

# RADIO

*and Television*

# RETAILING

APRIL 1941  
A MCGRAW-HILL Publication Price 25c



IN THIS ISSUE  
**NATIONAL DEFENSE**  
and its effect on  
**Specialty Selling**

plus Spring STORE MODERNIZATION Section



# TOPS for customer-making!



**It's Going Fast!**

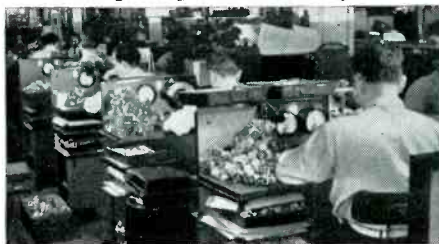
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**P. R. MALLORY & CO., Inc.**  
**MALLORY**  
**VIBRATORS**



Mallory Precision Vibrators result from constant engineering research and development.



Every performance factor of every Mallory Vibrator is proven perfect by these experts.



Sample cross sections from each production run receive rigorous life tests.

It's a hundred to one that the owner of every automobile radio you service, is also the owner of one or more home radio receivers. What a chance then . . . on auto radio service . . . to establish yourself and your reputation for superior service.

That's why we say . . . and that's why thousands of radio service engineers agree . . . that Mallory Vibrators are tops when it comes to making customers. With Mallory Vibrators you can depend upon exact replacements with the precise characteristics required by the circuit. You can depend upon the outstanding quality that has made Mallory Vibrators standard original equipment in the great majority of all auto radios.

Mallory Vibrators cost no more . . . and you can safely stake your reputation for service on every one you use.

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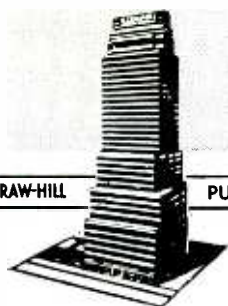
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**More than ever — INSIST ON**

**P. R. MALLORY & CO., Inc.**  
**MALLORY**  
 APPROVED  
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**VIBRATORS • VIBRAPACKS • CONDENSERS • VOLUME CONTROLS • ROTARY SWITCHES • SINGLE AND MULTIPLE PUSH BUTTON SWITCHES • RESISTORS • RADIO HARDWARE**

# RADIO and Television RETAILING



A McGRAW-HILL

PUBLICATION

APRIL 1941

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SALES STATIC . . . I'll leave it, but if my husband couldn't fix it I'm sure you can't

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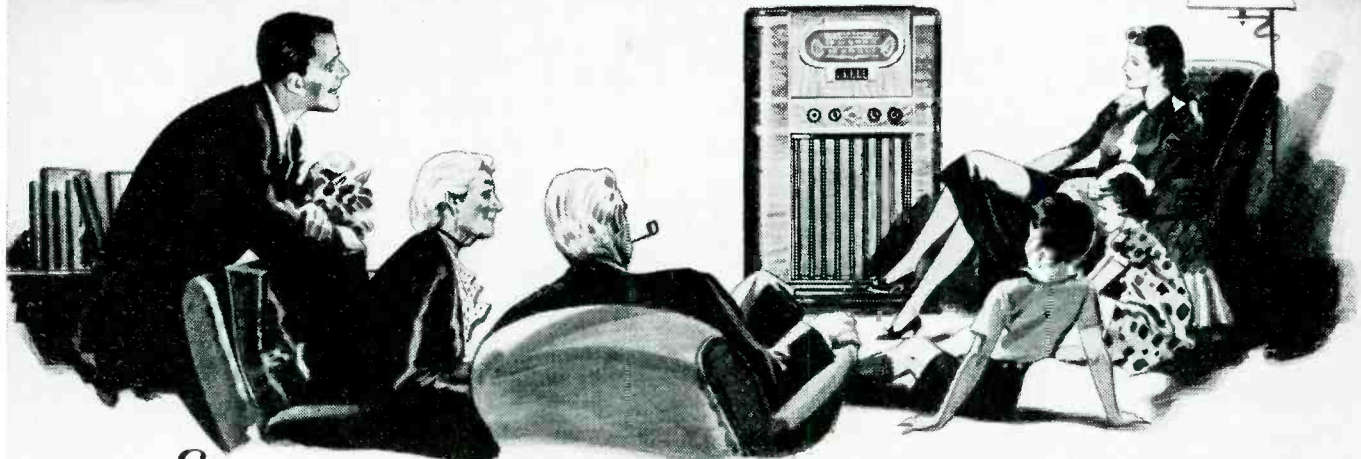
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## Taking Millions of People Out for a Good Time



**E**VERY HOUR, millions of RCA radio tubes glow with an invitation for everybody—a friendly, ever-present invitation. For Radio's latchstring is always out, in the greatest entertainment centers: Radio City in New York and Hollywood . . . the Metropolitan Opera . . . Studio 8-H with Arturo Toscanini and the NBC Symphony Orchestra. Or it may be drama, a comedian, a swing band!

*Radio is Better than Ever this Year!*

New RCA Victor Radios, with finer tone—finer engineering than ever before—this year will bring even more pleasure to Americans everywhere. Push a button of one of

these RCA Victor Radios . . . and you're in a front-row seat! You hear perfectly the life-like, colorful performance: every note of the music, every inflection of the human voice.

And when the show is over, Cinderella-like you're home in a flash! No crowds. No traffic. No weather-worries. You've been across the city or across the ocean . . . without leaving your children or your household routine.

Distance doesn't matter—radio whisks you home as quickly from 3,000 miles as it does a mile. All the world is just across the street. You have had a great time—and you are informed right up to the minute!

## **RADIO CORPORATION OF AMERICA**

Radio City, New York

RCA Manufacturing Company, Inc.  
RCA Laboratories  
National Broadcasting Company, Inc.

Radiomarine Corporation of America  
R.C.A. Communications, Inc.  
RCA Institutes, Inc.

\* **QUALITY**

\* **PERMANENCE**

\* **DEPENDABILITY**



... **ALL** Present a  
**United Front to make**

# **Centralab RESISTORS**

the **Only** Resistor  
in **ANY** Emergency!



- \* **QUALITY** backed by years of experience, engineering supervision and the best of materials.
- \* **PERMANENCE** of resistance values under high temperatures and excessive loads.
- \* **DEPENDABILITY** proved by countless tests and constant use for over twelve years.

● For service work, amateur needs or industrial equipment, Centralab Resistors will serve every purpose. The hard-as-stone insulating jacket and conducting core of ceramic are fired together at 2500° F. into a durable shockproof unit as ageless as stone . . . heat resisting and humidity proof. For every occasion and every use specify Centralab Resistors.



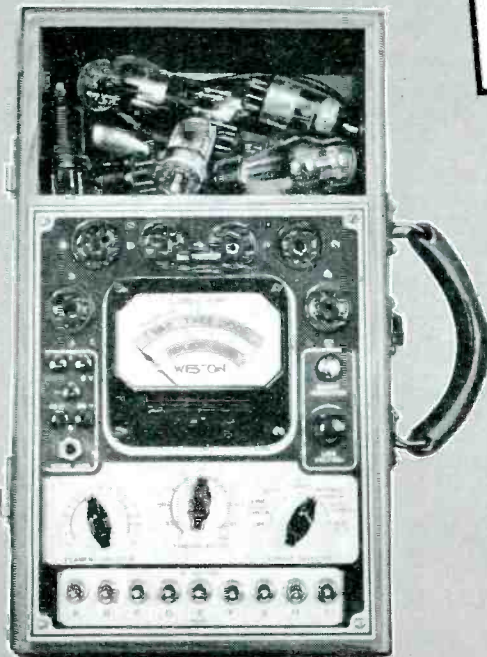
## **Centralab**

Division of Globe-Union Inc.  
MILWAUKEE, WIS.



**WESTON TUBE AND BATTERY TESTER  
(MODEL 777)**

An impressive looking instrument for the counter, and one which provides utmost in convenience, utility and long dependability. Tests over 420 commercial tubes, including beam and big filament voltage types... tests for shorts, for noise, for open elements, etc., etc. Also provides for testing all radio batteries under load. Has special self-wiping, knife edge toggle switches. Large WESTON Meter with "good-replace" scale, and separate arc for batteries. Counter type has convenient, quick reference rotator type tube chart. Portable model (illustrated below) has all the above features except the rotator chart. Both models supplied in handsome polished-wood carrying cases.



**A Portable Tube Checker with Complete Analyzer Ranges**



**WESTON (MODEL 774) CHECKMASTER**

Has all the features of the Model 777 Tube Checker, plus 23 circuit testing ranges for trouble-shooting. Furnished in sturdy and compact carrying case, with spare tube compartment. Ideal for bench and field servicing. Inexpensively priced!

**"When Buying TUBE CHECKERS  
AND OTHER TEST EQUIPMENT  
we look at the Record!"**



"We find ourselves many dollars ahead at the end of each year," says this successful serviceman, "by applying the same basic thinking to the purchase of test equipment as, for example, our own customers apply when they repeatedly call on us for sales and service. Our record with these customers has been dependable and satisfactory in every way."

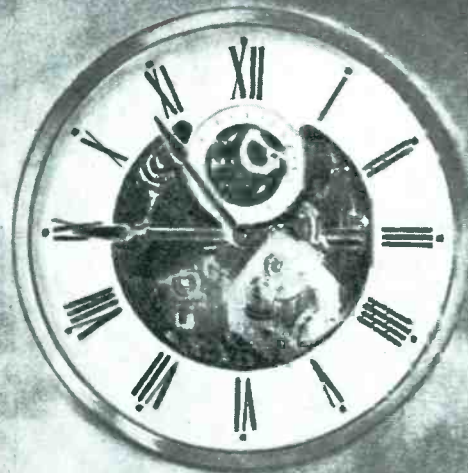
"That's why we are now sticking to WESTONS, regardless of any small difference in first cost. Our experience proves that WESTON instruments have far longer useful life, and thus cost far less per year. And you have the satisfaction of always being able to depend on your measurements. If, on the other hand, you try to stretch your test equipment dollars too far, something must break. You usually wind up with headaches, and high maintenance and replacement costs. We'll stick to our policy of spending sound dollars, for sound and proved test equipment."

Complete literature on all WESTON test instruments for servicing radio, television and other electronic devices, will gladly be sent on request. Write to Weston Electrical Instrument Corporation, 581 Frelinghuysen Avenue, Newark, New Jersey.

**WESTON  
Radio Instruments**

# RAYTHEON TUBES' EXTRA ADVANTAGES

make WESTERN UNION clocks the nation's accepted standard of time . . .



There is no compromise with the perfect time. WESTERN UNION time must be absolutely correct! Keeping accurate time for a nation is a precision task, one that requires each part to function perfectly on the split second. That is why RAYTHEON Tubes were selected to perform this important duty.

Each hour of the day and night an impulse is sent out from the master clock in New York through rectifiers powered exclusively by RAYTHEON Tubes to the district master clocks where the impulse is synchronized with over 120,000 standard Western Union clocks throughout the nation. THUS A STANDARDIZED TIME BASIS IS FURNISHED FOR THE INDUSTRIAL, COMMERCIAL AND SOCIAL LIFE OF OUR COUNTRY.

It is not unusual for RAYTHEONS to be selected when there is an important job to be done—RAYTHEONS are built for consistent accuracy and dependability in performance. That is why radio engineers, servicemen and dealers depend upon RAYTHEON RADIO TUBES no matter what the requirement—and remember, you pay no more for RAYTHEON'S extra quality.

*Insist on RAYTHEONS  
for your next tube order.*

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



A Western Union  
Master Clock.

WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS

*Come On*

# WORLD'S GREATEST RADIO PARTS TRADE SHOW!



**K**ee*p out of the Rut . . . Get a Fresh View of the Industry*

*Step right up, ladies and gentlemen! It's the one and only chance you'll have this year to see your great and glamorous industry on dress parade. Thrilling! Exciting! . . . The meeting of old friends, making new acquaintances from the north, the east, the south and the west . . . Magnificent displays of the latest developments for the coming season . . . Convention sessions of vital importance . . . Conferences with your suppliers. Something doing every minute . . . never a dull moment . . . Prepare now to attend . . . Don't miss the World's Greatest Radio Parts Trade Show!*

*Stevens Hotel, Chicago*

## JOBBER DAYS

start at 2:00 p.m. Tuesday,  
June 10 and run to 6:00 p.m.  
Thursday, June 12.

## RSA SPECIAL PERIOD

Thursday, June 12, 6:00 p.m.  
to 10:00 p.m.

## OPEN HOUSE

Friday, June 13, 11:00 a.m.-  
8:00 p.m.

# Radio Parts National Trade Show

Sponsored by Radio Manufacturers Association and Sales Managers Club  
*Executive Office* • 53 WEST JACKSON BOULEVARD • CHICAGO



# New 1941 Spring PHILCO PORTABLES

## Now Ready



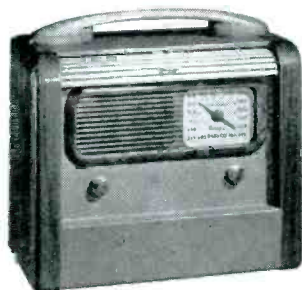
Just in time for the big Spring selling season! It's the easiest-to-sell variety of portable radios you ever saw. New 7-tube models, unequalled for power and performance . . . powerful Short-Wave models . . . new super-performing models in the lowest-price field. And they're all decked out in smart new cases with plenty of eye-appeal. Amazing values in every price bracket.

### MOST POWERFUL PORTABLE RADIOS EVER BUILT!

#### 7-TUBE, PLUG-IN OR BATTERY PORTABLE

- Seven Tubes, including noise-reducing Converter tube.
- 3-Way . . . Battery, AC or DC house current.
- Two I. F. Stages . . . Built-In Aerial.
- Permanent Magnet Speaker.
- Handsome cowhide graining case.

MODEL 842T **\$29<sup>95</sup>**  
*Complete with Batteries*



MODEL 844T. Same features as 842T. Walnut and Beaver graining case with Tambor . . . **\$39<sup>95</sup>\***



MODEL 843T. Same features as 842T. Case of pigskin graining with protective fold-down lid . . . **\$35<sup>00</sup>\***

MODEL 854T. Same features and case as 844T, plus American and Foreign Short-Wave . . . **\$49<sup>95</sup>\***

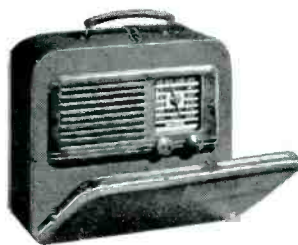
MODEL 853T. Same features as 843T, plus American and Foreign Short-Wave. Cowhide graining case with lid **\$42<sup>50</sup>\***

### AMERICA'S GREATEST PORTABLE RADIO VALUES!



MODEL PT-87  
5-tube Circuit. Plays anywhere on battery or AC-DC house current. Built-In Aerial. Full-Vision Dial. Cowhide graining case, ivory piping.

**\$19<sup>95</sup>\***



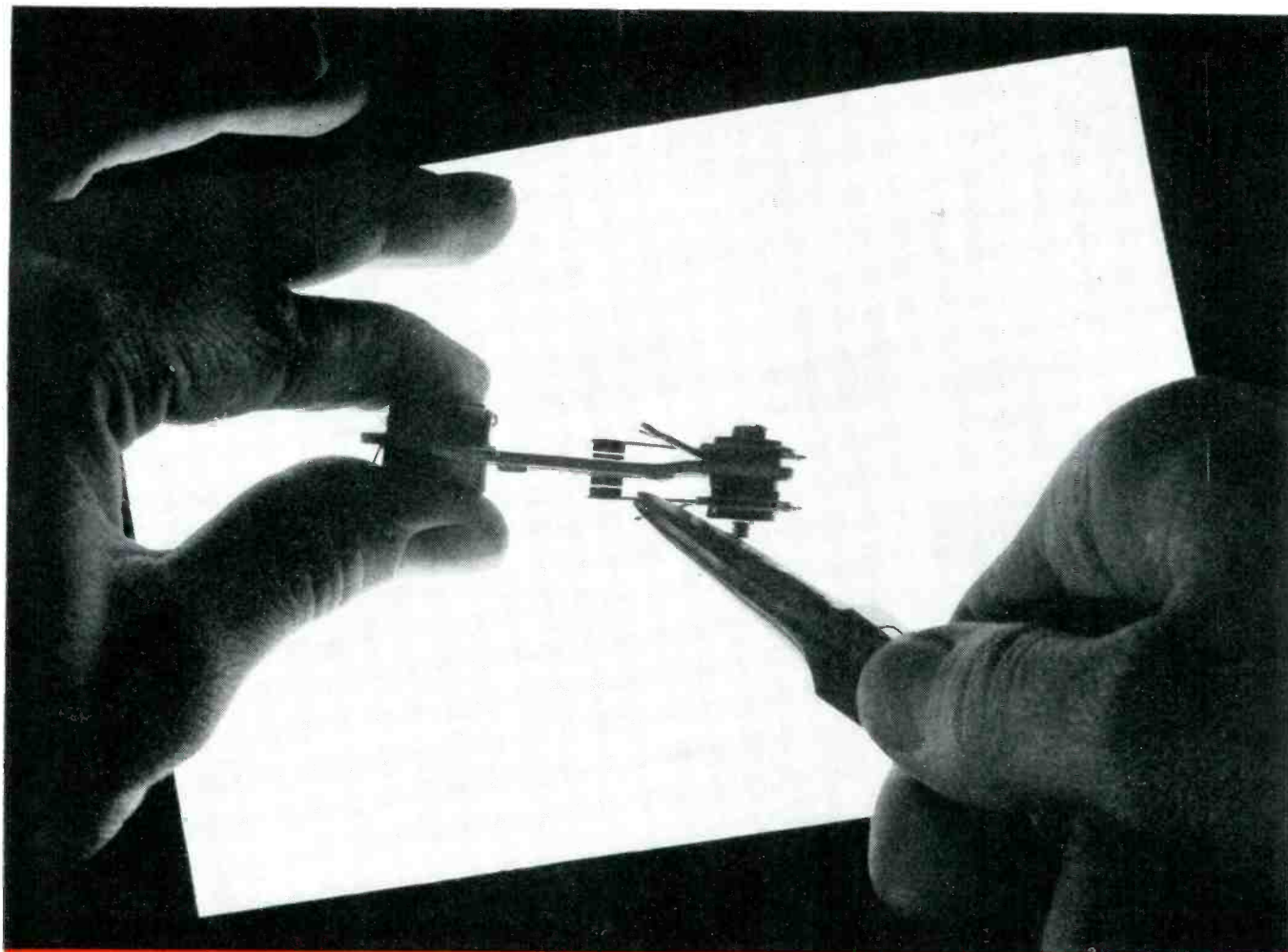
MODEL PT-88  
Same features as PT-87. Case covered in pigskin graining, with lid. Ivory piping. Matching plastic bezel. Real leather handle.

