, 2324 Ripley St., Philadelphia, Pa.; Washington, D. C., Va., Carolinas and Tenn., *Fred Groves*, 3106 Edgewood Ave., Richmond, Va.; Minn., N. W. Wisconsin and Dakotas, *Flint E. Harding*, 4825 Penn. Ave., Minneapolis, Minn.; southern Cal. and Ariz., *Harry A. Lasure*, 2216 W. 11 St., Los Angeles, Cal.; southern Wisconsin and Iowa, *J. J. Mac Bride*, 5451 Washington St., Chicago, Ill.; northern Cal., *William J. Purdy*, 420 Market St., San Francisco, Cal.; Louisiana, Miss., western Tenn., *Stephen Redman*, 2322 Valmont St., New Orleans, La.; Texas, *G. G. Willison*, 306 West Building, Houston, Texas.



**NEW NBC PRES.**—*Niles Trammell*, newly elected president of the National Broadcasting Company, is shown at his desk in Radio City. He succeeds *Lenox R. Lohr*, who resigned to accept the post of president of the Chicago Museum of Science and Industry



**WHAT HAS HE GOT THAT I HAVEN'T GOT?**

**D**ID you ever stop to wonder how some servicemen get more business and make more money than you? Here, perhaps, is the answer. The most successful men in *any* business are those who have learned never to pass up *anything* that will help them to accomplish an important job *in less time*.

This practice of taking advantage of every aid to *better work in less time* is often the only thing that stands between success and failure. In the radio service business, the man who uses all the information he can get to make trouble-shooting quicker and surer is the one who forges ahead. *He's* the man who has always had a complete set of RIDER MANUALS. He knows how foolish it is to depend on his own memory or intuition when complete, authoritative data can be at his fingertips for only 3c a day.

RIDER MANUALS give you, in the most convenient form, complete data on every set you may be called upon to service . . . data on alignment, I-F peaks,

operating voltages, parts lists and values, voltage ratings of condensers, wattage ratings of resistors, coil resistance data, etc.

If *you* don't have a complete set of eleven RIDER MANUALS, you are overlooking one of the surest ways of speeding up your trouble shooting and increasing your profits.

### YOU NEED ALL ELEVEN RIDER MANUALS

Volume	Price	Covering	Volume	Price	Covering
XI	\$10.00	May 15, 1940	V	\$7.50	1934-35
X	10.00	1939-40	IV	7.50	1933-34
IX	10.00	1938-39	III	7.50	1932-33
VIII	10.00	1937-38	II	7.50	1931-32
VII	10.00	1936-37	I	7.50	1920-31
VI	7.50	1935-36			

### JOHN F. RIDER, PUBLISHER, INC.

404 Fourth Avenue, New York City

Export Division: Rocke-International Elec. Corp., 100 Varick St., N. Y. C. Cable: ARLAB

## VOLUME XI HAS MANY NEW FEATURES

Includes data on FM receivers released up to press time.  
New Index . . . cross-indexed for easy reference.  
New "How It Works" section, with up-to-date information on the latest developments.  
New Vest Pocket Supplement contains much useful information for on-the-spot reference.

*You* NEED RIDER MANUALS

### NBC Elects VP & GM

NEW YORK—Frank E. Mullen, vice president of the Radio Corp. of America was elected vice president and general manager of the National Broadcasting Co. by the NBC Board of Directors according to a recent announcement by Niles Trammell, President of the NBC.

Identified with radio for seventeen years Mullen has had an outstanding career particularly with network operation. He has also been an active participant in the development of television.

In assuming his new position, Mullen resigned his former post with RCA. He takes up his new duties with NBC immediately, leaving the first week in August with Trammell to attend the annual convention of the National Association of Broadcasters at San Francisco.

### Dealer Helps

**NEW CATALOG**—*The Worner Products Corp.*, 1019 W. Lake St., Chicago, Ill. has just released a catalog covering its line of photo-electric operated relays. Write to the above company for a copy. Mention RADIO RETAILING when writing.

**G-I CATALOG**—Phonograph motors, recording assemblies and automatic record changers are described in detail in this new catalog. The home recording-phonograph assembly and the new automatic record changer are included. Address *General Industries Company*, Elyria, Ohio.

**PORTABLE BATTERY GUIDE**—A four page guide of recommended replacement "A" and "B" battery types for portable radio receivers may be obtained from the *Bright Star Battery Co.*, Clifton, N. J. Approximately 700 models of 122 different brands are listed. Free for the asking.

**SOUND CATALOG**—Complete data on wax master and instantaneous recorders, amplifiers, cutting heads, lead screws, chassis assemblies, blanks and needle items are contained in catalog No. 172 of *Universal Microphone Company*, Inglewood, Cal.

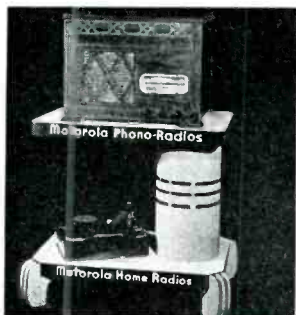
**MASTER CATALOG**—A postcard sent to *Radio-Wire-Television*, 100 Sixth Ave., New York, N. Y., will bring a copy of the latest *Lafayette* 196 page catalog No. 82, listing and describing radios, P. A. equipment, parts and other products.

**ACCESSORY CATALOG**—A six page dial belt listing is featured in a new 32 page catalog of *General Cement Mfg. Co.*, 1041 Kilburn Ave., Rockford, Ill. Cements, cables, hardware, knobs, dial crystals and station tabs are among the many items listed. Available to all radio men.

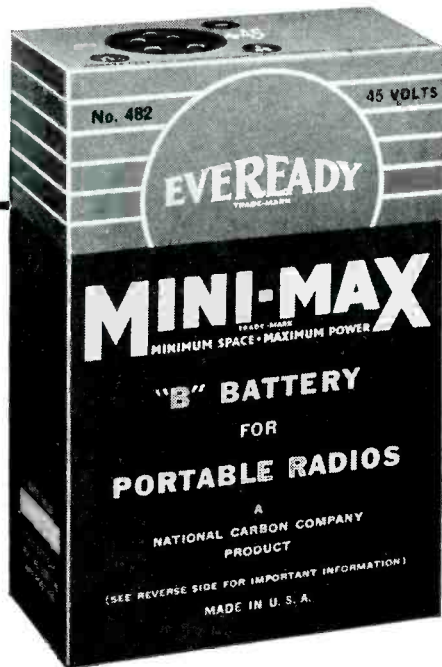
**DISPLAY STAND**—*Noblitt-Sparks Industries, Inc.* new Arvin "Point of Sale" display is free to all dealers who order at least one each of any six Arvin Headliner models. Strongly constructed, stands 5 feet high and 3 feet wide. Room for 7 models.

**1941 CALENDARS**—Full color, art-mount calendars will be available for the coming season through *National Union* distributors. Imprinted with the dealers name, address and phone, a choice of five oil painting reproductions may be made. Mounted on a two tone background, complete with pads, they cost \$4.50 per hundred. Address, *National Union Radio Corp.*, Newark, N. J.

**SALES AIDS**—A metal display cabinet for discs and needles, window posters, imprinted order cards, and ad mats are offered without charge to dealers handling products of *Presto Recording Corp.*, 242 West 55 St., New York City.



**NEW MOTOROLA DISPLAYS**—*Galvin Mfg. Corp.* is providing dealers with a variety of floor and window displays, to include a large, three unit "Money-Maker" display, a revolving window display, and a 4-set counter display. A streamlined "chairside" stand illustrated, displays and demonstrates table model, phonograph-radio combinations.