**\$25<sup>00</sup>\***

*\*Prices include batteries. Prices slightly higher Denver and West.*

See Your  
**PHILCO  
DISTRIBUTOR**  
*Now!*

**PHILCO ALL YEAR 'ROUND** The Most Valuable Franchise in the Appliance Field!



## Heart Trouble Avoided by This Utah Operation

**H**ANDS as skilled as any surgeon's perform this delicate operation in the Utah factory. This precision adjustment of the contact points in Utah Vibrators is responsible for their long life, correct electrical balance, current output and freedom from noise.

Because Utah contact points are adjusted to a specified clearance, with a variation of less than .0005 in., they eliminate the causes of failure so frequently found in ordi-

nary vibrators. Pitted or locked points, unsatisfactory performance and short life are avoided.

Only high quality materials conforming to rigid standards are used in the manufacture of Utah Vibrators. The points, for example, are made of the best grade Tungsten, fully capable of standing up under the terrific punishment to which they will be subjected.

Write for information about the complete line of high-value, dependable Utah Vibrators. Utah Radio Products Company, 810 Orleans Street, Chicago, Illinois. Canadian Office: 560 King Street West, Toronto. In Argentina: Ucoa Radio Products Co., SRL Buenos Aires. Cable Address: Utaradio, Chicago.



*Be sure to stop at Nos. 1018 and 1020 in the Exhibition Hall or Demonstration Room 505-A—National Radio Parts Trade Show, Stevens Hotel, Chicago, June '41.*



# V I B R A T O R S

SPEAKERS • TRANSFORMERS • UTAH-CARTER PARTS

## Don't *STOP* Now

### 10,000,000 People Can't Be Contacted Overnight

**I**NTERFERENCE reduction ranging from "substantial" in rural areas through "noticeable" in small towns to "slight" in big cities is reported by *Radio Retailing* observers spotted around the country to note initial effects of the March 29 reallocation. Even at this early date it is apparent that the changeover was worthwhile if not a complete cure-all.

Less pleasing but not wholly unexpected is their advice that in the week following the changeover most dealers received some calls for pushbutton resetting but not as many as expected, few reporting anything resembling a service jam. The public apparently took the shift with good grace but appeared to be in no hurry to have needed receiver adjustments made.

**R**ECEPTION improvements appear to be most impressive near the borders, out beyond primary service areas and in towns served by relatively small transmitters heretofore subject to heterodyning by distant but more powerful competition.

Most big cities were adequately served even before reallocation, boasting enough high powered locals to keep listeners happy, so little improvement was intended or experienced. (In New York, for instance, strong locals occupying 15 channels continued to render about the same service. We checked the entire band nevertheless and noted that before the shift we could comfortably hear signals without interference on 37 channels while after it the number rose to 50, a 47 per cent increase.) Some aggravation of harmonic heterodyning was reported by listeners close to strong locals which had shifted frequency but at this writing such trouble does not appear to be much more serious than it was even before the change.

**P**USHBUTTON resetting service, as predicted last month, was offered at rates between one and two dollars, with efforts to hold the charge midway between developing early shakiness and all signs pointing toward widespread standardization upon the lower figure. Chains and department stores advertising heavily, originally priced work at a \$1.35 average, now contend they can handle it profitably for less because men paid between four and five dollars have proven their ability to handle up to twenty outside jobs per day.

Speaking of big operators, it is noted that most of the dealers so far reporting heavy demands on their service departments fall within this classification, the obvious explanation being that such operators have done most of the consumer circularizing. Watching this phenomenon closely, smaller dealers now realize that they can profit only in proportion to their own individual promotional effort, particularly since broadcast stations have shot their publicity bolt and leave the rest of the job up to the trade.

And a big job it is. The radio dealer's opportunity to profit by using reallocation resetting as a stepping-stone to additional business is just beginning. 10,000,000 people with pushbutton-tuned radios can't be contacted overnight. It will be weeks before the public becomes fully aware of what it is missing through failure to have adjustments made. And it will take months of selling to induce them to do it.

*W Mac Donald*

Editor

# PHOTO Shorts

Pictures from the News  
to help you SELL



## BRITISH "BUSINESS AS USUAL"

In spite of possible "alterations" by enemy bombs, radio factories in England keep production in high gear to supply radio retailers



## FM GOES TO SEA

Health officers on quarantine tugs inspect ships entering Boston harbor, report via FM to headquarters on shore. Using G-E 25 watt transmitters, good performance is reported 30 miles at sea



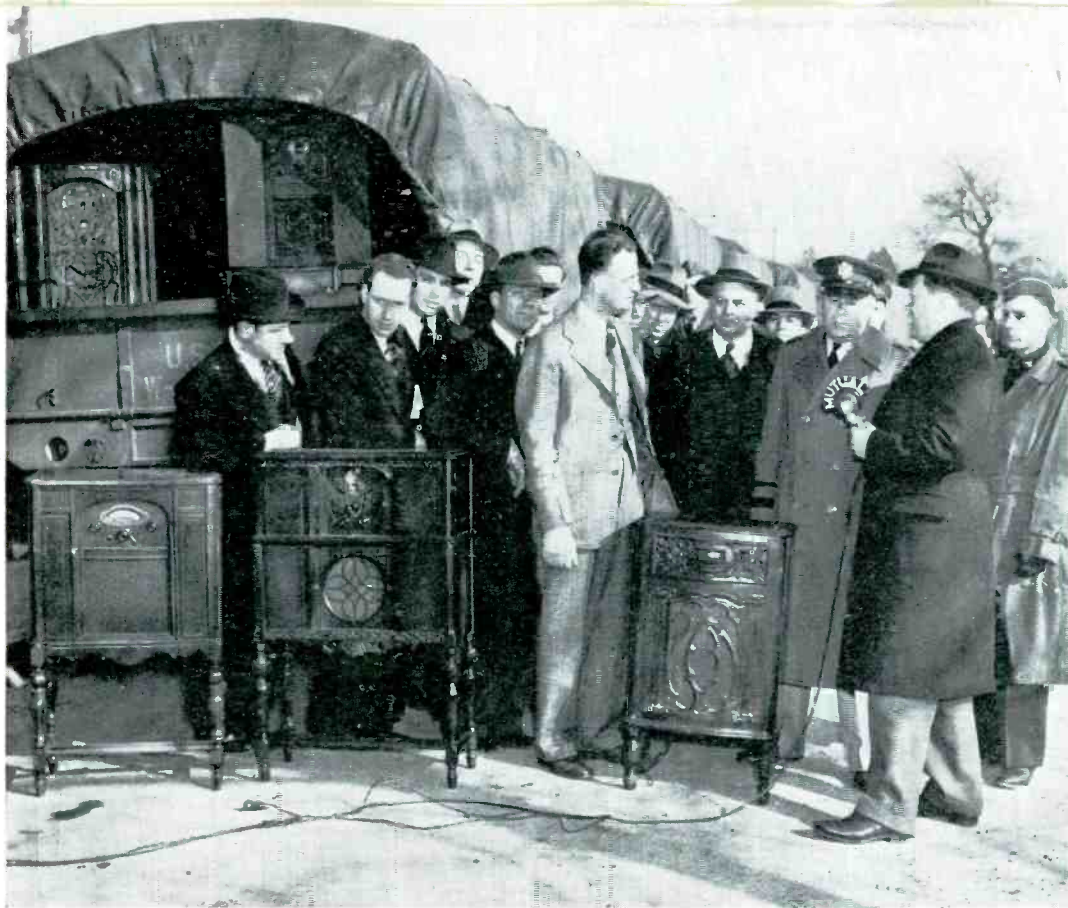
## SOUND ON THE CAPITOL'S DOORSTEP

100,000 people at the Capitol heard the third term inauguration through batteries of speakers. Inset shows RCA amplifiers in the control booth, located under the building

## DODO CABLE CAR

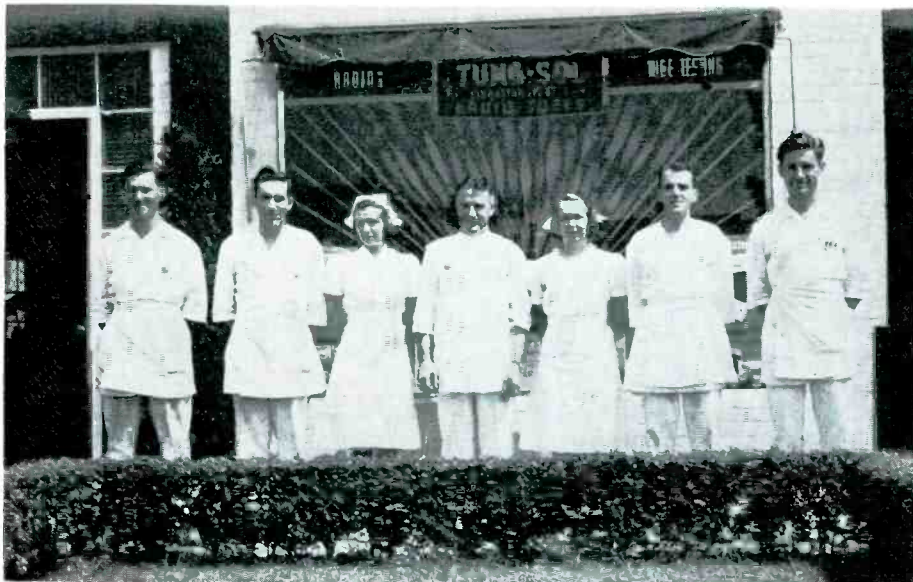
Believed extinct, this 52 year old specimen was resurrected in Seattle for the holiday season. Fitted with a Webster-Chicago sound system, it carried carol singers around the city





## DEFENSE, TO MUSIC

Major-General C. R. Powell says a few words to listeners after six truck loads of receivers are presented to Fort Dix by George Duvall (at the major's right), National President of RSA. Sets were reconditioned by members of chapters in the New York area



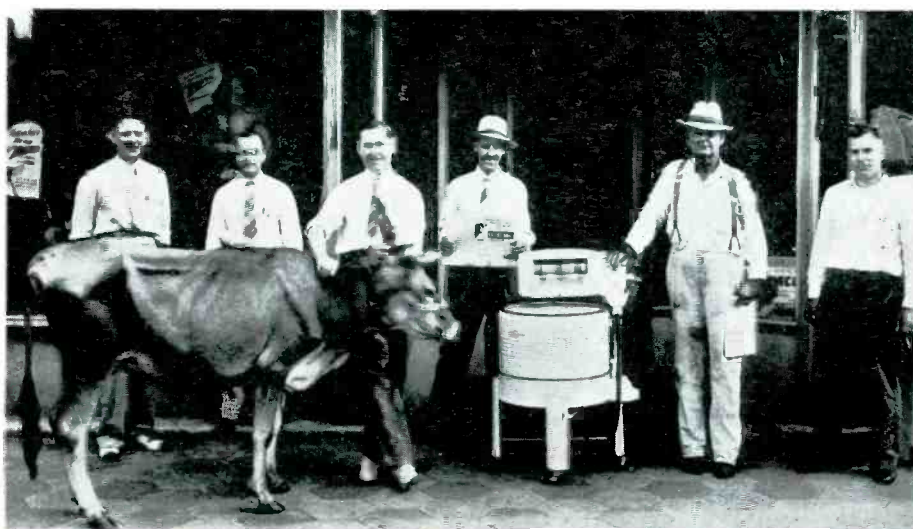
## DR. (DOCTOR OF RADIO)

With all members of the staff in white uniforms, Radio Hospital, Hartford, dramatically emphasizes quality of its service. A white "ambulance" completes the effect on all calls



## WHITE GREETING

By displaying dressy refrigerator models near the door, Radio Centre, New Haven, presents telling eye appeal to entering customers. Fluorescent fixtures point up highlights of the boxes



## BARTER BRINGS BOSSY

A cow was the first swap on an offer made by Anniston Electric Co., Anniston, Ala. Plugged in the local paper, trades on Westinghouse and other appliances were allowed for livestock, produce, or what-have-you

# NATIONAL DEFENSE

## *and its effect on* **Specialty Selling**

*By*

**CASWELL ODEN**

**T**HE BILLIONS of dollars being spent for National Defense have stimulated business to a gratifying degree, and will continue to have a gradually increasing beneficial effect for some time to come. Judging by what has already happened it would seem that Prosperity, this time, actually is right around the corner.

What effect will all this have on the radio and household specialty field? That question should be answered in two parts: (1) The effect upon our business as a whole and (2) The effect upon our Selling.

### **General Business Rise Rapid**

Assuming that there will be no serious interference with domestic equipment production, a large volume of radios, refrigerators, washers and other household appliances will be sold this year—far more than was sold last year. This is obvious. Many more people will be working; and when people are working they buy.

But this doesn't necessarily mean that you will get your share—just as a matter of course. Maybe you will, and maybe you won't. It depends upon the type of your operation. And thereby hangs our tale.

### **Why Yours May Not Keep Step**

Many of you are more dependent upon "selling" (outside) than you are upon "buying" (where the prospect comes to you). And

the effect of prosperity, of increased public purchasing power, of increasing employment is—or can be—entirely different upon the two types of operation.

If you are dependent upon "buying," you will get your share. Department stores and similar types of operations, for example, will get their share—and get it simply as a matter of course. They will have an increase in volume in proportion to the increase in national purchasing power.

But the dealer who is dependent upon "selling" for his volume, or a major portion of it, should not be quite so optimistic. True, the upswing is there for him to take advantage of, just as it is there for anyone else—but no matter how much business is floating around, he won't get much of it if he has no outside men to go out and get it. And this takes us right into the Employment Situation.

### **Salesmen Becoming Harder to Get**

You know how hard it is to get salesmen right now? Well, they are going to be still harder to get—and this in spite of the fact that increased purchasing power will make the job a better one.

In addition to this increasing difficulty of getting new men, many

of the salesmen we already have will disappear from the field (making the job still better: less sales competition). Some will be inducted into the army. Others will take jobs in defense industries. What are we going to do for men?

You'll get them somehow or other? When general business is good, your particular business is

## **BATTLE for MANPOWER**

**With men being inducted into the army . . . deserting commission work for salaried defense jobs . . . the trade has a new management problem on its hands**

good—somehow or other? I hope you are right. Maybe business will be so good that *you yourself* will sell enough merchandise to get by.

But "getting by" won't be "cashing in" on the upswing, and I'd still like to know what you are going to do for men. For what I'm giving you here is not merely prog-



**BOOM in consumer purchasing power gives department stores sales edge. Dealers with little floor traffic will have to keep the pressure on to get their share**

nostication. It is what will happen, and what is *already beginning to happen*.

**Workers Drifting to Defense Industries**

I know a hosiery worker who recently got a job as a machinist's helper. A bread man (route driver) who just got on as a loftsmen. A grocery clerk who is now operating a drill press. A salesman recently become a machinist's helper. (And another salesman who is taking a course in welding).

Now, the hosiery worker and the bread man and the grocery clerk were easily replaced. There were plenty of men eager to step into their jobs because they pay definite

wages. But there aren't many good men looking for selling jobs on a commission basis—even now. So what will it be like later on?

Other workers will be easily replaced, but the salesman will not be.

For illustration: Take that salesman of yours who just went into the army. Have you replaced him? No—because if you could have gotten another man, you'd have gotten him *before* the first one went into the army—so that you would have had two men, all along, instead of one! (I'm speaking of strictly commission men—you'd take a thousand, if you could get them, wouldn't you?)

The only redeeming feature of

course, is that business will be better and appliance sales will be easier and more plentiful. But there will be fewer men to make these easier and more plentiful sales.

All of which is fine for the manufacturer—a large volume of merchandise will move, whether it is "bought" or "sold." All of which is fine for the operator who is dependent upon "buying"—if nobody pushes Mr. Brown's doorbell, then he will take himself downtown and buy his box. But it's not so fine for the dealer who is dependent upon Outside Selling, and he's the gentleman I'm talking to.

**What To Do About It**

What to do about it? There's just one thing to do about it, and the time to do it is right now. *Hire new men*. Hire them while you can still get them. Expand your sales personnel. Expand it before it begins to contract.

But you can't get any more real salesmen? I know you can't. But you can get plenty of men at \$2.00 a day and 5%, to canvass for the salesmen you already have.

Some of these men, of course, will drop out later, as other jobs, more to their liking, and more in line with their ability, open up. But some of them will stick, develop into good salesmen, with the proper supervision.

And since this is the only way to get new sales blood into our business, we'd better start doing it.

# MUSIC



## SPRING Phonographs

MECHANICAL machines such as these, using no tubes, are still big summer sellers and should not be overlooked by the radio trade



THREE-WAY portable radio of typical design

Model	Record Size	Finish	Storage Space	Size (inches)	Wt. (lbs.)	List Price
<b>Autocrat Radio Co., 3855 N. Hamilton Ave., Chicago, Ill.</b>						
SWP-1	10	Leatherette	10	6½x11x13¾	11	9.95
<b>Boetsch Brothers, 221 E. 144th St., New York City. (Birch)</b>						
2	10-12	Iv. Leatherette	5	5¼x11x11½	7	8.75
3	10-12	Leatherette	6	6½x11x14½	8½	9.60
30	10-12	Leatherette	6	6½x11½x14½	10½	10.75
33	10-12	Fabrikoid	6	6½x11½x14½	10½	12.50
57	10-12	Fabrikoid	6	6½x11½x14½	10½	12.50
63	10-12	Aero Cloth	6	6½x13x16½	13¾	15.45
41A	10-12	Aero Cloth	7	7¼x14x16½	15½	17.95
6A	10-12	Aero Cloth	7	7¼x14x16½	12	19.25
<b>Decca Records, Inc., 50 W. 57th St., New York City.</b>						
1	10-12	Airplane Cloth	6	7x12½x16		13.95
0	10-12	Leatherette	6	7x12x15½		11.95
P16	10-12	Leatherette	6	7½x12¾x16½		16.95
<b>Favorite Manufacturing Co., 105 E. 12th St., New York City.</b>						
11	10-12	Aero Luggage	10	6¼x10½x14½	9	8.39
12	10-12	Fabrikoid	10	6x11x15½	9½	9.99
877	10-12	Leatherette	2	2¼x4¾x11		12.50
<b>RCA Manufacturing Co., Inc., Camden, N. J. (RCA Victrola)</b>						
0-2	10	Leatherette	6	7x13x16	14	
0-6	10	Woven Fabric	6	7x13x17	14	
<b>Totty Trunk and Bag Co., P. O. Box 949, Petersburg, Va.</b>						
P100	10-12	Leatherette	8	6¾x11¾x14½	16	
P200	10-12	Leatherette	8	6¾x11¾x14½	16	
P300	10-12	Airplane Cloth	8	6¾x11¾x14½	16	
<b>Plaza Manufacturing Co., 869 Broadway, New York City.</b>						
507	10-12	Fabric	10	5¼x10¾x14½	10	10.00
508	10-12	Fabric	10	6½x11¾x14½	11	10.50
509	10-12	Fabric	10	7x12½x15½	13	10.50
510	10-12	Fabric	10	6½x13½x17	14	12.50
511	10-12	Fabric	10	8x14½x15½	18	11.50
512	10-12	Fabric	10	6¼x12x16	16	20.00
513	10-12	Fabric	10	7¼x14¾x15¾	20	22.50
514	10-12	Fabric	10	8x14½x15½	19	18.75
515	10-12	Fabric	10	7x12½x16¾	13	12.25
<b>Waters Conley Co., Rochester, Minn.</b>						
22A	10-12	Leatherette	10	6x11x14	10	8.95
39A	10-12	Leatherette	10	6x12x15	11	9.95
46A	10-12	Leatherette	10	7x12x15	12	10.95
76A	10-12	Leatherette	10	7x13x16	14	12.95
88A	10-12	Leatherette	10	8x13x16	15	14.95
90A	10-12	Leatherette	10	8x13x17	16	19.95
97A	10-12	Leatherette	10	8x13x17	17	24.50

**M**OST IMPORTANT radio merchandise for stimulating spring sales is today's crop of portables.

There are three excellent reasons why such merchandise should be featured by all stores beginning this month. First, April marks the beginning of the warm weather season when such compact "take 'em with you" sets get their greatest natural play. Second, manufacturers are this year providing a variety of portable equipment types which not only meet every conceivable consumer requirement for radio reception outdoors but also cater to the growing demand for recorded music. Third, modern portables are owned by relatively few people and have sufficient novelty value alone to attract shoppers, the combination of these two factors aiding retailers to build store traffic and so sell other merchandise as well.

### Prospects

No longer is the portable radio field limited to just a few types. Checkup discloses that there are at least 15 distinctly different varieties that the dealer can spotlight. These range from the now familiar straight radios in luggage-size cases to "Personals" and even combinations incorporating automatic record-changers, not to mention built-in recorders. Included, also, are a large selection of compact record players and even special units for boats and airplanes.

Prospects for such merchandise are almost unlimited,



# to Take Out

PORTABLES of every description, for records and radio, seen as promotional key to coming season

By W. CARL DORF



PHONOGRAPH with electric pickup and amplifier



PERSONAL radio in lightweight camera style

because sales "saturation" is still extremely low. During the next six months travellers of all kinds and particularly vacationers will present a huge market for portables. "Music To Take Out" is a "natural" for such customers, often providing the "center piece" for a summer picnic, beach party, auto tour or boat trip.

The salesman is a sure bet for a new Personal and the executive is often waiting to be sold a portable for his office. The housewife, too, is an excellent prospect. It's a smart hostess who provides a portable for the guest room. The recreation room is very often, also a hot spot for such merchandise.

Students are big users of portables and especially portable phono-players. And the dealer should not neglect sportsmen and professional men. Doctors and dentists are good prospects. They can appreciate the compact design of these units and are intrigued by the way the portables can "dish it out."

### Promotion

In any retailer's store there are numerous opportunities for the promotion of this merchandise. For instance, when a record customer casually mentions that the long awaited vacation, cruise or tour starts next week, it should be a cue for the dealer to display and explain the features of his portables.

Many dealers highlight portable promotion in the spring and summer months with special window displays and attractive floor set-ups. Retailers promot-

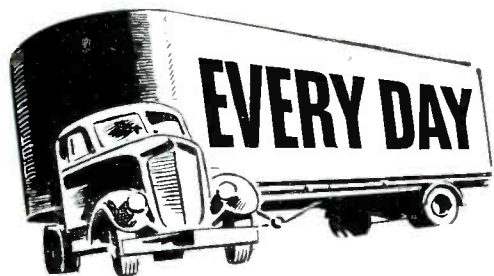


RADIO-PHONOGRAPH-RECORDER for portable use

ing this product say a good looking window on portables is a sure traffic stopper. Newspaper advertising and circularizing clientele just before a holiday is another good bet for portable promotion.

### Features

Latest innovation in Personal portables is 3-way operation, permitting this type to operate from batteries or ac-dc electric line supply. To-date at least 9 companies are producing tri-power models. These compact sets are housed in a variety of finished metal, plastic and two-tone leatherette cases.



IS MOVING DAY FOR THESE SUPER-SELLERS!

# NEW RCA VICTOR "EXTRA" RADIOS MOVE FAST..BRING YOU "EXTRA" PROFITS



## RCA VICTOR SUPER SIX

Model 15X—17 great sales features for less than \$1 a feature! Continental Style Cabinet. Six RCA Victor Preferred Type Tubes. R-F Stage for better reception. Edge-lighted Glass Dial. New Style Bull's-eye Pointer. Music-Speech Tone Control. Plug-in for Record Player Attachment. Powerful 5-inch Permanent Magnet Dynamic Speaker. Improved Superheterodyne Circuit. Popular 1610-1712 KC. Police Band. Magic Loop Antenna. Big Knobs for easy tuning. Automatic Volume Control. Special Hi-Stability I-F Transformers. Connection for Extra Antenna. 16 to 1 Ver-  
**\$16.95\***  
 nuer Tuning. AC-DC operation . . . . .

—your customers extra quality  
at no extra cost

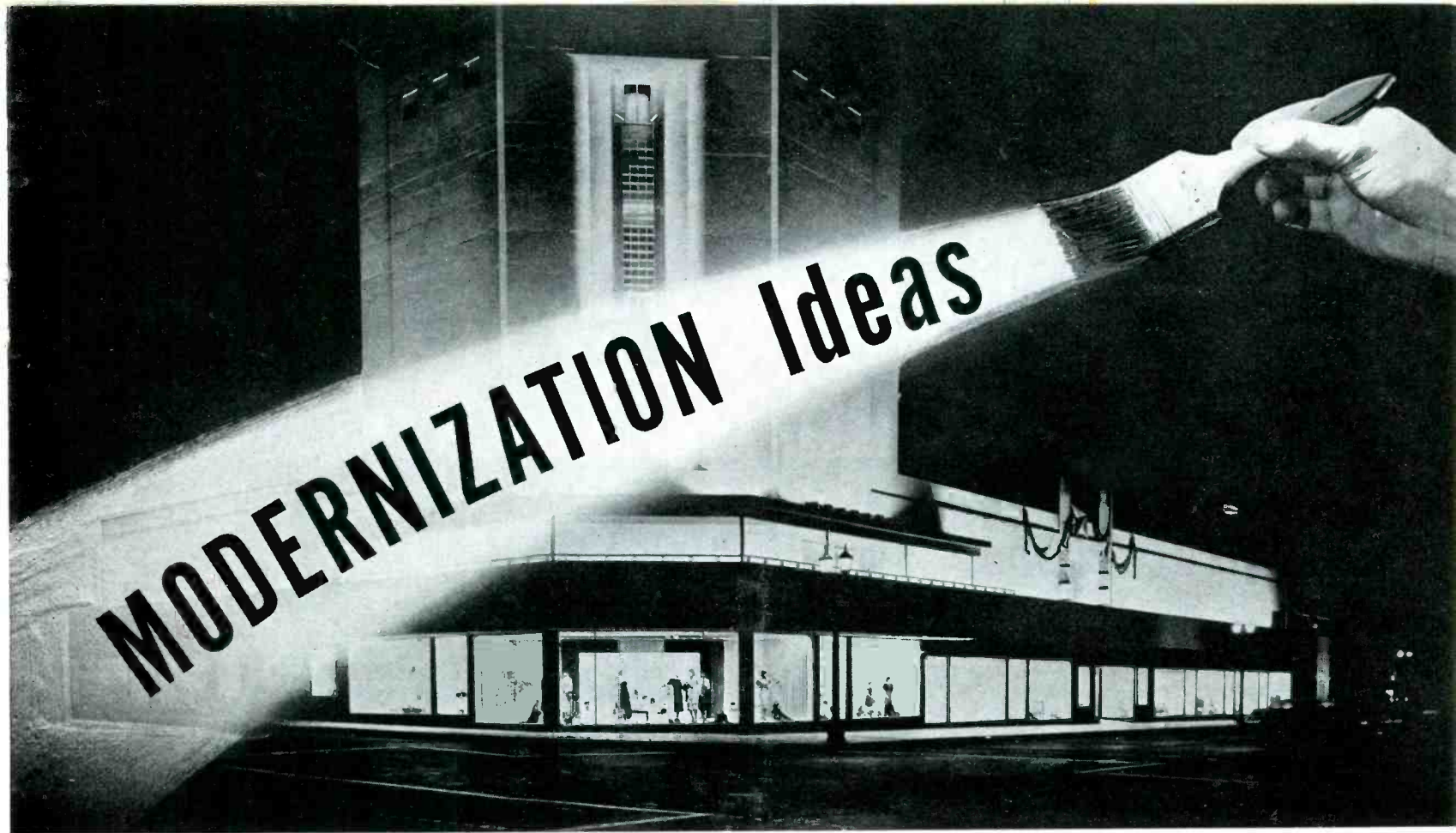
WEEK AFTER WEEK, more and more people are joining the thousands who have "discovered" these sensational RCA Victor extra radios. They give buyers extra quality at no extra cost—and they mean extra profits to the smart dealers who push them. Try it—and watch them move!



## You can offer your customers full short-wave reception for only \$3 extra—with the NEW RCA VICTOR 16X-11

Here's a value that the ever-increasing army of short-wave listeners will go for in a great big way! It's priced only \$3.00 above the sensational Super Six—but it offers short-wave reception on the 49, 25, 19 and 16 meter bands. Has most of the features of the Super Six—*plus two* Built-in Antennas and Under-writers' Approval. AC-DC. . . . .  
**\$19.95\***  
 Trademark "RCA Victor" Reg. U.S. Pat. Off. by RCA Mfg. Co., Inc.  
 \*Price f.o.b. factory, subject to change without notice. In Canada, RCA Victor Co., Ltd., Montreal.

**RCA Victor**  
 RCA Manufacturing Co., Inc., Camden, N. J.  
 A Service of the Radio Corporation of America



# *Planning* **STORES** *that* **SELL**

## **RADIO — RECORD — APPLIANCE Shop**

*Layout  
Display  
Decoration*

**Principles to Follow  
for Effective  
Merchandising**

**N**O EXACT SCIENCE is the planning of stores that sell. Layout, display and decoration must in the final analysis be largely decided by the size, shape and architectural peculiarities of available floorspace, the neighborhood in which such quarters are located, the overall nature of merchandise carried and, finally, the selling "style" of employed personnel.

There are, however, certain general principles which appear to be well worth following in this business and, with the thought in mind that readers will carefully weigh suggestions, adapting those which fit their particular needs and discarding others which do not seem so applicable, the following text is presented.

The greatest *number* of people that enter a radio store consists of

tube, service and record customers. Dealers that carry their own paper augment the flow with periodic time payments visitors. At certain times of the year seasonal items such as auto radios, portables, gift compacts, among others, draw additional traffic without much prodding.

Now all of these items return an interesting margin of profit to the retailer. However, they may lead to still more interesting, larger unit sales *if* a few principles of retailing are applied to the store layout and design.

As an extreme illustration consider a store with the front section of its floor devoted entirely to tube shelves and record counters with radios and other appliances at the back of the store. Most of the natural traffic is now concentrated at the front of the store and the great

majority of customers will never of their own will go to the rear and see merchandise that the dealer is even more interested in moving.

A well designed floor layout will not permit this condition to exist, and in fact, will usually force the customer to walk through the major merchandise display section in order to reach lower priced items. As a result, every visitor to the store becomes acutely conscious of major merchandise displays that he or she passes.

#### Store Size and Shape

Architectural plans vary so widely that no set rules can be formulated. Shown in these pages are suggested general layout plans for the most often encountered sizes and shapes. Individual dealers may modify for their own stores.

The one uniform belief of retailing experts is that an entering customer always tends to look to the right and notices objects and displays chiefly on that side of the store. This has been illustrated in the sample layouts and may well be continuously kept in mind by the store-modernizing dealer.

Where lack of space forces displays to be placed at the left side of the entrance they will usually need some extra "punch." A dramatic color contrast, spotlighting, or a "reminder" display at the door for the departing customer helps.

#### "Intermixing" Vs. Departments

Diagrams show departmentalized use of floor space for each branch of a dealer's business. However, this break-up into departments does not necessarily indicate a definite, physical separation of the various types of merchandise handled.

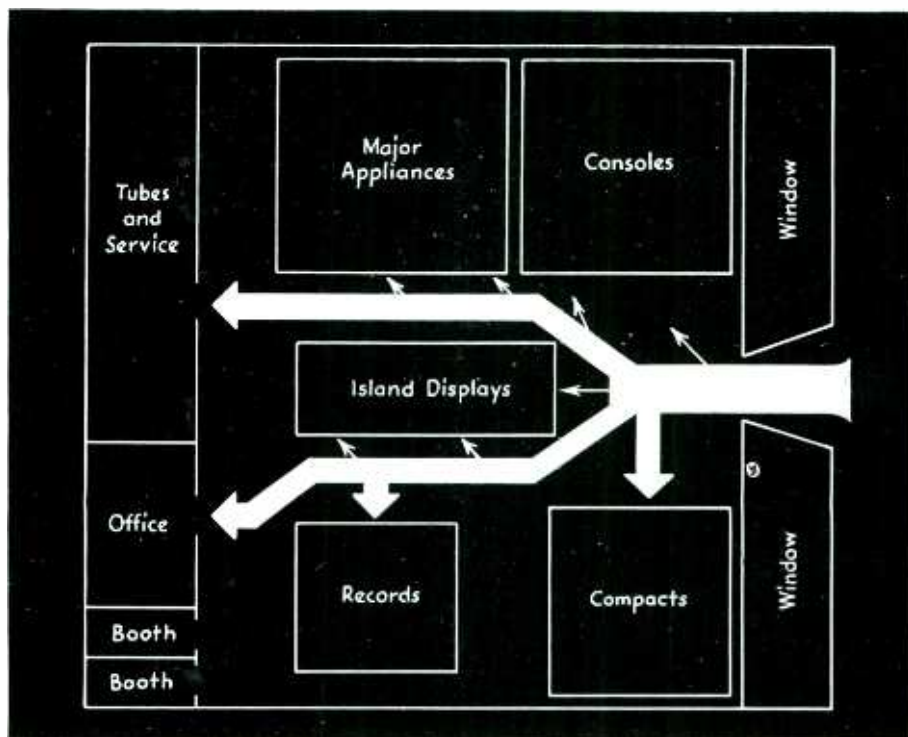
The planned appeal in cases of intermixing involves psychological "association of ideas" and has proven very effective in many cases. A similar appeal can be made by dealers who are forced to use departmentalized displays if a counter or small island display is incorporated in the departments. Merchandise from other departments thus speaks out and says, "what about me?"