**Here's the  
Ticket for  
ELECTION  
PROFITS!**

## With Radio's Mightiest Midget

More owners of portable radios will tune in on news of the coming election than ever before. That is your cue to tune in on profits . . . by stocking enough "Eveready" "Mini-Max" 45-volt "B" batteries right now!

Here's the sensationally small battery that gives great performance. Combining minimum weight and maximum power, it delivers *twice* the service life of

any other "B" battery of equal size.

Over thirty leading manufacturers have designed portable radio sets around the "Eveready" "Mini-Max." Your customers know of its long-life feature . . . will ask for it by name. To be sure of getting your share of the election-listening business, get your order in for "Eveready" "Mini-Max" "B" batteries today!

*Leading radio manufacturers making portable sets for the "Eveready" "Mini-Max" "B" battery are:*

ARVIN	GENERAL TELEVISION	SENTINEL
AUTOMATIC	GILFILLAN	SONORA
COLONIAL	HOWARD	SPARTAN
CROSLY	KADETTE	STEWART WARNER
DETROLA	MAJESTIC	STROMBERG CARLSON
DEWALD	MISSION BELL	TELEX
EMERSON	MOTOROLA	TRAV-LER
FADA	NAMCO	TROY
FARNSWORTH	PACKARD BELL	WARWICK
GAROD	PILOT	WESTINGHOUSE
GENERAL ELECTRIC	RCA	WILCOX-GAY

*And Others!*

### **NATIONAL CARBON COMPANY, INC.**

*General Offices: New York, N. Y. • Branches: Chicago and San Francisco  
Unit of Union Carbide and Carbon Corporation*



The words "Eveready" and "Mini-Max" are registered trade-marks identifying products of National Carbon Company, Inc.



son employ a normal inverse feedback circuit marked X-X in schematic shown. No low frequency degeneration is employed here since it may not be desirable in radio reproduction.

Incorporated in the phonograph combination using this chassis however, is an additional feedback circuit Y-Y. The .006 microfarad condenser shown in the plate to ground circuit of the output 6L6 presents a high impedance to the low audio frequencies and a very low impedance to the high frequencies, effectively bypassing these. This discrimination allows the low frequencies to feedback through the 20 megohm decoupling resistor to the first audio stage to provide degeneration at the low rumble frequencies.

### F.M.-A.M. Receiver

Most manufacturers of F.M. receivers have borrowed from current broadcast practice in their application to ultra high frequencies. High transconductance tubes, developed for television, are utilized in ultra high r-f stages as a practical compromise between ultra high frequency efficiency and production line standardization.

Public demand for sets having both

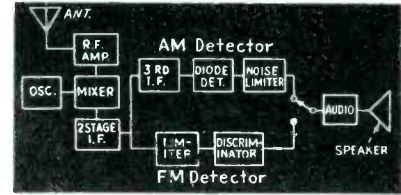
F.M. and broadcast band A.M. has, for the most part caused this condition, but the near future will see an increasing interest in receivers made expressly for F.M.

The new Hallicrafter S-27 is one of the first F.M. receivers specifically designed for ultra high frequency reception only of F.M. and A.M. signals. Built along the lines of a communications receiver, it covers a frequency range from 27 megacycles to 145 megacycles with acorn tubes, familiar to servicemen hams, in the r-f, first detector and oscillator stages.

As circuit shows, a three point band switch permits overlapping coverage of these frequencies and shorts out unused coil sections. The high frequency, plate tuned oscillator couples to the first detector cathode through the condenser shown, by the use of a small pickup coil at the bottom of each oscillator band inductance in diagram.

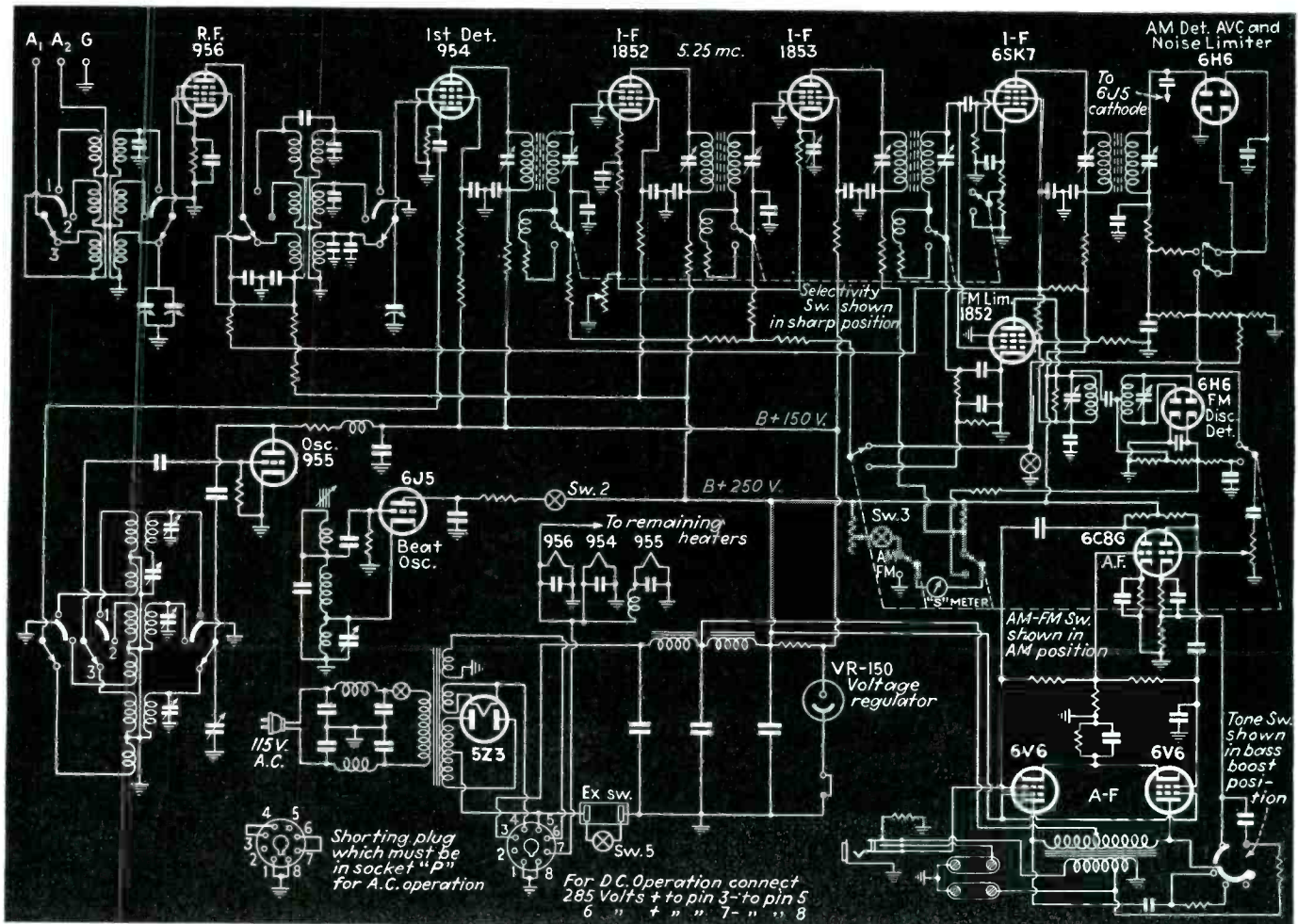
Output of the converter at 5.25 megacycles feeds into a selective two tube i-f amplifier using teletype tubes for A.M. reception but may be broadened sufficiently for F.M. reception by a front of panel switch that connects a small load coil and resistor into the tuned circuits.