#### Tubes and Service

Dealers differ on the location of radio tube shelves, some preferring

# 4

## Effective

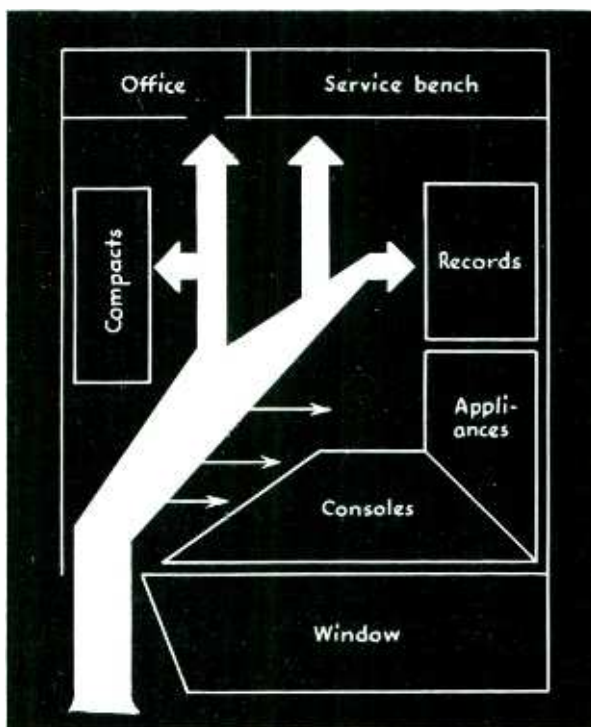


### LARGE, SQUARE

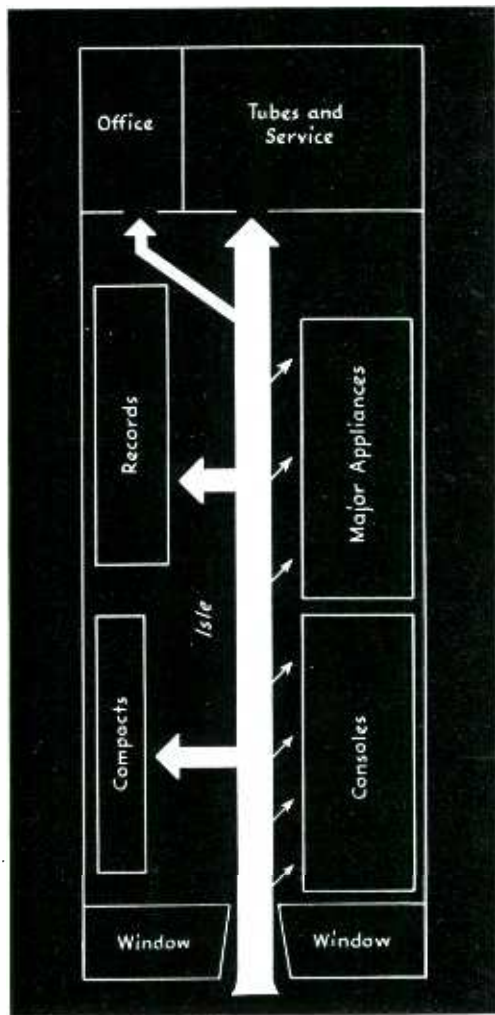
To capitalize on the customer's natural tendency to turn to the right, departments with greatest natural traffic are here located farthest away from door or to left of entrance. Large arrows denote normal traffic flow, small arrows the "right-hand-attraction" to larger unit sales. Central island displays should be changed frequently for best results.

### SMALL, REGULAR

Usually having but one window, small stores can yet pack a punch inside. To provide more selling space, the service department may consist of a dressy, closed-front bench along the rear wall. A portion of this counter space is frequently used for account records and cash register.



# FLOOR *Layouts*



## LONG, NARROW

Time payment and service customers are literally forced to notice other needed merchandise in this style of layout. Small island displays can highlight seasonal or special items from the regular departments

to place them in the service department and others at a general counter where other small items are sold. Whichever is chosen, many display experts throw up their hands in horror when it involves placing tubes on shelves facing the customer. They explain that most dealers let the appearance of the shelves slump as soon as the cartons are unpacked. However, tube boxes do have a very desirable color appeal and *can* present an attractive uniformity if neatly arranged.

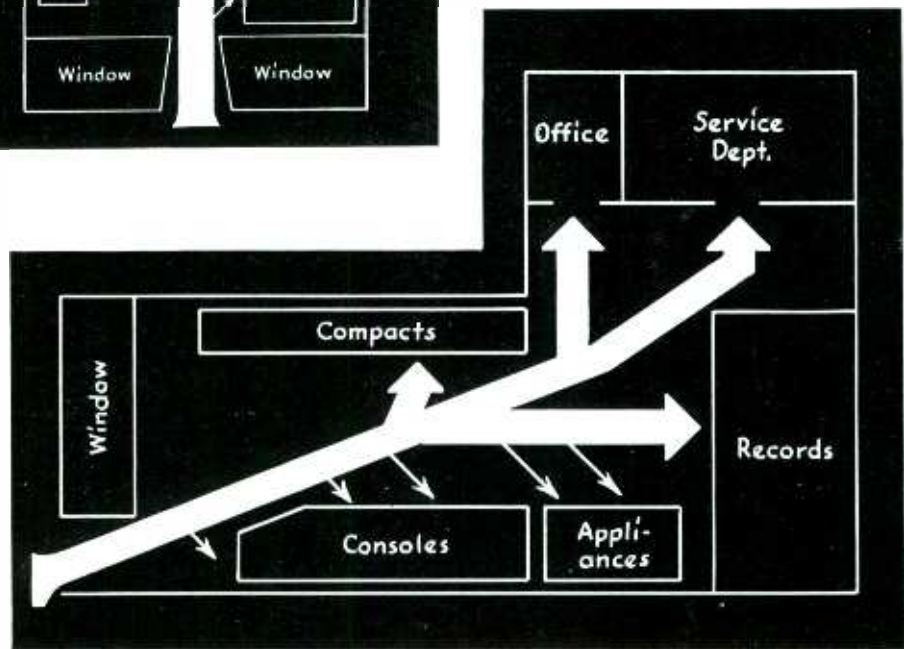
### Stock Storage

Non-selling storage space should be divorced as much as possible from the selling section of the store. Location on another floor is desirable but may not be practical. Space at the rear of the store can be partitioned in such instances.

## IRREGULAR SHAPE

Considered an "ugly duckling" by most retailers, a store with off-side space can often have an actual advantage. The non-selling office and small-sale departments force traffic deep into the store, past larger unit sales

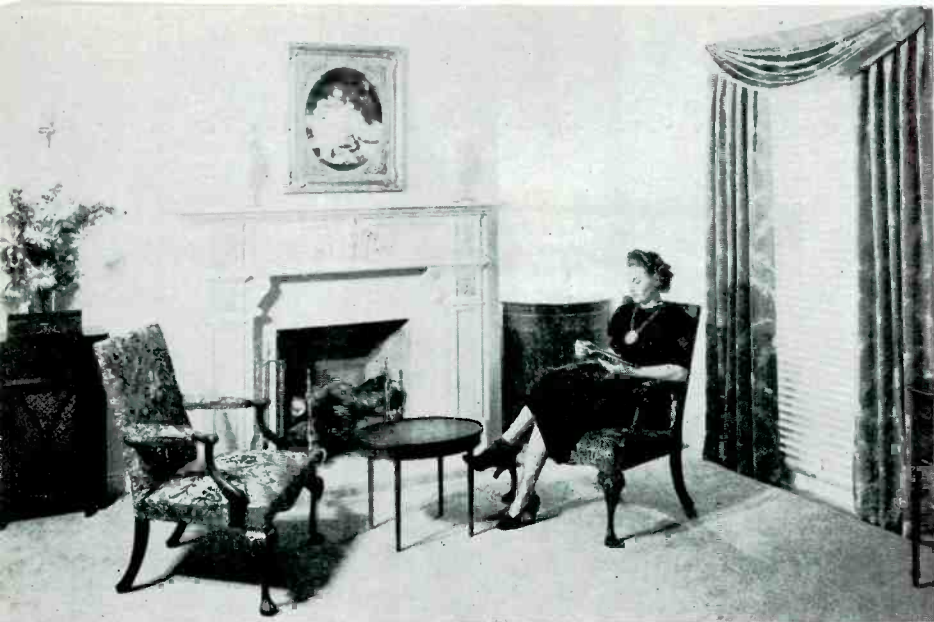
Whether or not office space should contain a desk where contracts may be signed depends largely on your type of customer. Some people object to being shunted to a "third degree" room for the final details of a time payment sale. If the floor displays allow room for chairs it is often a better practice to close all sales in the display section. Last minute questions on the purchase can be more readily answered and differences in the various models shown quickly.



### Front and Entrance

The first impression that the customer receives is most important to any selling business and effective use of the store front is a "must" item for the retailer. Whenever possible the front should tell a story about the store and the type of merchandise handled.

If a dealer has a distinctive name, trade mark or slogan, it should be used on the front of the store. Old-timers will recall the zigzag lightning streak that distinguished the



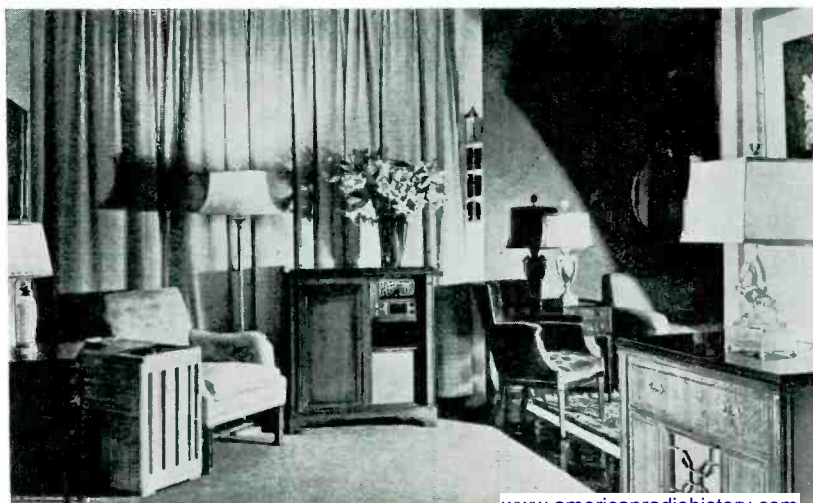
**BELIEVE IT OR NOT**—This is a radio-selling "set" and not a scene in a private home, arranged by Sterling Furniture's Harry L. Jewett in a model house near San Francisco

## SWANK Showrooms



**HOMELIKE DISPLAY**—Another Sterling exhibit, this time featuring Swedish Moderne. Other sets are found in the den, dining room, kitchen, bedrooms and even bathrooms

**SURROUNDINGS HELP SELL**—Here's the way New York's W. & J. Sloane, new to the radio business but with an established reputation for highest quality furnishings, dramatizes Magnavox within the store



early "wireless" stores. Whatever name or symbol is employed it should be duplicated on every piece of printed matter that the store uses to keep it constantly before every prospect.

Dealers who own their premises or have a willing landlord can go "whole hog" in structural changes of the store front. Any change that results in more window display space will attract more customers in an almost direct proportion to the space increase.

### **Outside Lighting**

Night time conditions should be kept in mind when planning the store front since the light values are entirely different. Certain colors on signs may be lost entirely under artificial light.

The amount of outside illumination necessary to light the overhead portion of a store front will vary with the color but it might be said that too much will almost never be achieved. Gas filled signs are of course a desirable attraction but the rest of the front should not be neglected.

Window lighting, on the other hand, should not permit reflections from displays to annoy shoppers yet should provide a rather high level of illumination. Keep this in mind when changing a display of brown cabinet radios to a white appliance display.

### **Island Displays**

Wide stores with a single entrance are almost forced to use island displays just inside. This is a very effective method of attracting the visitor but requires care in handling.

Consoles and other large units may be used in island displays and changed to attract the greatest number of prospects during seasonal or special promotions. Small units of merchandise can be featured on island tables and will usually result in a considerable increase of sales. This increase in sales of small items may be accompanied by several disadvantages, however. Customers will pick up and examine every article so soiling and breakage will result. Tables will need frequent rearrangement in order to present a neat appearance.

Then too, merchandise in an adjacent department may lose significance to the possible purchaser if

his attention is diverted to specials or novelty items on a table. Although it has been said that 90% of sales from aisle tables represent extra business not normally obtained it is also true that they tend to cheapen the store if overdone and may actually block the customer from ready access to more important displays.

**Merchandise Displays**

Larger unit displays are to some extent governed by the physical measurements of the store. Long narrow stores do not readily lend themselves to grouped displays yet need to avoid monotony.

An effect of grouping may be achieved by using platforms of varying heights and differently colored backgrounds. Spacing several receivers farther from the wall than others can help also.

Group displays may be made up of models of different make selling around the same price or may consist of a complete line display of each company. This latter is particularly convenient for the sales force when selling up but may have a tendency to over-sell the customer's ability to purchase. Whichever is employed, it should not be forgotten that present radio lines include many models with very desirable extra functions that may

need suggestion and demonstration to result in a higher unit sale or an additional sale.

**Manufacturer Displays**

Although interior displays do not need to be changed as often as windows merchandising experts recommend a change every two weeks. This does not have to be a complete change. Slight changes in placement of models and trim will have the desired effect. Display stands and backgrounds that are supplied by manufacturers have mechanical features that are valuable. A change of color with paint or crepe paper gives a fresh appearance to these.

**Interior Signs**

Other signs will have to be made by dealers or their sign painters to point out features and advantages of merchandise. These should not be "artistic" to the detriment of the merchandise described and should tell their story in the briefest time. Plain printing is the most effective, curlicues and script slowing up customer reaction.

Many small metal signs now on the market have changeable letters and present a neat appearance. Cardboard signs, to be clearly legible from a point more than 12 feet distant, should contain the following



color combinations of letters and background:

- black on yellow
- green on white
- red on white
- blue on white
- white on blue
- black on white

These are arranged in order of legibility.

**Modernism**

All signs and decorations should blend harmoniously with the general display motif of the store unless some "trick" effect is desired to make one feature of the merchandise stand out.

Where the majority of customers are middle aged and conservative, too extreme modernism may actually discourage their trade.

As a general rule to follow it will be best to check with local furniture stores as to their sales of the different types of furniture in demand in your neighborhood and then design the store to provide a similar atmosphere. People who wish to buy a radio must imagine just how it would appear in their home and this is facilitated if a display section presents a picture somewhat in keeping with their own living-room.

**Furniture and Fixtures**

A rug on the floor, chairs and lamps help to maintain a homelike impression, and, whether "comfortable" or "modernistic," provide a chance for effective selling.

To separate departments to some extent partitions, counters and island displays can be employed. However none of these should extend so high that any portion of the floor space is hidden from view. At any one point in the store all sections should be visible to give an impression of size and complete display.

Record booths should be located against a wall for this reason since their construction must be fairly high for proper operation. The same reasoning applies to display backgrounds.

**WINDOW Do's and Dont's**

<b>WORK FOR DEPTH</b>	Flat, single-dimensional displays do not attract
<b>USE PLENTY OF LIGHT</b>	Concentrate it on the merchandise, not in the prospect's eye
<b>INCLUDE BACKGROUNDS</b>	Clashing interiors spoil many otherwise good windows
<b>TRIM SPARINGLY</b>	Too much gingerbread detracts attention from merchandise
<b>AVOID CROWDING</b>	It doesn't pay unless you are running a bargain sale
<b>LIMIT SIGNS</b>	Avoid, particularly, "courtesy" displays foreign to your business
<b>CHANGE OFTEN</b>	Faded or soiled displays do more sales harm than good
<b>FOLLOW SEASONS</b>	Timely ideas in the window are more effective than mere "prettiness"

**MODERNIZATION Ideas**



**UGLY CORNER HAS FACE LIFTED**

Dealer V. W. Hodge of Claremont, N. H. made this startling change by moving his service shop and tube stock to new basement quarters, substituting a record counter and sound recording studio



*Interiors*

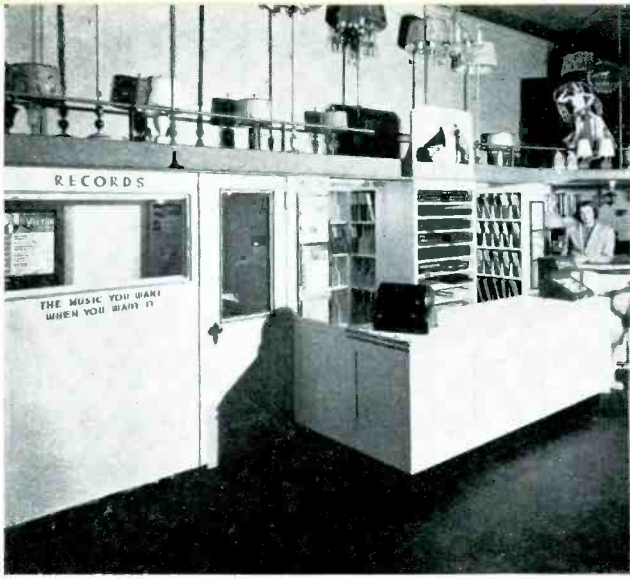


**NEW CEILING, WALLS, LIGHTING**

Even more striking was the improvement of the Hodge set display when an old metal ceiling was lowered 18-inches and covered with tile board, tin walls had new wall board superimposed and fluorescent lighting was installed. Refrigerators, not shown, occupy the opposite wall







**SQUARE CORNERS  
BECOME SLICK CURVES**

Out in Neenah, Wisconsin, Keil Werner Electric's record business began to boom a year ago, made counter and storage space inadequate. It was no great trick for a local architect to lengthen the department and to streamline some of the sharp angles

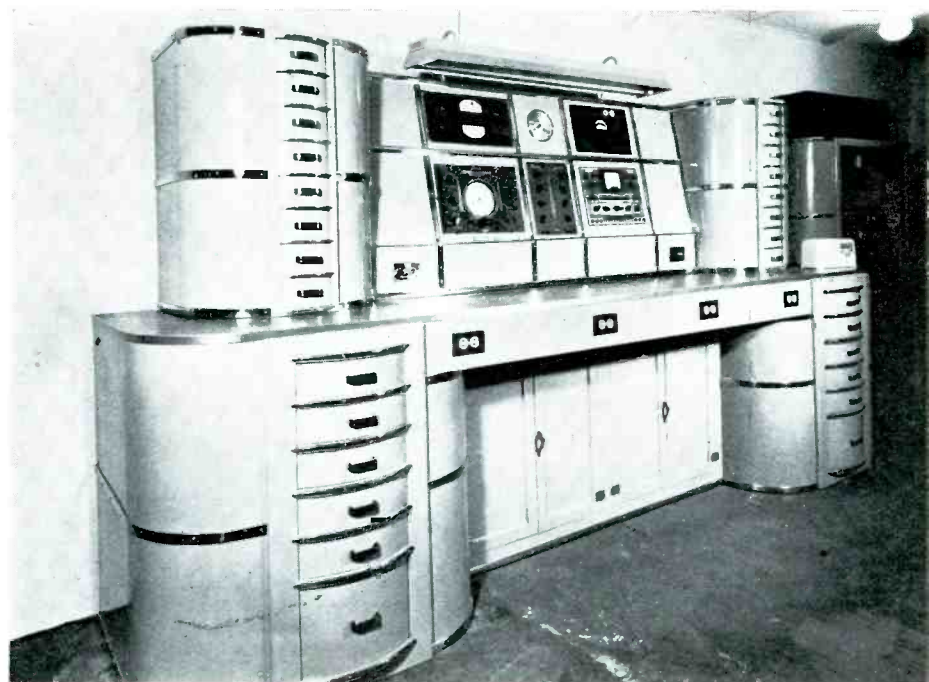


# BEFORE *and* AFTER

**PRACTICAL** examples of what can be done to snap up appearance without breaking the bank

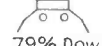



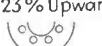

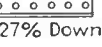

**MAGIC METAMORPHOSIS**

Modernization is by no means limited to merchandise displays. Witness this striking improvement by E. B. Roberts of Radio Sound and Service, down in Tulsa, Oklahoma. New bench is enameled steel, with chromium trim, lighting fluorescent



# LIGHTING Guide

**FLUORESCENT Lamps Needed to Give 50 Footcandle Average of Illumination\***

FIXTURE	LARGE STORE (width 4 times hgt.)		MEDIUM STORE (width 2 times hgt.)		SMALL STORE (width equals hgt.)	
	Light Finish	Med. Finish	Light Finish	Med. Finish	Light Finish	Med. Finish
Closed end unit 0% Upward  79% Down Open end unit 0% Upward  80% Down	23	22	20	18	16	15
Open louvered trough 0% Upward  65% Down	19	18	16	15	13	12
Glass louvers-White reflectors 17% Upward  65% Down						
Half cylinder-Plastic or glass 23% Upward  43% Down						
Wedge unit-Glass 29% Upward  43% Down	14	11	11	9	9	7
Open top-Diffusing bottom 54% Upward  27% Down						
Open top-Open louvered bottom 45% Upward  25% Down						

**HOW TO USE TABLE:** Classify store as large, medium or small, with light or medium wall and ceiling finish, as shown by column headings, and find vertical column which most nearly applies. Find, at left, fixture diagram approximating type to be used, trace to right and find value shown on this horizontal line in vertical column first selected.

Divide the total square feet of floor space to be lighted by the value selected from the table to determine number of 40-watt, 48 inch white fluorescent lamps required. Number of fixtures required may then be readily calculated, depending merely upon the number of lamps per fixture.

Where "daylight" type lamps are used 20 per cent more will be needed.

\* Data from publication *Light*

# FULL

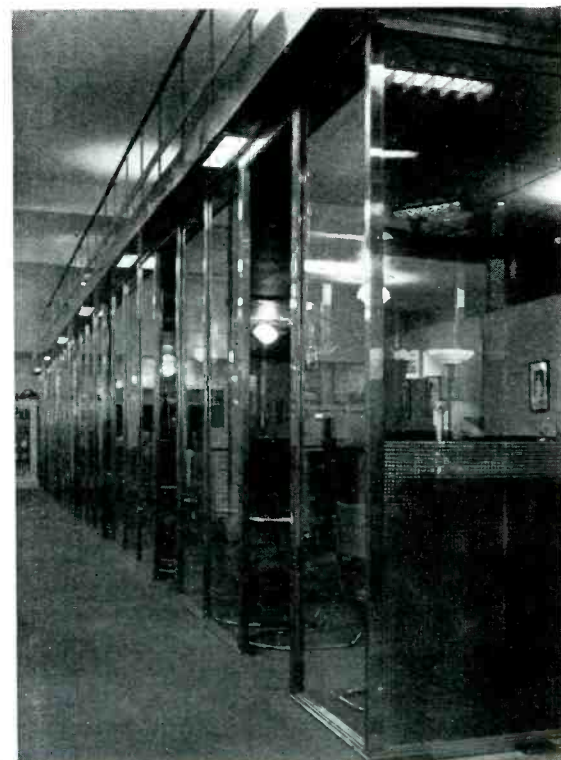
**HOME SPECIALTY diversification complicates store layout but the problem can be solved**

**J**UST A FEW short years ago Arthur Featherstun of Mt. Vernon, Illinois, worked in the factory of a Chicago set manufacturer. Ambitious, he rented a store with a 12½-foot front, went into business for himself and registered enough of a success in five seasons of radio sales and service to warrant expansion.

In July, 1939 he bought a corner building, remodeled the street floor for the merchandising of a complete line of home specialties and fixed up upper floors for rental as apartments. Sales volume upped 20 per cent in six months. In 1940, the first full year in new quarters, gross sales gained 40 per cent.

### Good Three-Year Gamble

Expense of remodeling before occupancy, says Featherstun, should be covered by increased net within the next two years. And business now being done indicates that the investment will actually be amortized within that time if sales continue at even the present rate

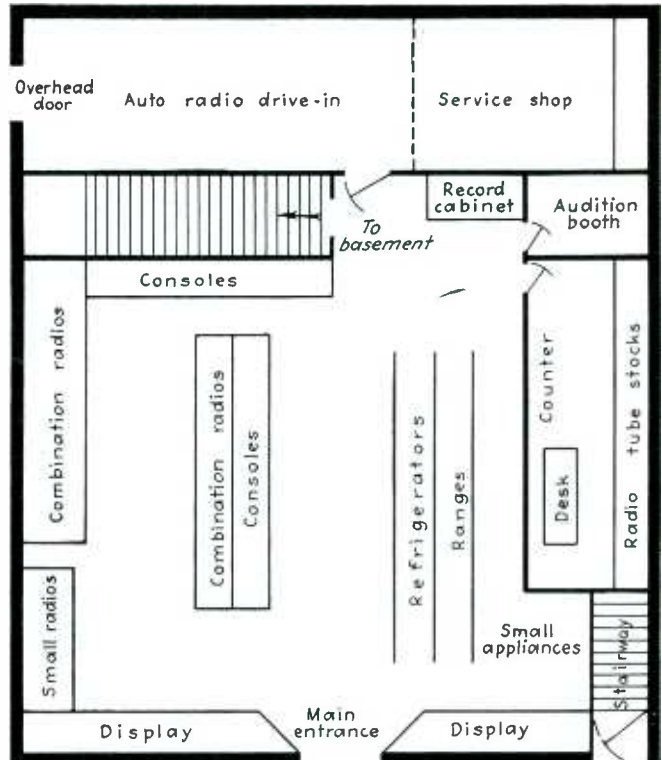


# LINE Display

MODERNIZATION Ideas



**CONCEALED STAIRWELL**—Beneath a clever plaster and panelling drop ceiling (note recessed “shadow box” displays) covering stairs to second floor apartments is this store’s tube stock and cash counter. At work: Arthur and Ruth Featherstun of Mt. Vernon, Illinois



despite the fact that remodeling included \$700 for porcelain-enamel-on-steel front and windows, \$1,100 for new wall, ceiling, flooring and modernistic fixture treatment.

Featherstun is already looking forward to the time when he can substitute glass blocks for the present rear wall, giving the shop an illusion of greater depth. This

should, he thinks, attract still more people in the higher income brackets. A better class of trade was one of the first effects noted following the 1939 move, while a reputation for service automatically held original customers too.

Particularly important to the store and greatly aided by its carefully planned layout which exposes

customers for one type of merchandise to many others, is the sale of auto-radios and records to people who first come in for home sets, tubes and other accessories, plus the sale of appliances such as refrigerators and ranges to all radio customers. Selling of additional home specialties to people who originally bought just sets or service is the factor chiefly responsible for the firm’s steady growth.



## PHANTOM HOUSE

From San Francisco’s “Treasure Island” exhibit Lachman Brothers took plate glass and stainless steel to build these 7 streamlined radio rooms beneath a store balcony. They are soundproofed, air-conditioned, fluorescent-lighted and contain sets, modern leather and metal tubing chairs. Outside this unique radio department are refrigerators, washers, ranges

### Floor Arranged for Speed

Aside from utilization of a once ugly stairwell (see photo) to aid instead of injure general store appearance, other layout features were carefully planned.

For example: Note that the store’s office desk, tube stocks, lamp stock, record cabinet and audition booth are grouped close together so that one person behind the counter can handle this “package” business quickly. Despite the fact that the floor is only 30-feet wide, note also that aisles are 34 inches wide. This permits customers to step back and get a full view of radio consoles and major appliances.

# Printed AIDS for Spring

## BOOTHS

A. BITTER CONST. CORP., 27-01 BRIDGE PLAZA NO., LONG ISLAND CITY, N. Y.  
Two folders on record departments, with illustrations and typical plans

## DECORATING MATERIALS

DENNISON MFG. COMPANY, FRAMINGHAM, MASS.  
Booklets on display ideas for summer and winter and large folder on decoration.  
Also 32-page color book on window displays, priced at 10¢

SHERMAN PAPER PRODUCTS CORP., NEWTON UPPER FALLS, MASS.  
Twenty-four-page "Display Guide", 60 ideas on paper displays

## FIXTURES and FURNITURE

A. BITTER CONST. CORP., 27-01 BRIDGE PLAZA NO., LONG ISLAND CITY, N. Y.  
Folders on counters, shelving and show-cases

GRAND RAPIDS STORE EQUIPMENT CO., GRAND RAPIDS, MICH.  
Brochure with material specifications

LYON METAL PRODUCTS, INC., AURORA, ILLINOIS.  
Folder on metal store fixtures

YAWMAN AND ERBE MFG. CO., ROCHESTER, N. Y.  
Catalog 3805.2 on steel desks, chairs and file equipment

## FLOOR COVERINGS

ARMSTRONG CORK COMPANY, LANCASTER, PA.  
Booklets and stuffers, highly illustrated, on inlaid linoleum and rubber tiling

BIGELOW-SANFORD CARPET CO., INC., 140 MADISON AVE., NEW YORK CITY.  
Design booklet (also "Carpet Consul" service)

CONGOLEUM-NAIRN, INC., KEARNEY, N. J.  
Linoleum tile folder with planned layouts. Color pattern illustrations

JOHNS-MANVILLE CORP., 22 E. 40TH ST., NEW YORK CITY.  
Broadsheet on asphalt tile flooring. Color chart and designs

DAVID E. KENNEDY, INC., 58 SECOND AVENUE, BROOKLYN, N. Y.  
Two booklets on asphalt and rubber tile flooring, with photos on typical installations.

ALEXANDER SMITH & SONS, 295 FIFTH AVENUE, NEW YORK CITY.  
New book on carpets (also special consulting service)

## LIGHTING

CURTIS LIGHTING, INC., 1123 W. JACKSON BLVD., CHICAGO, ILL.  
"Skylux" plan-a-line system catalog No. 1050 treating fluorescent fixtures

DAY BRITE LIGHTING, INC., 5411 BULWER AVE., ST LOUIS, MO.  
Catalog with design specifications on fluorescent fixtures

GENERAL ELECTRIC COMPANY, NELA PARK, CLEVELAND, OHIO.  
Folders, and engineering booklets on fluorescent and incandescent lighting

HYGRADE SYLVANIA CORP., SALEM, MASS.  
Instructive catalogs and spec. sheets on fluorescent fixtures. Design data in cat. M143

MITCHELL MFG. COMPANY, 2525 CLYBOURN AVE., CHICAGO, ILL.  
Several folders on counter, showcases and general fluorescent lighting

REFLECTORS INC., 3217 FRANKFORD AVE., PHILADELPHIA, PA.  
Catalog on fluorescent fixtures

WESTINGHOUSE ELEC. MFG. CO., EDGEWATER PARK, CLEVELAND, OHIO.  
Engineering and catalog sheets on lighting. Also on fixtures

## PAINTS

E. I. DU PONT DE NEMOURS & CO., WILMINGTON, DEL.  
Folders with color charts on industrial enamels and paints

PRATT & LAMBERT, INC., BUFFALO, N. Y.  
Stuffers and folders on interior and exterior paints

THE SHERWIN-WILLIAMS CO., CLEVELAND, OHIO  
Booklets with color patterns

## SOUND PROOFING

ARMSTRONG CORK COMPANY, LANCASTER, PA.  
Folders and illustrated brochure on "Temlok" insulation

THE CELOTEX CORPORATION, 919 NO. MICHIGAN AVE., CHICAGO, ILL.  
Two books, "Less Noise" and "Acousti Celotex"

JOHNS-MANVILLE CORP., 22 E. 40TH ST., NEW YORK CITY.  
Sixteen-page book on sound control

## STORE FRONTS

LIBBEY-OWENS-FORD GLASS COMPANY, TOLEDO, OHIO.  
Book on how to plan and construct modern store fronts

PITTSBURGH PLATE GLASS COMPANY, PITTSBURGH, PA.  
Broadsheet on "More business with Pittco store fronts"

PORCELAIN METALS, INC., 28-26 BORDEN AVE., LONG ISLAND CITY, N. Y.  
Folder "Metal Modernizer"

UNIVERSAL ATLAS CEMENT CO., 135 E. 42ND ST., NEW YORK CITY.  
Book descriptive literature and structural sheets on concrete store fronts

MODERNIZATION Ideas

# TWO Department

By H. E. TATE

Radio-Appliance Buyer,  
Grunbaum Brothers

**I**N MARCH 1940, following a study of store traffic, we made a move which within eight months increased our radio sales 15 per cent, upped appliance sales 30 per cent without increasing selling costs. It seemed to us then and we are sure of it now that these two types of merchandise, displayed in close proximity, aid each other.

Until the spring of last year our radio department occupied a choice main floor space next to the elevators, displays of sets filling a long narrow aisle flanked by very small audition rooms. We moved it downstairs into the basement, alongside appliances, and the two have certainly worked well in combination.

### Permitted Radio Display Expansion

Of course, we did more than just move the radio department. Today the space devoted to this and allied merchandise occupies an area 1,875 square feet overall, almost twice what we gave it before. It consists of a 10 by 75 ft. open area, three 12 by 15 ft. console and combination demonstration rooms, a fourth of equal size devoted to compacts and portables and a fifth room, subdivided into two smaller record audition rooms.

Then, too, we located the radio department so that it is seen first by customers coming downstairs either by stairs or elevator, put armchairs that tired shoppers simply can't keep out of in the open area. Decoration was carefully planned,



## Store Solutions

**COMBINING radio and appliance floorspace upped sales in Seattle without increasing overhead**

demonstration rooms being done in cream-colored linen texture wall-paper, having thick carpeting and indirect "urn" lighting. Efficiency was also considered. So demonstration room doors are glass, have windows between. Sidewalls have three inches of Rockwool sound insulation and all rooms have ventilating fans.

### *Appliance Layout Improved Too*

Space devoted to appliances was simultaneously increased (department totals 6,000 square feet) so

that they did not suffer when radio space was expanded. This permitted us to handle three makes of refrigerators, where only one could be accommodated before.

Boxes are displayed on a raised platform which can also be seen from elevators and stairs.

A model electric kitchen was opened in the department when we made the change, has since tremendously aided sale of washers and ranges as well as refrigerators, in addition to permitting us to run cooking classes which do the radio

**DOUBLE HARNESS**—From a choice street-floor location Grunbaum's radios were moved downstairs alongside refrigeration. Both products immediately registered sales gains

department good by building floor traffic.

We had two separate department managers (one for radio and another for appliances) last year, plus two salesmen in each department. Today we have only one buyer (handling the combined department) and yet the overall staff totals seven men, one more than before.

Business improved, largely as a result of the move and resultant traffic, to the point where we had to hire two more salesmen.

## Helped at **SCHOENFELD'S Too**



**BUYER R. W. ROYER**—He gave up 600 square feet of radio space on an upstairs balcony, moved sets in with appliances in



an expanded basement showroom, installed soundproofed and air-conditioned audition booths

# Small Set Suggestions

OBJECT of displays such as these is to dramatize midget models while at the same time conserving floorspace



ABOVE

MOVABLE RACKS—Philadelphia's Kahn & Rosenau swears by fixtures such as these, obtainable at low cost from set manufacturers



LEFT

BUILT-IN SHELVING—New York's Center Music Store uses a more elaborate system of modernistic wooden shelves. (Note clever use of artificial grass beneath portables in foreground)

LOWER LEFT

WALL COUNTERS—Cheaper to install yet still effective is this step-back shelving installed against a wall



BELOW

ISLAND TREATMENT—Otherwise ugly pillars were here converted into combined compact-console displays through simple carpentry



MODERNIZATION Ideas

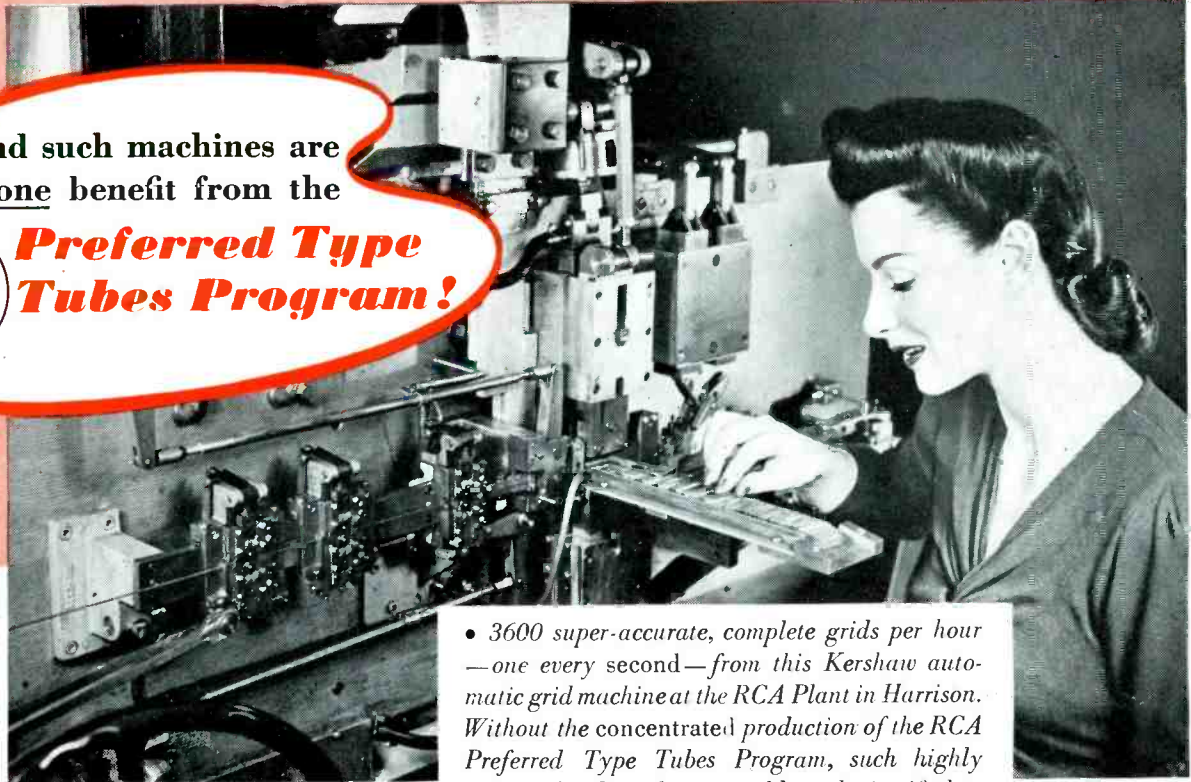
# MACHINES LIKE THIS

## Mean Better Tubes for YOU!

...and such machines are just one benefit from the



**Preferred Type Tubes Program!**



• 3600 super-accurate, complete grids per hour —one every second— from this Kershaw automatic grid machine at the RCA Plant in Harrison. Without the concentrated production of the RCA Preferred Type Tubes Program, such highly specialized machines would not be justified.