In A.M. position an additional 6SK7 i-f stage is employed for maxi-



imum selectivity and sensitivity, feeding one diode section of the 6H6 for detection and avc, the other diode portion providing noise limiting action when switch is thrown to complete the diode circuit. The audio circuit utilizes a 6C8G as the first stage and phase inverter, feeding push pull 6V6 tubes, with a degenerative feedback circuit here employed, controlled by the bass boost switch.

With switch in the frequency modulation position the 1852 limiter is operated without bias and at low plate and screen grid voltages. With small signal input the tube acts as an amplifier but at greater signal input grid rectification causes current flow through bias resistor, makes grid negative and holds down plate current. Because of this action the output voltage soon reaches a saturation point as the input voltage increases, and prevents changes in amplitude from reaching the 6H6 discriminator. This tube rectifies the signal frequency varia-



*Special...N.U...  
Special*  
**\$7.50**



TAKES  
BOTH

PACKED IN ONE  
CONTAINER

TWO DRAWER  
STEEL CABINET

Here's a honey of a steel utility cabinet with the drawers partitioned to make it easy for storing small parts. You'll find this cabinet a mighty useful addition to your shop equipment and best of all . . . you get it FREE on this limited offer. Don't delay, take advantage of this deal and get your FREE steel cabinet. Cabinet size is—length 11½", width, 9½", depth, 5".

**NO DEPOSIT  
ON CABINET**

You can buy the condenser assortment for \$7.50 plus 30 N.U. point contract. Points can be added to present N.U. contract. You get the steel cabinet FREE, now. There is no deposit. (The condenser assortment comes to you packed with the cabinet.)

**Popular  
CONDENSER  
ASSORTMENT**

LIST

**\$14.35** ★

This fine assortment of popular type N.U. condensers will move fast, give you a good profit and insure the good will of your customers. If you're already using N.U. condensers, you'll be sure to snap up this offer in a hurry. If you don't know yet how really good N.U. condensers are, here's a great opportunity to try them! The assortment you get on this limited offer consists of:

3—JB8450	1—AT2015
1—JB8845	1—AT8250
1—SC8450	1—AT4450
1—AT8150	3—AT8450
1—AT1615	1—AT1645

3—T601
4—T602
3—T605
5—T610
2—T625

GOOD FOR **60** DAYS ONLY

**NATIONAL UNION**  
57 STATE ST., NEWARK, N. J. *Radio Corp.*

**4000 and more REASONS**

Why the PFANSTIEHL

*Finest Phonograph Needle*

"STOLE THE SHOW"

**4000 and more PERFECT PLAYS** From Every Pfanstiehl Needle

Better Tone . . . Longer Record Life . . . Truer Reproduction

*Needle of the Century*

Here is the sales "natural" of the century that rocked the convention. Ideal for home phonographs, especially automatic record changers. Exclusive Pfanstiehl-patented precious-metal-alloy tip. Smooth rounded non-scratching point formed to fit the record groove. Minimizes friction and surface noises. Point actually renews its smoothness with use. Does not crack or pit. Actually provides a full honest 4000 or more perfect plays. A needle beyond all compare.

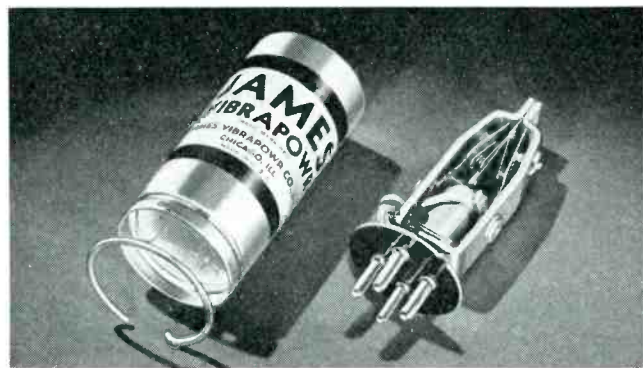
*Brand New  
"Counter Salesman"*

A counter display as new and striking as the needle, itself, sells your stock of Pfanstiehl Needles for you. Beautiful, modernistic, clever — it attracts every eye — urges each customer who enters your store to buy the needle that does away with needle changing annoyance. And each needle is attractively packaged and sealed, in a container that reflects in every detail the outstanding value of the needle it contains.

Stock up at once . . . Profits are waiting . . . Order from your jobber or—

**THE PFANSTIEHL CHEMICAL COMPANY**

Metal Division 103 Lake View Ave. Waukegan, Illinois



**NOW YOU CAN BUY THESE BETTER  
AUTO RADIO VIBRATORS  
At No Premium In Price**

Countless thousands of James Vibrapowr units have solved the Auto Vibrator service problem for those servicemen who replace with the best. They paid a premium for extra quality—but they did a better service job. Now these same James Vibrapowr units may be had at no premium in price. No longer need the serviceman compromise quality in his quest for economy. These new lower prices on James Vibrapowr units are made possible through increased manufacturing facilities—as well as to an ever increasing sales volume. In design—in engineering and in the many exclusive features they embody they stand head and shoulders above the field.

**NEW  
LOWER  
PRICES**

DeLuxe Push-pull non-synchronous James Vibrapowr units, formerly \$3.95 list are now \$2.95. Standard Units formerly listing at \$2.95 are now \$2.25. The Push-pull synchronous type lists at \$4.95. The universal unit that serves over 80% of replacement calls lists at only \$1.75. There is a James Vibrapowr unit to meet every replacement requirement. Write for specification sheets.

LITERATURE ON REQUEST

**JAMES VIBRAPOWR CO., INC.**  
CHICAGO ILLINOIS



tions and feeds the audio components to the a-f stages.

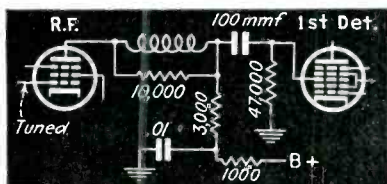
The "S" meter is now a tuning meter since it is connected across the discriminator load resistors and shows the diode voltage. When a signal is tuned across it reaches a peak, drops to zero, then rises on other side. Zero position in the valley of the signal peaks shows that the receiver is accurately tuned. Carrier levels of F.M. stations can be compared by noting readings in the A.M. position of this meter since it then operates as a carrier indicator showing plate current variations of the last two i-f stages.

### Untuned First Detectors

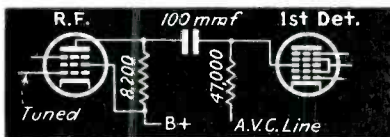
The trend in radio circuit engineering seems to be returning to tuned radio frequency stages in models now appearing on the market.

Use of high gain tubes in these stages though, has caused several front end changes. These have been made in the first detector input coupling and grid circuits. The previously conventional radio frequency transformer with its tuned secondary has been eliminated and instead untuned coupling methods employed.

The new r-f input stages are completely tuned on all bands incorporated in the various models and also are trimmer or permeability tuned in the pushbutton models. Since this is standard practice our diagrams include only essential features of the new r-f detector coupling methods.



The first circuit shown is that used in the RCA model 17K, 19K and 16T4. The plate of the radio frequency amplifier tube is fed through the 3000 ohm resistor shown. To stabilize operation of the r-f stage a radio frequency choke is connected in the plate circuit, its natural period broad-



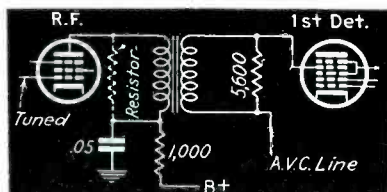
ened by the 10,000 ohm resistor. The grid of the first detector is tied down by the 47,000 ohm resistor and is coupled to the r-f stage by the condenser shown.

With slight changes in plate resistor and choke values the same circuit is utilized by Philco in the models 40-140, 165, 507, 509, 215 and 217.