**Y**OUR radio-tube dollar today goes farther than ever before . . . thanks to *super* mass-production made possible by the RCA Preferred Type Tubes Program!

In the RCA Tube Plant at Harrison, N. J., is the world's *greatest* array of high-speed, automatic tube-manufacturing equipment. Such machines reach their peak of development only where standardization permits turning out a *few* tube-types by the *millions*. That's just one reason why you are getting more

uniform tubes today—tubes of finer quality—when you buy RCA Preferred Type Tubes.

But machines are only *part* of the story! Materials, too, can be ordered in larger quantities—hence are more uniform. Assembly workers become more skilled, more rapid, more precise, when their work is changed less frequently—when they concentrate *their* activities . . . And *everybody* gains . . . manufacturer, distributor, dealer, serviceman and consumer!



**Feature the radio receivers that are equipped with Preferred Type Tubes!**



# Preferred Type Tubes

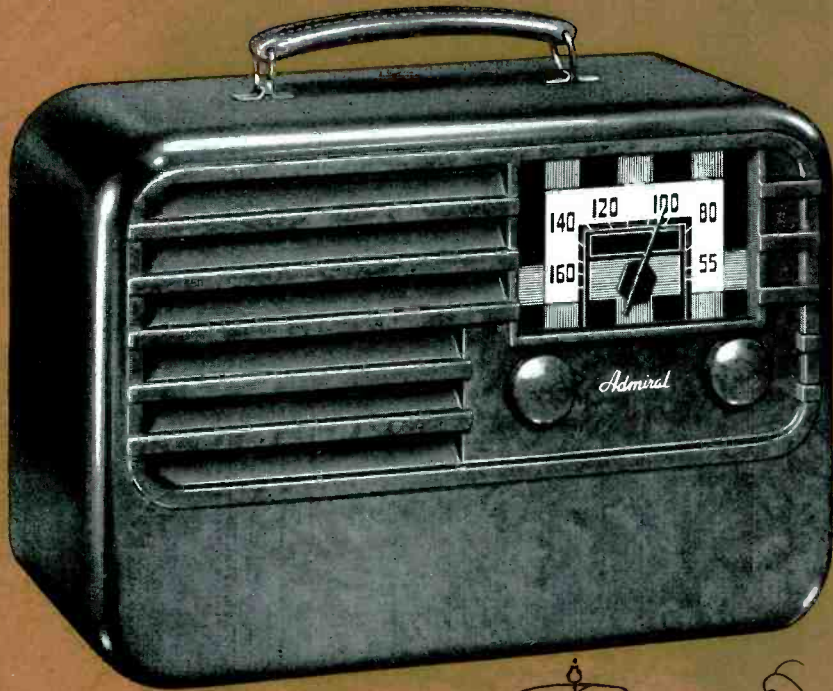
RCA Manufacturing Company, Inc., Camden, N. J. • A Service of the Radio Corporation of America • In Canada, RCA Victor Company, Ltd., Montreal

AGAIN

# Admiral

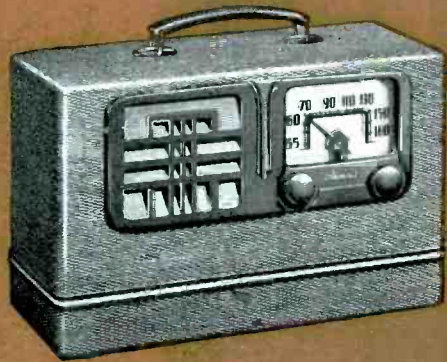
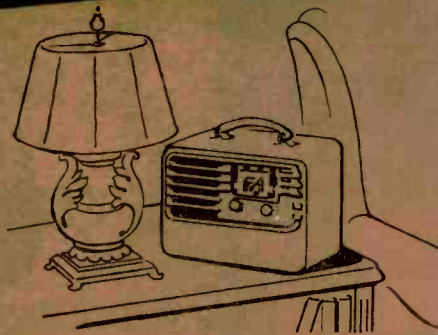
GIVES YOU

# Pick



**AC-DC PLASTIC HOME RADIO  
"DOUBLES" AS A BATTERY PORTABLE**

**Model 76-P5**—Another scoop for Admiral! Look how practical it is! Here's a real selling feature. The average portable radio is probably used away from home less than 10% of the time. This new Admiral, however, provides year 'round 100% utility. It's a smartly styled 5 tube AC-DC home-set with a big plus feature: it also "doubles" as a battery portable to take places. Chassis and batteries are supported from the handle by a special metal sling. There's no strain on the beautiful plastic case. **\$19.95** And look at the price . . . only

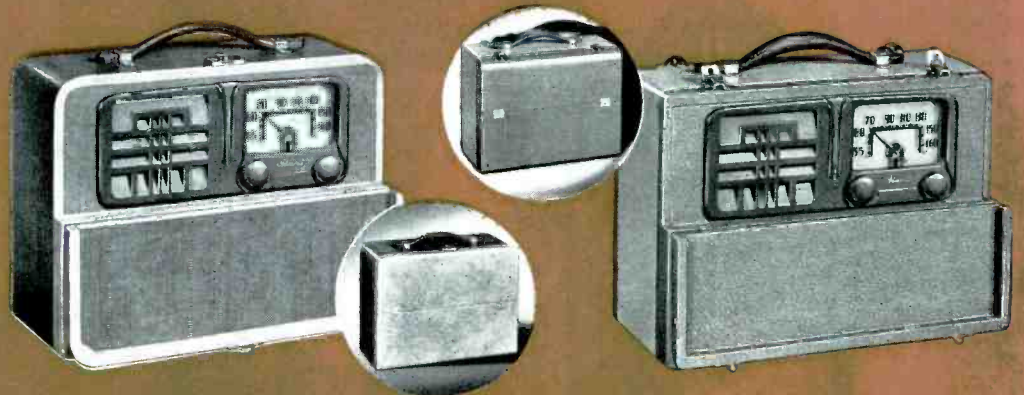


**THESE NEW ADMIRAL DELUXE PORTABLES  
RIVAL HOME RADIOS IN PERFORMANCE**

**Super-Powered With Tuned RF Stage 3 Section Gang Condenser!**

**Model 77-P5**—Admiral 5 tube portable. Here's beauty that's as easy on the ears as it is on the eyes. Comes in a smart grey tweed luggage case with leather carrying handle. List price only **\$19.95**

All prices slightly higher in Far West and South subject to change without notice. Admiral Radios are equipped with RCA preferred type tubes.



The most powerful portables ever made! These new 6 tube Admiral Portables . . . with tuned RF stage 3 section gang condenser to give super sensitivity and selectivity . . . will out-perform the field! Just make your own comparisons, anytime, any place and you will quickly be convinced.

**Model 78-P6**—Beautiful two-tone simulated leather luggage case with hinged cover. List price only **\$24.95**

**Model 79-P6**—Deluxe two-tone simulated leather luggage case with hinged cover and back. List price only **\$29.95**

**ADMIRAL "BANTAM" Camera-Type Radio**

**Model 29-G5**—As easy to carry as a camera . . . weighs only about 4 lbs. . . but a real heavyweight in performance. 5-tube, 3-way superhet (AC-DC-Battery). Powerful miniature speaker; vernier tuning (4 to 1 ratio); Aeroscope antenna; smartly styled Tenite case with simulated grained leather trim.



**\$19.95**

**CONTINENTAL RADIO & TELEVISION CORP.**

3800 Cortland St., Chicago, U.S.A.

Export Office: 116 Broad St., New York

Originators of Tilt-Tuning—Touch-O-Matic—Aeroscope—Slide-A-Way—AC-DC-Battery Bantam



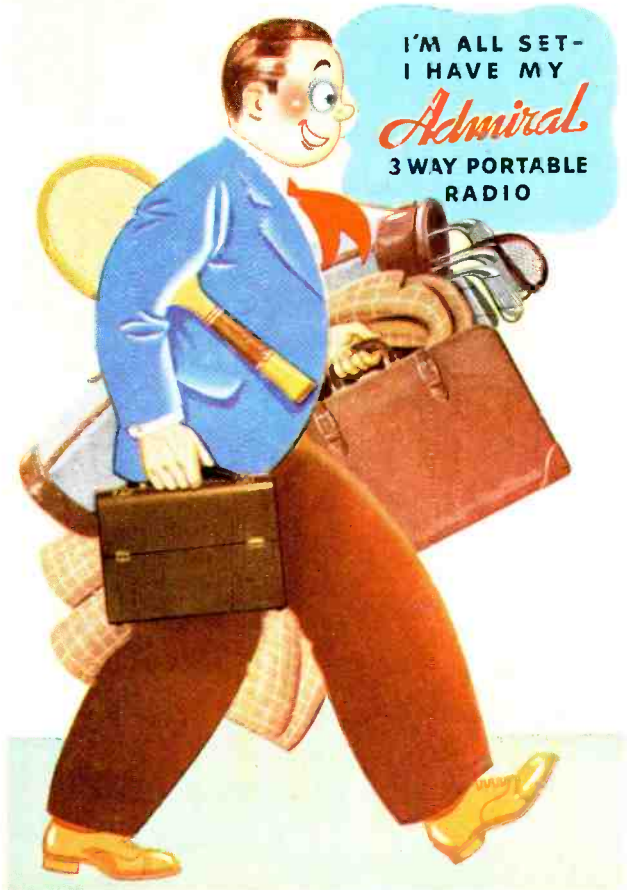
# THE of the Portables!

## With All These Features!

- 3-way operation—AC, DC or 1½ V. batteries
- Clear, rich tone assured by heavy duty dynamic speaker
- Super-powered by tuned RF stage 3 section gang condenser
- Automatic power switch
- Automatic volume control
- Beautiful Lucite escutcheon and dial
- On-off indicator guards life of batteries
- Super Aeroscope
- Tunes standard broadcast band



No. D-67  
Set of two displays  
(girl and man)  
Order by number



## THESE LIFE-SIZE, FULL-COLOR DISPLAYS

Over five feet high, printed in vivid, life-like colors these new Admiral Displays will "stop 'em cold" . . . and sell plenty of portables for you. Each is die-cut to hold an actual radio. Order the set of two by number from your distributor, today.

*free*

# FLYING Radios



LEAR



SENTINEL



RCA

SETCHELL CARLSON

RME



HALLICRAFTERS

**P**ORTABLE radio receivers designed especially for the purpose are riding the airlines these days, finding favor particularly among pleasure pilots flying small ships in which, for one reason or another, fixed types have never been installed.

Lear, specialist in direction-finding equipment for planes, has had, for instance, considerable sales success with a job closely resembling ground-bound broadcast portables familiar to the trade, luggage cloth-covering and all.

RCA has just brought out a three-way model that tunes CAA weather reports, radio range courses, airport control tower signals and standard broadcast programs as well. Listing at \$39.95 less batteries, Model AVR-102 works on its own built-in loop or hooks to a plane's antenna, has a rubber-mounted chassis, incorporates a static-limiter.

Sentinel recommends Model 228-P, tuning from 140 to 410 and from 530 to 1520 kc. for both plane and boat owners, offers this a.c.-d.c.-battery unit at \$44.95 list, with batteries. Built-in are beam signal filter, head-phone jack.

Setchell Carlson pushes its Model 501, straight battery type receiver tuning from 195 to 605 kc., equipped with a metal case insuring complete shielding. List is \$34.95 complete with batteries and headphones.

RME makes portable straight battery operated model ME-14M, tuning from 180 to 4100 kc. in three bands, selling for \$47.40 net without batteries.

HALLICRAFTERS has just modified its familiar model S29, calling the modification S29A. Tunes from 150 to 400 kc. and from 540 kc. to 11.9 mc. in four steps.

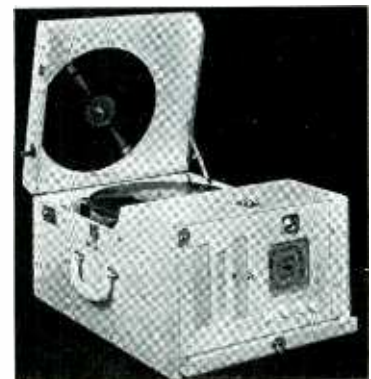
*New*



**SONORA** 3-WAY CANDID, a personal portable radio operates on ac-dc or battery. This 5-tube superheterodyne is housed in a streamline plastic case of combination deep-grey and taupe-grey. Measures 8 1/8 x 5 1/4 x 4 inches. Black shoulder strap is available. Sonora Radio & Tele. Corp., 2626 W. Washington Blvd., Chicago, Ill.



**ANDREA** THREE BAND TABLE-type radio, 6H44, is housed in two-tone walnut with contrasting black ebony finish trim. Seventube, including ballast, superheterodyne is equipped with 6 3/8-inch speaker. List price \$44.95, ac operation. Andrea Radio Corp., 48-20 48th Ave., Woodside, N. Y.



**PORT-O-MATIC** COMPACT PORTABLE automatic phonograph is known as the "Ambassador." Eight tube receiver including ballast and tuning eye covers standard broadcast and short wave. Phonograph plays twelve 10-inch or ten 12-inch records, using the drop type record changer. Available in tan fabricoid, \$139.50. Port-O-Matic Corp., 985 Madison Ave., New York, N. Y.

# Products...



**EMERSON** 3-WAY portable radio, model 424, plays on ac-dc or battery. Six-tube superhet with 3-gang tuning condenser is housed in simulated leather in attractive color scheme—russet tan with dark tan banding at base. Measures 9 $\frac{1}{2}$  high, 14 $\frac{1}{2}$  wide, 5 $\frac{1}{4}$  inches deep. \$24.95 complete.



**GAROD** PERSONAL PORTABLE radio, standard model, is a 3-way portable operating on ac-dc or battery. This 5-tube receiver is equipped with 4-inch speaker. Measures 9 high, 6 wide, and 4 inches deep. Weighs 6 lbs. Standard model in two-toned brown leatherette, lists for \$24.95.

**DETROLA** PERSONAL PORTABLE 3-way radio operates on ac-dc or battery. This 5-tube, including one ballast tube, superhet is housed in tan marble tenite, trimmed in grained Detrokoid to match. Measures 4 $\frac{3}{8}$  wide, 8 $\frac{3}{4}$  high, and 4 inches deep. Weighs approximately 4 lbs. Illustrated model 378, \$19.95 complete.



**EMERSON** PORTABLE PHONORADIO, model No. 382 is a 5-tube ac superheterodyne. Tunes standard American broadcasts and police. Contains 5-inch speaker. Plays all size records up to and including 12-inch with lid closed. Simulated leather portable case finished in rich two-toned brown. Price \$29.95. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.



**GAROD** AUTOMATIC COMBINATION radio and phonograph, model 711-P, is housed in walnut veneer, period design cabinet. Radio has 7 tubes with push-pull audio system, and is equipped with speaker. Phonograph plays 10 and 12-inch records intermixed. List price \$49.95. Garod Radio Corp., 70 Washington St., Brooklyn, N. Y.



**DETROLA** COMPACT COMBINATION radio and automatic phonograph, model 3861, is a 5-tube superhet tuning standard broadcast bands. Phonograph plays 10 and 12-inch records. Walnut veneer cabinet with grille overlays measures 13 high, 18 wide, and 14 inches deep. List price \$44.95. Detrola Corp., 1501 Beard Ave., Detroit, Mich.



**FADA** PERSONAL PORTABLE radio, model C34, is a 3-way receiver operating on ac-dc or battery. Has 5 tubes and covers American broadcast. Contains 4-inch speaker. Measures 9 high, 6 wide and 4 inches deep. Weighs 6 lbs. Housed in a black leatherette case. Set complete with batteries, \$19.95. Fada Radio & Electric Co., Inc., 32-20 Thomson Ave., Long Island City, N. Y.



**ANSLEY** OXFORD DYNAPHONE is an 8-tube combination radio and automatic phonograph tuning short-wave and standard broadcast bands. Plays ten 12-inch or twelve 10-inch records. Mahogany cabinet with front panel of feathered crotch veneers and legs of solid mahogany. Measures 28 x 17 $\frac{1}{4}$  x 16 $\frac{1}{4}$  inches. The instrument panel is located in the two-lower-simulated drawer; the top opens to give access to the record changer. List price \$129.50, ac operation. Ansley Radio Corp., 4377 Bronx Blvd., New York, N. Y.



**ARVIN** COMPACT TABLE-TYPE radio, model 422A, measures 6 $\frac{1}{2}$  wide, 5 $\frac{1}{2}$  high, and 3 $\frac{1}{2}$  inches deep. Four-tube, including power rectifier, superheterodyne tunes from 540 to 1750 kc. List price \$7.95, ivory finish. Also available is model 422, brown finish which lists for \$6.95. Individual suede carrying case with zipper fastener and double strap handles is available for these models at \$1.00. Noblitt-Sparks Industries, Inc., Columbus, Indiana.



**PHILCO** PLUG-IN AERIAL for use in the portable-type radios where reception conditions are difficult. This aerial automatically disconnects the self-contained loop. It is designed in packet form for convenience. Suction cups on the packet containing the loop aerial make it easy to attach. Philco Radio & Tele. Corp., Philadelphia, Pa.

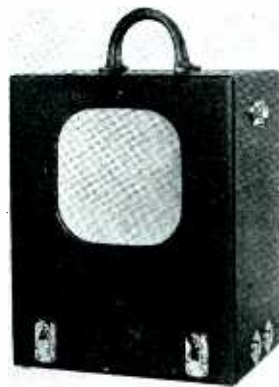


**MUSIC MASTER** PORTABLE RECORDER, model H, retails for \$84.50. Separate windings on the output transformer enable the speaker to function at maximum tone and the cutter head operates at its normal load and balance. The usual feed screw is eliminated. Music Master Mfg. Co., 508 South Dearborn St., Chicago, Ill.

**ATLAS** SPEAKER, model DR-54, the new "Inter-mediate" 4½ ft. "Morning Glory" has a bell opening of 25 inches. Effective air column is 54 inches; dynamic reflex design reduces the overall length of the double re-entrant trumpet to 23½ inches. Adjustable mounting bracket supplied. Lists at \$32.00; P. M. driver unit, model PM-23 shown is \$32.50 list. Atlas Sound Corp., 1449 39 St., Brooklyn, N. Y.



**MOTOROLA** AIRCRAFT RADIO, designed for use in light planes, includes a 5-tube superhet receiver to cover beacon ranges, crystal controlled transmitter on 3105 kc, and directional loop for mounting on plane. Operates on dry batteries. Comes equipped with two ear-phones, microphone, power supply, direction finder and directional loop. Receiver-transmitter measures 11 x 4¾ x 4 inches. Complete weight 15½ pounds. List price \$169.50, complete. Galvin Mfg. Co., 4545 Augusta Boulevard, Chicago, Illinois.

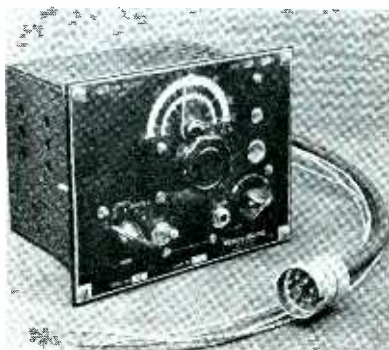


**STROMBERG-CARLSON** PORTABLE SOUND SYSTEM, 18-P, contained in carrying case made of plywood with an outside covering of brown Spanish drill. Frequency response, 30 to 7500 cycles within 3 db. Equipped with 3 tubes, two 10-inch speakers, 25-inch length each speaker cable. Net weight 42 lbs. Measures 14¾ wide, 18 high, and 11¾ inches deep. Stromberg-Carlson Tele. Mfg. Co., 100 Carlson Road, Rochester, N. Y.

**CLARION** AMPLIFIER, model A-35-K, suitable for both theater and home movie or portable sound projector use features a special equalizing control affording a maximum 10 db. rise at 7,000 cps. Supplies 90 volts for the PE cells, as well as voltages for exciter lamps. Incorporates 6 tubes including rectifier. Frequency response 80 to 10,000 cps. List price, complete with tubes, \$63.03. Transformer Corp. of America, 69 Wooster St., New York, N. Y.

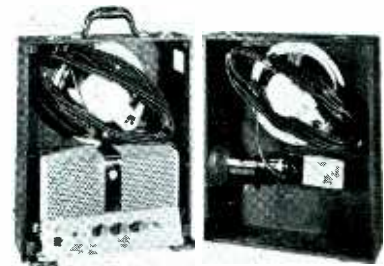


**WESTERN ELECTRIC** THREE-BAND AVIATION receiver, model 33A, tunes 250-625 kc, 3,900-7,500 kc and 6750-12,200 kc. Provides for two crystal controlled frequencies. Phone and CW telegraph. 24 volt dc operation; 12 volt dc optional. 700 milliwatts output. Weighs 18 lbs. 3 oz., complete. Small cockpit panel space 7½ x 6 inches. This receiver is constructed in two units, a radio frequency unit and an audio-power unit. Western Electric Company, Inc., 195 Broadway, New York, N. Y.

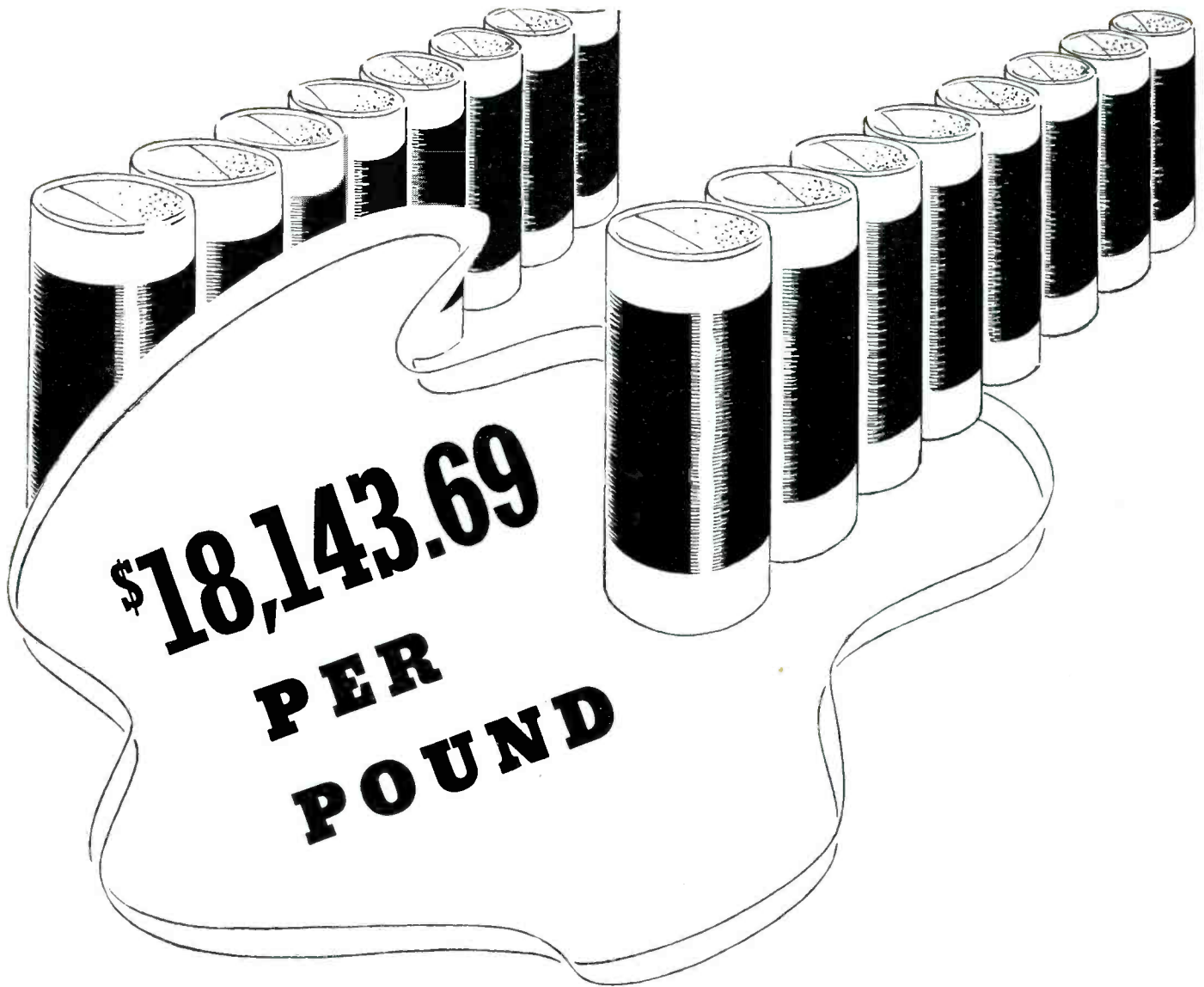


**UNIVERSITY LABS.** BOOSTER SPEAKER, model 18 B, is specially designed for paging and intercommunicating use. Has power handling capacity of 12 watts; impedance 8 ohms; includes built in drive unit. List price \$24.00. University Laboratories, 195 Chrystie St., New York, N. Y.

**RCA PG-180** A 15-watt portable sound system featuring two 10¼-inch speakers, Junior Velocity type microphone and two separate input circuits. A compact unit in a single carrying case measuring 21 x 16¾ x 11 inches. RCA Mfg. Co., Camden, N. J.



**THORDARSON** 12-WATT AMPLIFIER model T-30W12 designed for mobile use, weighs 20 lbs. and operates from 6 volt storage battery. This compact unit measures 13½ x 7½ x 7¼ inches. Several output impedances are available by adjusting rotary selector switch. The unit may be used with either 6 volt or spring wound phono motor and turntable for record reproduction. Thordarson Elec. Mfg. Co., 500 W. Huron St., Chicago, Ill.



**Y**ES . . . that's what we pay for filament wire used in the Sylvania 1.4 volt and 50 ma. battery tubes, the tubes that paved the way for the remarkable sale of battery portable radios since their introduction on the market in 1938. This filament wire, one-fourth as fine as the human hair, is the finest in the world.

From emitting materials to plate electrode, only the best goes into Syl-

vania products. This filament wire of which we speak is a striking example: Expensive as it is, reprocessing and coating makes it still better . . . still more dependable—extra Sylvania value.

This is simply good business on our part . . . for Hygrade Sylvania builds its trade on quality and dependability to help you build *yours* on the same sturdy foundation.

# SYLVANIA

**SET-TESTED RADIO TUBES**



*Also makers of Hygrade Lamp Bulbs, Hygrade Fluorescent*

*Lamps and Miralume Fluorescent Light Fixtures*

# FREED-EISEMANN PHONOGRAPH COMBINATIONS

with Regular and FM Radio

An important message for merchants about the newest, quality radios from one of the oldest manufacturers of quality sets.



FM-42; Phonograph-Radio combination; 16 tubes; Panphonic dual speaker system; Garrard mixer record changer; Authentic Hepplewhite design cabinet — walnut or mahogany; for Frequency Modulation and regular broadcasting.

FREED-EISEMANN Staticless Frequency Modulation Combinations are considered the finest radio sets by engineers, the radio trade and many FM broadcasting stations. The new Freed-Eisemann is the complete modern radio. All sets embody regular broadcast band as well as Frequency Modulation.

**AGGRESSIVE DEALERS — ATTENTION.** You don't have to wait until FM broadcasting opens up in your territory to handle the Freed-Eisemann line. Because of its high quality phonograph reproduction, its superb reception of regular, as well as FM broadcasting, this is the set of today that will not be outmoded tomorrow. Read the booklet entitled "The ABC of FM." Send for it—no charge. And if you want a quantity for prospective customers they may be had at a nominal cost.

**ADDITIONAL FEATURES.** The Freed-Eisemann cabinets are masterpieces of craftsmanship. All are authentic period designs. The phonograph performance is unexcelled. The automatic record changer is the world-famous Garrard.

**OTHER FREED-EISEMANN ADVANTAGES.** You deal direct with the manufacturer. You can get an exclusive territorial franchise (several important territories still open). Your opportunity to take on a line with assured profit possibilities. Write for details to

FREED RADIO CORPORATION  
39 WEST 19TH STREET, NEW YORK, N. Y.

*Freed-Eisemann*

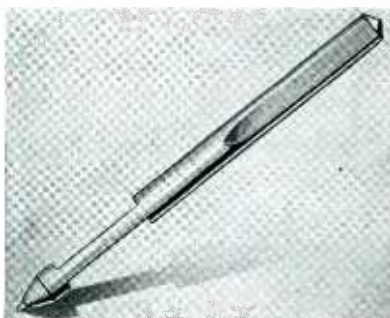
FAMOUS SINCE RADIO BEGAN  
Licensed under E. H. Armstrong Frequency Modulation System Patents.



**CINAUDAGRAPH** CIN-AXIAL DUAL speaker system incorporating a 12-inch woofer, a 5-inch tweeter and complete cross-over net-work. Designed for commercial, professional, and home use, also for FM receivers. Frequency response is essentially flat from 30 to 12,000 cps. Cinaudagraph Speakers, Inc., 2 Selleck St., Stamford, Conn.



**UNITED TRANS.** VOLTAGE REGULATOR for maintaining constant voltage for laboratory apparatus and various other applications where a constant voltage unit is essential. Input voltage may vary from 95 to 130 volts. The output voltage is maintained within one per cent accuracy. A triple output receptacle is provided affording 110, 115, or 120 volts output. The operation of the regulator involves no moving parts, being based on a magnetic principle which assures instantaneous response. United Transformer Corp., 150 Varick St., New York, N. Y.



**ELECTROVOX** WALCO SAPPHIRE NEEDLE, model WN-55, has a genuine sapphire point mounted in a straight duralumin shank. The shank has two parallel in-cut flats ground near the tip to provide a lateral flexibility, and also has a flat on its upper extremity for the set screw. This insures correct positioning in the pickup. Designed for pickups having needle pressure of 2 ozs. or less. The Electrovox Co., 424 Madison Ave., New York, N. Y.

**PRECISION TUBE** METAL SHIELDED WIRE or wires in seamless aluminum, copper, or brass tubing. Made in specified lengths with exposed ends, multiple lengths or standard full lengths, easily cut and stripped on the job. Tubing sizes start at 1/64 inch outside diameter. Precision Tube Co., 3824 Terrace St., Philadelphia, Pa.

*It's British!*



**THREE CORE  
SOLDER**

**THE MODERN SPEEDY  
WAY**

**TO SOLDER  
ERSIN**

**MULTICORE**

THE FINEST Solder IN THE WORLD



FILLED WITH  
NON-CORROSIVE  
ERSIN FLUX

**THIRTEEN GAUGES**

From .128 To .028 inches

**INDEPENDENT CORES**

**PROVIDE**

**3 FLUX CONTINUITY 3**

**AVOIDS DRY JOINTS**

**MAKES SOUND JOINTS**

**ON**

**DIRTY OR OXIDIZED  
SURFACES**

1-lb.-16, S. W. G. 50/50 Alloy,  
Contains Over 90-ft. Sufficient for  
2,160 Average Joints

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DISTRIBUTORS — JOBBERS**

Write to

**M. H. KELSEY**

6604 BUCKINGHAM PLACE  
CINCINNATI, OHIO

for

**SAMPLES, PRICES and DESCRIPTIVE  
BOOKLET.**

**RETAILERS — SERVICEMEN  
CONTACT YOUR JOBBER**

Sole Manufacturers

**MULTICORE SOLDERS LIMITED**  
BUSH HOUSE, LONDON, W.C. 2, ENGLAND

**BE SURE  
USE**

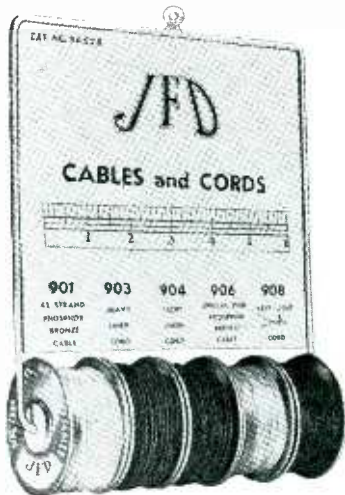
**"MULTICORE"**



**HALLICRAFTERS** FM-AM TUNER, model S-31, offers special advantages to those who already possess high-fidelity audio equipment, providing full facilities for FM, and for broadcast reception, without the necessity for duplication of audio equipment. Its output of 130 milliwatts is ample for any standard amplifier, including those in existing broadcast receivers. Has two tuning ranges 540 to 1650 kc. and 40 to 51 mc. Outputs of 500 and 5000 ohms are provided. Hallicrafters, Inc., 2611 S. Indiana Ave., Chicago, Ill.



**PHILCO** TEST EQUIP. STAND will enable radio servicemen to improve the appearance and efficiency of their repair benches. Built of a heavy gauge sheet metal and finished with baked-on blue enamel, the stands are so designed that any number of them can be bolted together to accommodate additional test equipment. Philco Radio & Telev. Corp., Philadelphia, Pa.



**J.F.D.** WALL RACKS for belts, bands, cables, and cords. One rack for cables and cords, and the other for cable-cord-belt. Holds 5 spools on each with 6-inch rule for convenient measurement. J.F.D. Mfg. Co., 4111 Ft. Hamilton P'kway, Brooklyn, N. Y.

## NEW IDEAS . . . OLD IDEALS

that's *Simpson*

**T**HE first testing instrument bearing the name, Simpson, was announced less than five years ago. Today construction is booming on a new building that will double the capacity of the present Simpson facilities. What has brought about a sales growth as remarkable as this?

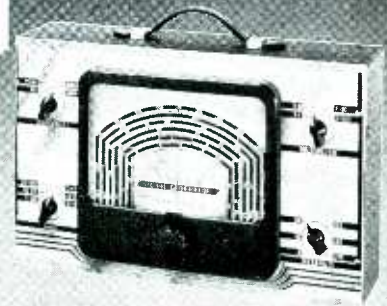
At first thought you would probably say that it was due to the new ideas originated in Simpson Instruments—ideas like "Roto-Ranger"—three-way switching—replaceable units—and the many other new ideas that have blazed the trail for instrument design across those five years.

But if you knew the men behind the Simpson product, you would know that there is a still better reason for this success. You would know that the new ideas have been expressed in old ideals of quality construction that date back to the days when Ray Simpson as president of the Jewell Electric Instrument Co., and a group of associates who are still with him, were building and maintaining the high standard of Jewell Instruments throughout a long, successful career.

That success is being repeated in the Simpson Instruments of today, typified by the instruments illustrated here.