By changing the plate resistor connection to the plate side of the rfc instead of the coupling condenser side General Electric employ the same cir-

cuit in models J-71, 805, 808, 809, 818, 828 and 105.

Philco use another variation in this circuit in models 40-158, 115 and 124, eliminating the choke and resistor combination in their resistance coupled first detector stage.



An untuned transformer is also employed by Philco in several models. This transformer is broadened by the resistor shown across the secondary winding and may also have an additional resistor of about 7000 ohms across the plate winding in several models. The untuned transformer coupling will be found in their models 40-120, 125, 130, 135, 160, 503, 506, 510 and 525.

### New Tubes

**1LB4**—Loctal power amplifier pentode by Sylvania with 50 ma. filament.

**1LH4**—Diode high-mu triode by Sylvania with loctal base.

**1LN5**—Loctal battery r.f. amplifier pentode by Sylvania.

**1LA4**—Loctal battery power amplifier by Sylvania. Characteristics are:

Filament Voltage	1.4 Volts
Filament Current	0.05 Ampere
Plate Voltage	90 Volts
Screen Voltage	90 Volts
Grid Voltage	-4.5 Volts
Peak A-F Signal Voltage	4.5 Volts
Zero-Signal Plate Current	4.0 Ma.
Zero-Signal Screen Current	0.8 Ma.
Maximum-Signal Plate Current	4.0 Ma.
Maximum-Signal Screen Current	1.1 Ma.
Plate Resistance	0.3 Megohm
Mutual Conductance	850 Umhos
Load Resistance	25,000 Ohms
Power Output	115 Mw.
Total Harmonic Distortion	7 Per Cent

**1LA6**—Loctal battery pentagrid converter by Sylvania. Characteristics are:

Filament Voltage	1.4 Volts
Filament Current	0.05 Ampere
Plate Voltage	90 Volts
Screen Voltage	45 Volts
Anode-Grid Voltage	90 Volts
Control-Grid Voltage	0 Volt
Oscillator-Grid Resistor	200,000 Ohms
Plate Resistance	0.75 Megohm
Plate Current	0.55 Ma.
Screen Current	0.6 Ma.
Anode-Grid Current	1.2 Ma.
Oscillator-Grid Current	0.035 Ma.
Total Cathode Current	2.4 Ma.

**1LE3**—General purpose loctal battery triode by Sylvania. Characteristics are:

Filament Voltage	1.4 Volts
Filament Current	0.050 Ampere
Plate Voltage	90 Volts
Grid Voltage	-3 Volts
Plate Current	1.4 Ma.
Plate Resistance	19,000 Ohms
Transconductance	760 Umhos
Amplification Factor	14.5

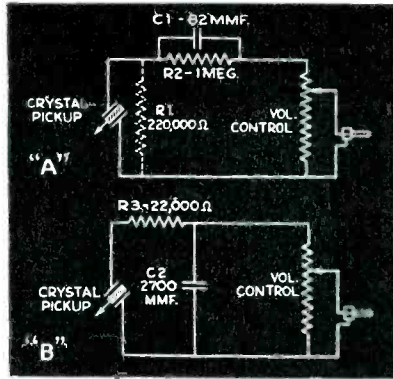
## Phono Tone Compensation

In connecting record players to run of the mill audio-systems it may be desirable in some cases to alter the pickup circuit to compensate for characteristics of the amplifier.

Illustrated are two circuits suggested by RCA for use with model R103S record player and which experimenting servicemen can employ to good advantage on crystal pickup phonograph attachments.

In "A" R1 controls the low frequency response; larger values of R1 give increased lows. For maximum low frequency response remove R1.

R2 controls pickup output, smaller values giving increased output. C1 controls high frequency response, to



increase highs increase C1.

Where a decrease in high frequency response to reduce needle scratch on worn records is desirable the circuit in "B" may be employed. In this circuit C2 acts as a load on the pickup and is also a controlling factor on the high frequency response.

Smaller values of C2 give more pickup output and also more highs. R3 gives a sharper high frequency reduction, increasing R3 decreases highs. The suggested values shown will serve as a basis from which slight changes may be made to suit individual cases. Variable controls may be mounted on a test panel for sample adjustments.

- Generous Dealer Discounts
- Lower Prices, Greater Values
- Electric and Battery Models
- New Portables—Combinations
- New 3-Way Home Recorder
- Advertised to 5½ Million Prospects Monthly

# FOR BIGGER PROFITS!

Vote THE SENTINEL TICKET

● There's a landslide of values in the great new Sentinel Line. It's a winning ticket from every angle. Brings new profit opportunity to the retailer with a line of receivers enjoying a 20-year reputation for quality and freedom from service. Get out your pencil now and vote by sending for full details of this winning line.

SENTINEL RADIO CORP., 2020 Ridge Ave., Dept. RR-8, Evanston, Ill.

# Sentinel

Quality Radio  
Since 1920

## Mr. Radio Serviceman:

# RSA MEANS BUSINESS!

New business promotion plans and new member-helps spell increased profits for RSA members at the start of the new season. Watch for the RSA Replacement Parts Guide—New Broadcast Promotions—New Member Helps! Don't be the last man in your neighborhood to join RSA. Send the coupon Today!

**MAIL THIS COUPON NOW!**

**RADIO SERVICEMEN OF AMERICA, INC.**  
**304 S. Dearborn St.,**  
**Chicago, Illinois**

I am interested in RSA Membership. Tell me about it.

Name .....

Address .....

City ..... State .....

RR-840

Let's Grow Together  
in 1940!



## RADIO SERVICEMEN OF AMERICA, Inc.

Reliable Service Assured

JOE MARTY, JR., EXECUTIVE SECRETARY  
304 S. DEARBORN STREET, CHICAGO, U.S.A.

# Servicing HOME RECORDERS

HOW typical machines work. Teaching the consumer to cut good discs. Correcting common troubles

By VIN ZELUFF

**I**NTENSE INTEREST in home recording brings varied versions for public consumption.

Some manufacturers go whole hog and present the ultimate in combinations—radio, record player, automatic changer and recorder in one cabinet.

Others are feeling their way, omitting the changer and even the radio, while a few companies go in for only the mechanical features, giving the mechanism, pickup and cutting head in a portable case for connection to your radio and microphone. Some even supply a parts kit for assembly by the serviceman or rabid fan.

## Less Complicated

Although instructive floor demonstrations will help the user become acquainted with these recording instruments, the serviceman will bear the brunt of the calls for home instruction when beloved Aunt Sophronia's voice plays back like that of a dying duck.

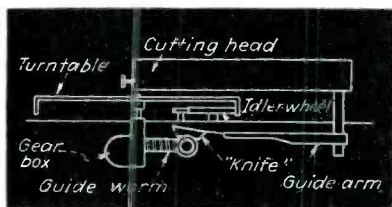
If we can acquire a few pointers on possible troubles we can wave the magic wand so often attributed to us and rectify some of these troubles quickly and painlessly.

Recording equipment has previously been designed primarily for technically minded users in studio and transcription work, but its entrance through the domestic front door has shorn off some of its complications, so necessary for professional reproduction.

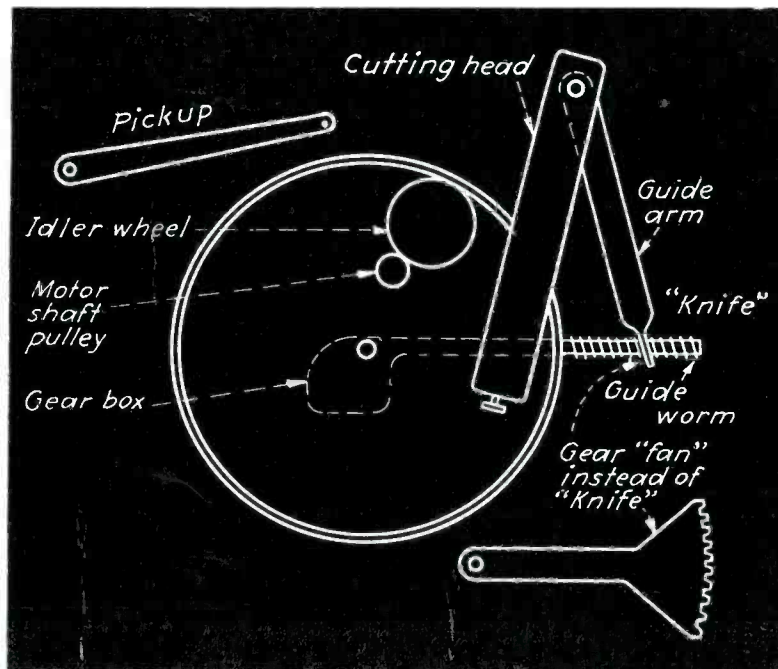
## Crystal Cutters

For the most part crystal cutting heads similar to crystal pickups will be encountered in the new home lines. These stand up well in normal use but are sensitive to extremes of temperature, heat above 120 F. sometimes softening and damaging them. This might be encountered if portable recorders are placed on or near hot radiators.

If machines are stored in very cold closets, "rumble" may be heard on playbacks, but will not occur if the crystal



Turned sideways, our sample recorder looks like this



Aerial view of a typical recording mechanism assembly

cutter is first allowed to warm to normal room temperature before making recordings.

## Magnetic Cutters

Electromagnetic type cutters where used are composed of the usual horseshoe magnet, coil and moving armature with rubber damping blocks. Jerky or intermittent operation will be occasioned if the armature leans and touches the polepieces.

In disassembling this type for adjustment or replacement of armature a small steel bar placed across the open end of the magnet will preserve its strength while it is removed from the assembly.

## Mechanism Types

Commercial recording apparatus employs in many cases overhead cutting feed and several recorders for home and semi-pro use are equipped with this type. The large majority, however, consist of an arm type cutter mounting that is led laterally from under the turntable or motor board. We show a typical mechanism which is a composite culled from several now on the market and that illustrates the method used to guide the recording head in cutting concentric grooves.

Rotation of the motor shaft pulley drives the turntable through the rubber rimmed idler wheel. The rotating turntable spindle in turn produces a slow revolving of the guide worm, transmitted by the step down ratio gear box.

The "knife" edge of the guide arm fits into a single groove of the worm and this worm guides the "knife" and its supporting arm inward toward the center of the record. Since both the guide arm and the cutter arm are mounted on the same vertical shaft the recording head cuts the groove and impresses the signal at the same time.

Variations of this may be found. One in use employs a gear "fan" instead of the guiding knife, permitting a shorter guide worm.

Raising of the cutter arm above a 45 degree angle also lifts the guide arm from worm sufficiently to clear the grooves on the worm, for return of the head arm to its rest position or to stop the lateral movement for an interrupted recording. On some models operation of a separate lever is necessary for disengagement of the guide arm.

## What Is the Blank?

Instantaneous recording discs of today are a smooth, blank sandwich, composed

of a paper, fibre, or metal base, on both sides of which is deposited a plastic material, into which we cut the sound grooves.

### Cutting Needles

Cutting needles, properly called styli, are available in three general classes, steel, stellite and sapphire. Steel, inexpensive, has the shortest life, while stellite, a longer life stylus, can be resharpened. The sapphire stylus, the most expensive, may allow several hours of cutting before resharpening by the manufacturer is necessary. They require care in handling.

Most needle shanks have a flat surface for the stylus screw to engage, but if not, care must be taken to insert shank so that flat part of the point faces directly toward the rear or pivot end of the cutter arm.

When cutting, the stylus should be in a vertical position for proper operation, and the adjustment of this checked every time a replacement stylus is inserted.

### Silent Cut

With stylus inserted properly and a blank record affixed by its holes to the plungers or screws on the turntable, we can start motor and cut a few "silent" grooves. A dull stylus will cut a shallow groove but we are using a new stylus for test and the grooves should be the same width as the "land" space between the grooves. One typical recorder has an adjustment screw on the top of the arm which, when turned

clockwise, will increase the depth of cut, and decrease the depth if turned counter clockwise.

### Some Blanks Thicker

Blanks differ in thickness and if a blank other than that recommended by the recorder manufacturer is used adjustment for depth of cut should be made or dissatisfaction of the customer will result.

If the groove is too shallow the playback needle will jump out of the grooves. If it is too deep, not enough "land" surface will be left between tracks and the playback needle will cut through from groove to groove.

A small magnifying glass will be helpful in comparing the valleys with the hills. The depth of cut may also be roughly checked by noting the thickness of the thread cut from the blank. It should be the thickness of a human hair, about three thousandths of an inch if a machinist's micrometer is available.

Any defect in the guiding mechanism will show as uneven or unconnected lines and should be corrected before proceeding further.

### Record Elmer

A sound recording can now be made but it will be best to let someone else talk or sing while we watch the operation of the recorder. Before lowering the cutting arm on the record, touch the spindle for a moment to create a static charge. This will tend to attract shavings toward the center, away from the

stylus. As the cutting progresses it is sometimes desirable to help this action, preferably with a dry paint brush.

If the shavings are allowed to accumulate near the stylus they may jump or jam it and ruin the continuity of the groove.

### Modulation Indicator

If a signal level indicator is provided it should be closely watched to maintain the proper audio level. Since it is usually hooked up as an output meter a fair idea of the a-f signal strength may be obtained, and lack of indication would indicate trouble here.

Consumer strangeness with these indicators and mike-frightened artists(?) would seem to betoken many complaints of noisy or distorted reproduction. If the record has been made at a too low volume level the added gain necessary to make it audible on the playback will also bring up the inherent scratch level. Conversely, a too high volume recording will overcut the disc and lose some of the sound track, as well as vary adjacent tracks with its own signal. This will cause a very distinctive "pre-echo" effect in the groove ahead and a normal echo in the groove following.

### Chewed Up Blanks

As the cutter nears the record label it should be removed from operation, raised to clear the guide arm from the worm, and returned to its rest. If not removed it may cut into the label or the guide arm may hit a stop and the cutter will



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then gouge a complete circle in the center of the disc. Either would probably damage the stylus and may also circumscribe the record through the base.

### Playback Needles

Since our disc is ready for playback we can now think about the needles for the pickup. Most recorder manufacturers think that the ordinary steel needle used on commercial discs should not be used for playback of instantaneous records. Commercial pressed records contain an abrasive that is inserted in the material to wear down the needle point until it shapes itself to the sound grooves. Home recording blanks do not contain this abrasive material and needles that are made to actually fit the grooves are desirable. Cactus, thorn and fibre needles may tend to score the grooves because of the friction developed between the non-metallic surfaces.

Any of the needles manufactured for playback of home blanks may be used but when once inserted in the pickup head they should not be removed and reinserted. If used at all they should be discarded since any wear from the first playing would tend to fit the needle to the groove and a change in the position of the needle might allow it to cut some of the groove surface.

### General Notes

The recorder must stand absolutely level. We can check this with a marble on turntable. The microphone welder should be kept away from the machine, since the cutter head may howl from feedback. When speaker is used for monitoring extreme care in this must be used.

Erratic operation will often be caused by particles of the thread sticking to the idler wheel or other parts of the mechanism and interfering with the driving of the turntable or the arm guide parts.

It is best to recommend that recording generally be made with the tone control in the high position, as less rumble will be recorded and any unwanted highs can later be toned down on the playback.

### Stroboscope

If the motor is suspected of off-normal speed it can be checked with a stroboscope disc. Placed on the turntable and revolved, its marks should appear to stand still. If the dots appear to revolve clockwise, speed is too fast, if counterclockwise, too slow. Observe the dots while illuminated with a neon bulb, fed from the 60 cycle line for synchronization. Cut a groove while using stroboscope.

A finished, properly recorded disc should appear shiny when examined in a bright light, a dull, gray record denoting an improper cut. A regular, geometric pattern appearing on the surface will usually indicate vibration of the turntable, either up and down or sideways. Motor looseness in mounting, thread jammed in mechanism, need for lubrication, or improper adjustment of the drive wheel tension on rim drive turntables will be found among the possible causes of this condition.

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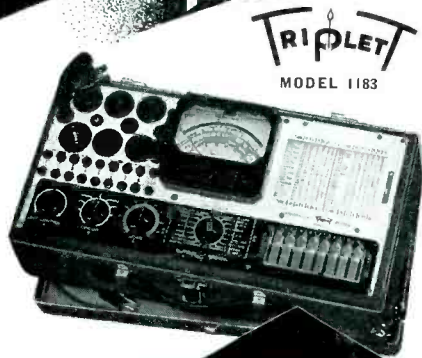
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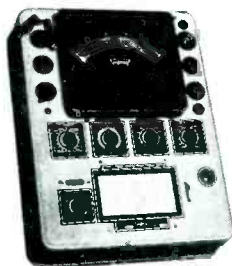


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Fades out after playing for fifteen seconds . . . change 670 ohm bleeder resistor between volume control and ground to 1000 ohm resistor.

DETROLA 191E

Hum . . . reverse speaker field winding.

FARNSWORTH AK76

Fades . . . check .01 condenser connected from the arm of volume control to grid of first audio 6SQ7.

MAJESTIC 3C80

Intermittent, squeals and howls . . . weak prong contacts on 6Q7G socket. Replace with better grade socket.

PHILCO 17

Intermittent . . . replace bypass in grid return of oscillator coil, part 3615AP, 11 on schematic.

PHILCO 116

Fades or motorboats . . . remove can containing four electrolytic bypass condensers, part No. 30-2121. Replace with paper condensers of smaller capacity, using ratio of 3 electrolytic mfd. to 1 paper mfd.

PHILCO 118

Intermittent . . . check .05 condenser bypassing secondary center tap of detector coil for partial open.

PHILCO TH1

Weak . . . check 500,000 ohm plate resistor on the 6C6 for increase in resistance.

RCA 97T2

Crackles regardless volume control setting . . . noise apparently in 6F5 audio stage but caused by faulty 390 ohm cathode resistor of 6F6 power stage feeding back to 6F5 cathode.

RCA 101, 104

Motor interference after a few months operation . . . inspect lead-in shield for break where it connects to set. To remedy slide a piece of shielding over lead and solder.

RCA 811K

Noisy on electric tuning . . . connect .1 mfd. condenser from hot side of tuning motor to chassis.

SILVER MARSHAL 30

Weak on audio . . . check 3,500 ohm resistor from which detector and first audio tubes obtain plate voltage, unit often increases in value. Poor tone . . . look for open in one-half of primary of output transformer.

SILVERTONE 1964

Condenser will not turn when tuning knob is rotated . . . take out knob shaft and tap lightly on anvil over the friction drive slot so as this slot is narrowed.

STROMBERG CARLSON 145

Distorted at medium or high volume . . . leaky or shorted .01 condenser in series 10,000 ohm resistor connected plate to plate p.p. 6L6's.

STROMBERG 420

Loud hiss, no signal, can be made to operate momentarily by snapping on and off . . . inspect for low filament voltage on 6A8. Often this is as low as 4 volts. Replace power transformer.

STROMBERG RECORD CHANGER  
(GARRARD)

Arm and needle scratches across record at beginning of rejection cycle . . . this is caused by a stiff piece of spaghetti covering shielded lead coming out of pickup arm. This wire is twisted 3 or 4 times and the tension causes this trouble. Untwist wire and permit it to hang loosely.

TRUTONE D731

Fades in cabinet, not on bench . . . accumulated heat in cabinet breaks down filter condenser unit. Replace.

ZENITH 7-8-28

Internal noise . . . suspect long candohm voltage divider. Inspect the second tap with the black wire.

ZENITH ALL 1941

Weak short wave . . . open r-f choke in plate circuit of 1232 tube.

Noisy . . . dial rubs against escutcheon. Stator lugs on braid of gang condenser rubs against side of opening in chassis. Check loctal tube socket contacts.

Can not be aligned . . . open or rosin connection on primary winding of wavemagnet.

Overloads . . . open resistor in avc circuit of first detector.

Distortion on phono . . . broken crystal in pickup.

Low volume on phono . . . check shield on lead from crystal for poor ground.

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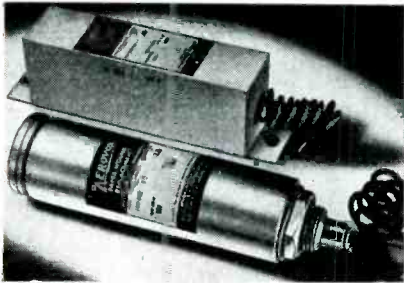
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## TRICKS of the TRADE

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Noisy . . . i.f. transformers are subject to this trouble. Replace defective units.

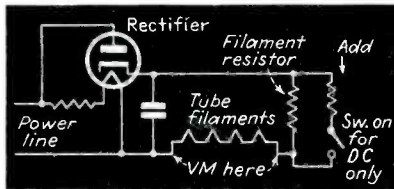
ZENITH 6AOT-6AO4

Noisy . . . right hand pilot light wiring may be pinched by automatic bracket, check for poor contact on manual push button. Check for poor contacts on pilots.

Oscillation on short wave band. . . push black lead of automatic away from automatic adjustments. Keep white and green leads of automatic away from 7L7-7H7 socket.

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Low volume, distortion and fading on dc . . . if normal operation on ac and batteries then dc line voltage is lower than set design allows. Series filament resistor must be paralleled with a resistor to raise filament volt-



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### TELEVISION

ED. NOTE: Beginning a new sub-division in the "Tricks of the Trade" column, a regular feature of RADIO RETAILING since 1931.

#### RCA TT5

Picture half size in width . . . replace condensers C81 and C82, usually open circuit or leads break.

Impossible to center picture vertically or horizontally . . . replace resistor R93, breaks at soldered lug. Other troubles may be located by close inspection of resistors and condensers mounted on fibre terminal board. Vibration in shipment may break these off.

Black horizontal streaks on picture . . . audio signal getting into picture channel. Readjust fine tuning control in front center of set.

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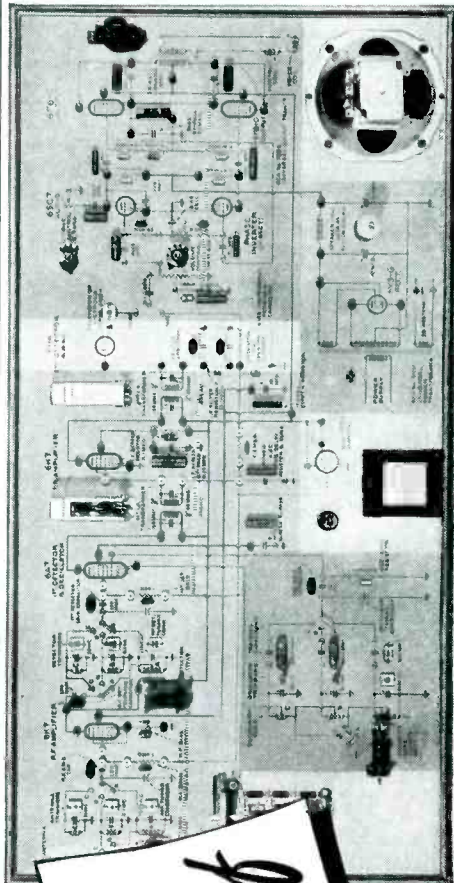
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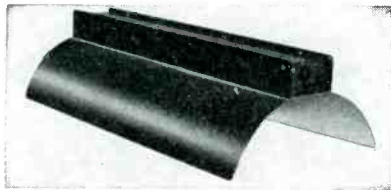
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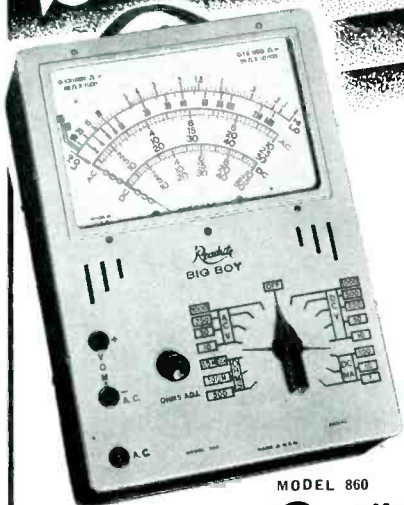
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## RECORD RETAILING

(Continued from page 24)

buying guide.

Listening should be supplemented by reading. Read all available news and gossip of the music trade; band reviews and routes; musical picture release dates and reviews; musical show openings and reviews; also news and reviews of radio programs. And read news and gossip of bands, band leaders, and personnel wherever you find it. A record dealer cannot afford to know less than his customers about such matters as: What instruments the various leaders play; names of vocalists and outstanding personnel with leading bands; relative popular rating of leaders and bandmen on their respective instruments; and dozens of similar details which record buyers like to discuss.

The coin machine has also become a factor in popularizing music. Outstanding examples are "Beer Barrel," "In the Mood," "Oh Johnny," and "Tuxedo Junction." These records were in great demand on coin machines before the tunes received general radio attention. Records popular on the machines are usually popular with record buyers, therefore dealers should cultivate the acquaintance and confidence of local coin machine operators, who frequently collate disc popularity data.

## FLUORESCENT LIGHTING

(Continued from page 36)

complete units.

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## LETTERS

### What's In A Word

Your July article by Carl Dorf, entitled "The Upstairs Discount Racket" has produced a wide ripple of anxiety in the "upstairs" radio trade though it has also given us considerable amusement from the fact that it was so grossly inaccurate and misleading . . .

The colossal blunder in this ill-advised, and perhaps thoughtless blast, lay in the fact that you failed to discriminate between . . . well-meaning, reputable and conscientious upstairs concerns, and those who wallow in the gutter of chiseling and cutthroat competition . . .

Despite the glaring insinuations against the reputable upstairs radio dealer, we do not, and have never, sold at a discount. The highest discount we have ever allowed anyone has been a 5 per cent discount for cash, which we understand is entirely within the code of good ethics . . .

J. M. McGUIRE  
 NEW YORK J. M. McGuire & Co.

Perhaps the words "upstairs" and "discount" were too closely linked in our headline but we believe you take this too seriously in view of the fact that the term "upstairs" was used very much as we would use the adjective "loft" in connection with illegitimate manufacturing operations and for the same reason . . . rather widespread trade use. We even quoted it.

Actually, we did say within the text of the article: "The writer doesn't want to imply that all chiseling houses are located above the ground floor and that all upstairs establishments are cut-price houses. Not so, there are any number of legitimate appliance and record stores that merchandise radios on upper floors."

This seems to us like a pretty clear statement.

### More About Dirty Discounts

I want to congratulate you on your very excellent article about the "upstairs" discount racket, in the July issue of *Radio Retailing*.

It is just this kind of plain talking that is going to call attention to the disgusting situation that exists in our business and make the manufacturers and distributors recognize the urgent need for immediate action . . .

MORTIMER H. FOGEL  
 NEW YORK

I feel we owe you a word of commendation for your well-worded write-up on the "upstairs" discount racket, better known to the legitimate radio dealers as "I can buy it for you wholesale."

Every word of your article is true and right to the point as we can say from experience. The only thing you will have to explain a little further is just how we can lick this sort of thing which has such a foothold in the radio business.

W. E. SLOCUM  
 EDGEWOOD, R. I. Gerry & Slocum

First thing is to bring the situation right out into the spotlight. This is the part of the job for which we, as a publisher, are best fitted. Can we help in any other way—

### Intermittent Help Wanted

We would like to get the opinions of dealers who operate service departments

**ONE OF THE BEST TUBETESTERS I HAVE SEEN TO DATE**

Says TEXAN HERBERT E. HALL



"It has shown tubes to be defective that even higher priced instruments have passed as good," Mr. Hall adds. He is speaking of RCP Tube Checker Model 308P, but you'll find this same extra measure of performance a feature of every RCP Test Instrument. Advanced engineering design enables you to do better work and earn a bigger profit with RCP Equipment.

### CHECK THESE RCP PROFIT BUILDERS!

#### SALES PROMOTER MODEL 312

With Automatic Roller Type Tube Charts

Tests every type of tube . . . spare socket for future tubes of new base arrangement. Famous dynoptimum test circuit gives finest correlative test made under plate voltages and loads as specified by R.M.A. Separate test for noise, hum, intermittents, bad connections. Hot interelement short and leakage test between all individual elements; hot cathode leakage tests. Accurate calibration checked against laboratory standards. Newest "Rolindex" built-in roller type tube test charts insures smoothest, positive, speedy operation. 9-inch Jumbo meter and master size of Model 312 makes an impressive counter piece to increase your service business and add to your \$29.95 profits.



#### PORTABLE AC-DC MULTITESTER MODEL 446P

Five range DC voltmeter 0/5/50/250/500/2500  
 Four range DC milliammeter 0/1/10/100/1000  
 DC ammeter 0/10  
 Four range AC voltmeter 0/10/100/500/1000  
 Three range ohmmeter 0/500/100,000/1 Meg  
 Four decibel ranges —8 to 15/12 to 35/26 to 49/32 to 55

It's the equivalent of 25 different instruments in a single case (hardwood hinged cover) complete with batteries and test leads. Appearance, quality and performance put it in a class with testers \$11.50 selling for twice the price.

#### RCP'S NEWEST LINE

of dependable, low-cost test equipment is described in Catalog No. 123. Send a postcard for your free copy today.

# RADIO CITY

PRODUCTS CO. INC.  
 88 PARK PLACE, N. Y. C.

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at a profit, on their basis of accepting sets with intermittent troubles. We hope that with your cooperation in printing this letter in your magazine other dealers will write telling of the most satisfactory ways they have found . . .

As we see it, there are two ways to handle such jobs: The first, to take it on a gamble, quote a price low enough to satisfy the customer, and then perhaps spend hours on the bench isolating the trouble, finding in the last analysis that you have lost money on the job. The second, not to accept the job unless the customer agrees absolutely to replace all tubes, filters, fixed condensers and volume controls or other parts as appear overdue for replacement and from which the intermittent condition could originate.

The latter suggestion, unfortunately, scares away customers. We believe there must be a happy medium but we have not been able to find it.

ARLINGTON, MASS.

GEORGE S. COBURN, JR.  
*Farmington Radio Co.*

### More Sense Than Poetry

In sales as in service work most of our "troubles" are in our own minds and must be attacked at that point.

We in the radio business have been used in so many different ways and chiseled so many times in the past that no matter who walks in our store now we immediately think he is looking for something cheap, and consequently put ourselves in that frame of mind.

Let's get rid of that feeling. Let's also forget about our competitors down the street. Let's charge our customers more, if necessary, but let's also really give them more.

LOS ANGELES

J. RYAN

### Happy We Could Help

The notice in the March issue about trading tabs off radios that we don't use and are wasted, to stores in other localities who could use them, brought such results that we ran out of them.

By April 29 we had shipped in excess of 80 pounds of tabs to various cities. Believe it or not but the Eastern men

are alive and those in the North and Mid Western cities are asleep as we didn't have a reply from them.

We wish to thank you from the bottom of our hearts for your cooperation in making our desires known as you and your publication alone are the bible to the Radio Service Man.

LONG BEACH, CALIF. H. E. WARD, JR.  
*Radio Technicians' Ass'n.*

### Liked June

Your June special was a corker. Sections 1, 2 and 3 were clear as crystal.

Servicing Tomorrow's Circuits was an especially good story. Let's see more like it.

CLARENCEVILLE, QUEBEC, WALTER MAIGAR

### Like Them All

We are wondering whether you have available enlargements of the excellent cartoons which appear monthly on the index page of your very readable journal. We should like something big enough to be able to frame and hang in our showrooms.

DURBAN, SOUTH AFRICA H. D. FREED  
*Cash Wholesalers, Ltd.*

Sorry. These are not available as blowups.

Regarding your latest issue of Radio Service Shortcuts.

I would like to know if you have those customer educational hints pages 2, 3, 4 and 5 in suitable form for wall mounting. I do not like to cut up the issue but believe if they could be obtained for wall mounting they would be of great help in improving price conditions.

ROSLINDALE, MASS. GERARD J. KOHLER

Can't supply these either, much as we would like to oblige.

### Just Plain Praise

I want you to know that I think your magazine is the best in the country for both radio dealers and servicemen.

HOLLYWOOD H. M. GATEMAN

**A GOOD NAME  
GOES A LONG WAY**



The progressive dealer will find Ken-Rad Dependable Radio Tubes worth investigating. They sell easily because users are real boosters.

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Owensboro, Ky.

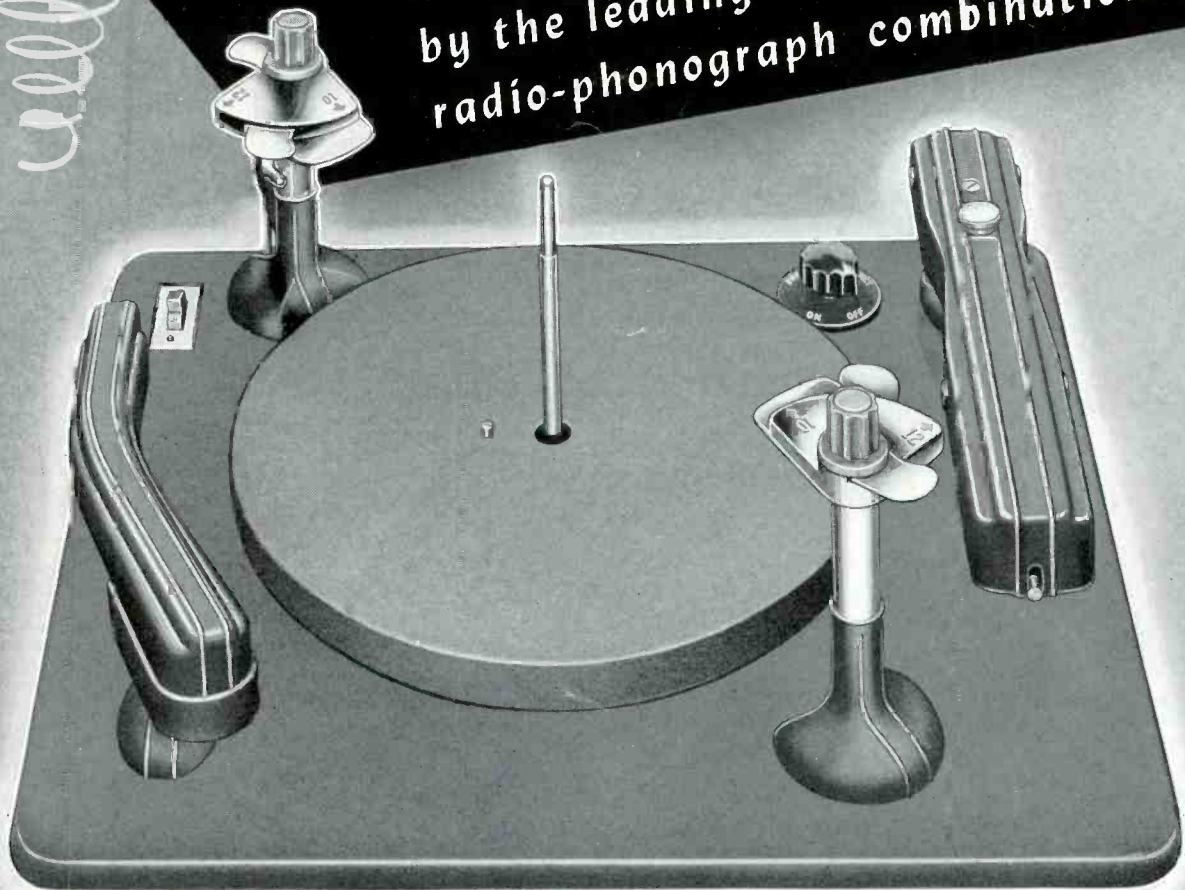
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Forging Ahead

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SELECTED FOR QUALITY  
by the leading makers of  
radio-phonograph combinations



## SEEBURG RECORD-O-MATIC

It bears the stamp of approval from every leading maker of radio-phonograph combinations, for only Seeburg's exclusive features can give their products the dependable, flawless performance the consumer expects.

Record-O-Matic has the simplest automatic changer mechanism. Handles fourteen 10" or ten 12" records, gravity type. Is compact—14" long, 14" wide, 3" deep. No screws or brackets on top surface. Cutting head assembly contains no steel stampings—all parts cast for rigidity; hardened cone bearings at all essential points; lead screw has support bearings at each end; larger main bearing and ball thrust to carry weighted turntable; 1 3/4 oz. pressure crystal pickup in aluminum tone arm gives long record life; crystal or magnetic

cutting heads; cutter has plunger type, automatic engagement with lead screw—separate switch for manual play-back frees tone arm from automatic mechanism—any size record may be played manually. Additional information on the Record-O-Matic, the Model J Seeburg Automatic Record Changer handling fourteen 10" or ten 12" records and the Model H Changer handling fifteen mixed 10" and 12" records will be sent on request. Seeburg experience and engineering integrity guarantee quality throughout.

PRECISION MADE  
J. P. SEEBURG CORP., 1500 DAYTON ST., CHICAGO, ILL.

FINE MUSICAL INSTRUMENTS SINCE 1902



Automatic Record Changers  
and Recorders by Seeburg



MODEL 83K1

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**BIGGEST**  
**BUY** *in*  
**RADIO**

**WOW!**  
 WHAT A RADIO  
 VALUE



And the Entertainment  
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**WIRELESS AUTOMATIC  
 RECORD CHANGER**

Makes an Automatic Phonograph-Radio Combination of  
 any Radio Regardless of Age, Make or Model

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Changes eight 10-inch or  
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 matically. Requires no connec-  
 tions, hook-ups or wiring to  
 radio . . . just plug into any  
 light socket.

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 3-GANG CONDENSER  
 TUNED R. F. STAGE**

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- 6 Electric Motor-Drive "Feather-Touch" Push Buttons
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