### SIMPSON ELECTRIC CO.

5216-18 Kinzie Street, Chicago, Illinois



**MODEL 310  
SIGNAL GENERATOR**

Your kind of Signal Generator—designed down to the most minute detail for highest accuracy, greatest stability, minimum leakage and good wave form. Smooth vernier control permits close settings and knife edge pointer assures accurate readings. The big 9-inch meter dial makes it easy to read. Dealers net price **\$37.50**



**MODEL 260 HIGH  
SENSITIVITY SET TESTER**

A great value in a fundamental instrument—a high sensitivity tester for television and general servicing. Ranges to 5000 volts—both A. C. and D. C.—at 20,000 ohms per volt D. C. and 1000 ohms per volt A.C. Resistance readings from 10 megohms down to  $\frac{1}{2}$  ohm and five Decibel ranges from -10 to +52 D.B. Dealers net price.....**\$27.50**

### MODEL 300 TUBE TESTER

#### A TYPICAL SIMPSON ACHIEVEMENT

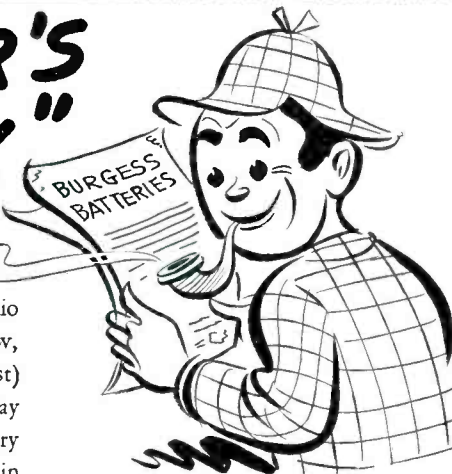
Tests localts, single ended tubes, bantams, midjets, miniature, ballast tubes, gaseous rectifiers, Christmas bulbs, etc. Filament voltage from .5 to 120 V. Has three-way switching, neon short check, "good" and "bad" scale, percentage scale; tube charts in cover. Dealers net price.....**\$26.50**



# "HOMER'S BACK"

Since losing his job in Bud's Radio Shop, our hero, Homer G. Snoopshaw, B. R. S. (Battery Replacement Specialist) really has been up against it—but today he received a letter from Burgess Battery Company offering him a position in Burgess' own Replacement Laboratory—the very spot where the famous Replacement Guide is prepared! What a break—for Homer! And for Burgess!

Homer starts work next Monday, and his position will be "Advisor Extraordinary to Radio Dealers Everywhere." If you are one of the few dealers who don't have a copy of the latest Burgess Replacement Guide, see your distributor or write to Homer, c/o Burgess Battery Company, Freeport, Ill., and you'll get one right away. Answers over 520 portable replacement problems.



## HAVE YOU SEEN

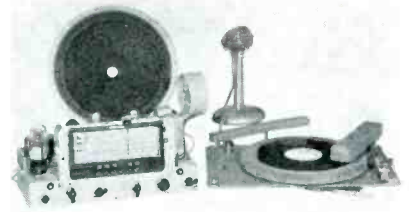
the New Burgess XX45? Made especially for the new "Personal" Radios-- weighs less than 12 oz., rated at 67½ volts, and sells for only \$2.25. Equal in service to any of comparable size.



If you are not fully informed on the Burgess line, you'll be doing yourself a favor if you write in for full information--We'd be glad to hear from you.

**BURGESS BATTERY CO.**  
FREEPORT, ILLINOIS

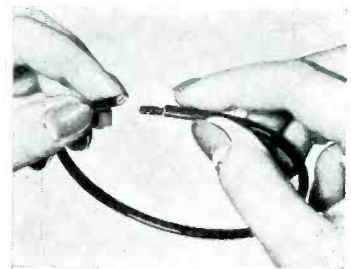
**BURGESS**  
*The Complete Replacement Line*



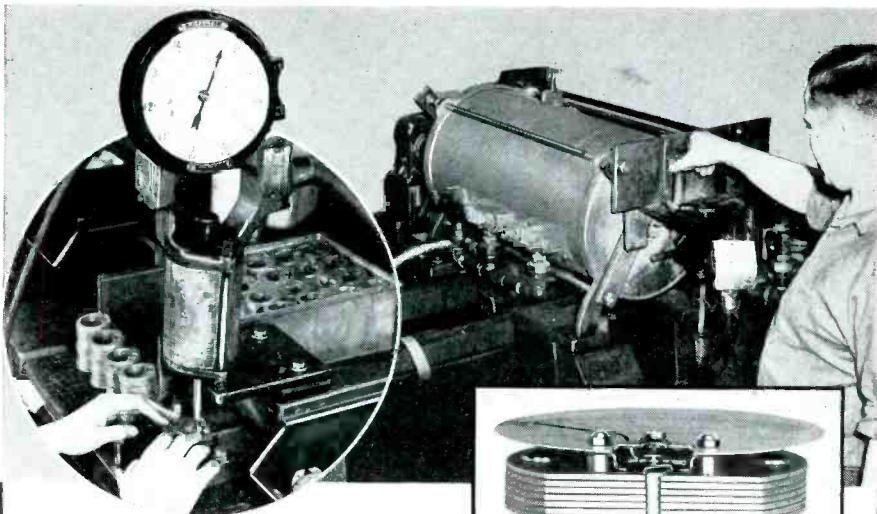
**HOWARD CHASSIS**, ready to be installed in custom cabinets or for use in modernizing old radios, are available in sizes from 5 to 12 tubes. All have phono inputs, built-in loop antennas, speakers, illuminated dials and complete fittings. Howard Radio Co., 1731 Belmont Ave., Chicago, Ill.



**HOWARD RECORDING NEEDLE** just introduced by this company which claims it will cut more than 200 6½-inch recordings. A permo metal tip of unusual hardness makes this possible. Howard Radio Co., 1735 Belmont Ave., Chicago, Ill.

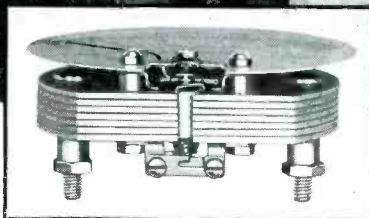


**WALSCO ADJUSTABLE DIAL BELT**, "Unibelt," with zipperlike fastening gives instant, strong and durable connection. Latex covering prevents slipping. Flexible "steel core" prevents stretching. Available in the four sizes: 300 A, 6¾ to 10 inches, \$35; 300 B, 10 to 13 3/16 inches, \$35; 300 C, 14 7/16 to 17 5/8 inches, \$40; 300 D, 19 5/8 to 22 3/4, \$40. All prices f.o.b. factory. Walter L. Schott Co., 5266 W. Pico Blvd., Los Angeles, Calif.



## It's got to be right

TO BE **TRIPLET**



Interior View of D.C. Movement... Double truss bridge protects against any vibration—insures permanent perfect alignment of bearing supports, and provides correct scale readings.

In every phase of manufacture, Triplet exercises rigid control over the quality of every part. In instrument manufacture, for example, heat-treating magnets the Triplet way, plus careful ageing, insures permanency. Following heat-treating, processing by special electric hammers insures initial uniformity and freedom against change. Triplet instruments have perfect alignment magnetically and mechanically, with the result that scale readings are linear and free from "curve error." That is why Triplet instruments have been recognized internationally for their precision, long life, and reasonable prices. That is why more and more people are standardizing on Triplet instruments, because they know—"It's got to be RIGHT to be Triplet."

Write for Catalog—Section 204 Harmon Avenue

**THE TRIPLET ELECTRICAL INSTRUMENT COMPANY**  
Bluffton, Ohio



**GENERAL CEMENT FLOCK FINISH KIT** for finishing phono turntables, cabinets, testers, tool chests, compartments, and displays. Gives soft felt finish such as is used on dials, cabinets and chassis. Kit consists of "felt-koat" flock, "felt-koat" undercoat, "felt-koat" undercoat thinner, brush and sifter-top can for sifting flock over the undercoat. Directions included. No. 1800, list price \$2.00. General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.



**VERTROD** THREE ANTENNAS announced by this company. Model 100, for high fidelity and broadcast receivers, list price \$7.50. Model 103, for communications receivers, list price \$12.00. Model 104, for FM and AM receivers, list price \$12.00. Vertrud Mfg. Co., 132 Nassau St., New York, N. Y.



**DAVENOIL** LUBRICATING OIL expressly prepared for delicate and precise instruments. This company claims that it will leave a residue of dirt or sticky gum. Furnished with metallic applicator. Price \$25. The Davenoil Co., 158 Summit St., Newark, N. J.



**KELVINATOR** 1941 REFRIGERATOR, model C-6, is very similar to model SS-6 with the exception that this new model features the stainless steel door-opening trim and a porcelain-covered sliding crisper. It has 6¾ cubic-foot capacity, shelf area of 11.8 square feet, and freezing capacity of 84 cubes. Priced at \$124.95. Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.



**CARRIER** ROOM WEATHERMAKER, type 51C2 for window mounting, contains complete mechanism for ventilating, cooling, dehumidifying, cleaning, and circulating air. Can be used for just ventilating purposes and is easily moved from one location to another. Total refrigerating effect is approximately 5700 btu per hour. 760 watts input for complete operation; 50 watts for ventilation. Finished in two-tone enamel. Carrier Corp., Syracuse, N. Y.



# Thousands of INVITATIONS

—and All Addressed to YOU!

• Think of it, Mr. Retailer, and you, Mr. Serviceman—your job of changing radio push button controls in the reallocation of broadcast frequencies makes you welcome everywhere. Instead of ASKING to come in, you are now INVITED to enter the homes you want to reach with any product or sales message. It's the opportunity of years.

Here's an Important "Sales Service" Suggestion



## LOW PRESSURE CRYSTAL PICKUPS

By suggesting the replacement of conventional playing arms on electrical phonograph equipment with Astatic Low Pressure Crystal Pickups, you are rendering phonograph owners a real service and helping yourself. Low Pressure Pickups with permanent Sapphire points and only one ounce pressure on recordings do away with the buying and changing of needles and keep records like new for years. This replacement job, with a sales and service profit, will be welcomed by many set owners. Try it. See for yourself.

*Descriptive and Technical Literature is Available*

In Canada:  
Canadian Astatic, Ltd.,  
Toronto, Ont.

Licensed under  
Brush Development Co. Patents

# ASTATIC

ASTATIC MICROPHONE LABORATORY, Inc.  
YOUNGSTOWN, OHIO

# INSIDE Stuff

FIGURES FOR '40 printed in our January issue were "on the nose" from the first of the year through most of November but, as noted at that time, necessarily included an advance estimate covering the last six weeks. Now we've pinned down the facts about that closing period and present the promised revision:

## DOMESTIC and EXPORT

Radio Type	Factory Shipments	% of Total	Value at List	% of Total	Aver List
Compacts (ac or ac-dc)	5,506,000	47%	\$101,879,000	29%	\$19
Consoles (ac or ac-dc)	849,000	7	55,039,000	16	65
Phono-Radio Compacts	313,000	3	10,705,000	3	34
Phono-Radio-Consoles	481,000	4	57,090,000	16	118
Home Recorders (with radio)	20,000	2	1,973,000	1	99
Portables (bat and bat-elect)	1,216,000	10	26,720,000	8	22
Rural Radios (battery)	550,000	5	13,533,000	4	25
Auto Radios	2,132,000	18	68,290,000	20	32
Radio Chassis (less cabinets)	464,000	4	12,612,000	3	27
<b>TOTAL</b>	<b>11,531,000</b>	<b>..</b>	<b>\$347,841,000</b>	<b>..</b>	<b>\$30</b>

## EXPORT Only

Radio Type	Factory Shipments	% of Total
Compacts	392,000	78%
Consoles	15,000	3
Phono-Radio Compacts	5,000	1
Phono-Radio Consoles	6,000	1
Home Recorders	400	..
Portables	18,000	4
Rural Radios	28,000	6
Auto Radios	27,000	5
Radio Chassis	11,000	2
<b>TOTAL</b>	<b>502,400</b>	<b>..</b>

## ACCESSORY Sales

Elec. Phonos & Wireless Rec. Players	293,000
Receiving Tubes	108,000,000
Phonograph Records	75,000,000

## GENERAL Statistics

Homes With Radio	29,300,000
Cars With Radio	8,000,000
Radios In Use	50,100,000

**TELEVISION COMMERCIALIZATION** is still around that corner. It struck us during the FCC hearing late last month in Washington that there had been many curious reversals of attitude. The Commission itself, for instance, this time appeared positively anxious to get things rolling, perhaps countering any possible onus attached to its last monkey-wrench-in-the-works. Several manufacturers once anything but pleased to see the art approaching commercialization simultaneously urged that it now be given the gun, our opinion being that the very good work done by the NTSC had convinced these earlier holdouts that through close industry cooperation television could be permitted to ride without unduly upsetting current audio equipment business. On the other hand, makers of both receivers and transmitters until now the chief proponents of early commercialization seemed less inclined to push, leaving an impression that they were up to their ears in defense orders anyway and had no intention of putting their shoulders to the engineering and programming wheels again unless there were other shoulders there to help. Just one prediction, following the meeting, seems safe. The

Commission will probably accept revised standards involving use of 525 lines and frequency modulation on the sound channel. These may be made official by the government within the next month, thus at least clarifying technical requirements for five years or more. Even when such standards are laid down it will still take several months to get televisions back in general production. So there appears to be little likelihood of commercialization before Fall. And no certainty that it will come then.

**FREQUENCY MODULATION** is really beginning to roll on a commercial basis. Just for posterity's records: To station W47NV of Nashville, Tennessee, goes the historic honor of putting the first paid program on the air, during the week of March 6, 1941, for the Standard Candy Company of that city. Other commercially licensed stations are getting down to business and it is estimated that there are 30,000 FM receivers in American homes (and paid for) at this time, with between eleven and twelve thousand of these in the New York area. Watch them grow, say we, after June.



**NO BEGINNER**—Carl T. Mc Kelvy, is new director of sales for J. P. Seeburg Corporation. Mc Kelvy has been associated with radio and the music fields for past 20 years. In March 1938 he was appointed president of Seeburg's radio division

## RMA Convention Program

Many industry and group meetings arranged for Chicago gathering

WASHINGTON — Following is the RMA's tentative schedule for its seventeenth annual Convention and Radio Parts National Trade Show to be held at the Stevens Hotel in Chicago June 10-13.

*Tuesday, June 10*—Board of Directors' meeting, presiding, President J. S. Knowlson, West Ball Room, 10:00 a. m. Membership luncheon meeting, 12:30 p. m., North Ballroom. Radio Parts National Trade Show opening, 2:00 p. m., Exhibition Hall. Annual meeting, Set Division, 2:30 p. m., Private Dining Room No. 1. Same time, Tube Division, Private Dining Room No. 5. Parts and Accessory Division, Private Dining Room No. 2. And The Amplifier and Sound Division, Private Dining Room No. 3.

*Wednesday, June 11*—Radio Parts National Trade Show, 10:00 a. m. to 6:00 p. m., Exhibition Hall. RMA Committee on Advertising, 10:00 a. m., Private Dining Room No. 4. Same time, Export Committee, Private Dining Room No. 5. Credit Committee, Luncheon meeting, Eastern and Western divisions, 12:15 p. m., Private Dining Room No. 1. Business session with NCO following luncheon. Luncheon meeting, New RMA Board of Directors, 12:30 p. m., Private Dining Room No. 2. Election of president and other RMA officers for ensuing year. RMA Annual Industry Banquet, 7:00 p. m., Grand Ballroom. Same time, Annual Dinner Meeting, National Radio Parts Distributors Asso.

*Thursday, June 12*—Radio Parts National Trade Show, 10:00 a. m. to 10:00 p. m. For RSA members 6:00 p. m. to 10:00 p. m.

# On the Newsfront

Friday, June 13—Radio Industries Golf Tournament, Calumet Country Club, Luncheon at Club House 12:30 p. m. and dinner at 7:30 p. m. From 11:00 a. m. to 8:00 p. m. Radio Parts National Trade Show, open house 6:00 p. m. to 8:00 p. m.

The convention committee has arranged for many industry and group meetings to include the Sales Managers Clubs, the Radio Servicemen of America, "The Representatives," and other organizations of the industry.

## RMA Meetings

**President Knowlson sets April 16 for important industrial discussions**

WASHINGTON—Problems relating to the national defense program, including necessary industry supply of aluminum and other metals and also the future federal tax program are some of the important industry matters scheduled for discussion at RMA meetings called by President Knowlson for April 16 at the Roosevelt Hotel in New York City.

These RMA meetings are annual spring events of the Association preceding the seventeenth annual RMA convention and the Radio Parts National Trade Show at Chicago, June 10-13, for which plans are being prepared by Chairman Paul V. Galvin of the Convention Committee.

## Ray C. Wakefield, New FCC Commissioner

WASHINGTON—Ray C. Wakefield of California was sworn in on March 22nd as a member of the Federal Communications Commission, thereby completing the complement of that body. On March 5 Wakefield was nominated by the President for a seven-year term, succeeding the late Thad H. Brown. He was confirmed by the Senate on March 17.

Commissioner Wakefield comes to the Federal Communications Commission from the California Railroad Commission, on which he had served since January, 1937.

## Pres. Knowlson on Defense Board

CHICAGO—President James S. Knowlson of the Radio Manufacturers Assn. and head of the Stewart-Warner Corp. was recently appointed a member of the newly-formed Chicago commission on National Defense.

## FM News

### FCC takes further steps to speed FM service

NEW YORK—As a further aid to FM stations already authorized by Washington whose openings have been delayed because they cannot secure prompt delivery of high-power transmitting equipment, the FCC on March 19 announced that lower-power equipment may be utilized temporarily on a commercial basis.

This order will permit broadcasters, originally granted licenses for high-power transmitters, to make temporary use of equipment thus far delivered, until the remainder apparatus is completed by manufacturers.

This action follows similar authorization by FCC (first part of March) to permit experimental stations holding FM construction permit to switch over to commercial operation, pending installation of higher-powered equipment.

In line with this announcement the Commission has issued 60-day permits for commercial operation to the following three stations: WOR in New York; The Yankee Network's station atop Mount Washington, N. H., and the Zenith Radio Corp. at Chicago.

Gordon Gray, Winston-Salem publisher, on March 13 received an official OK to

erect a giant 50,000 watt FM transmitter to cover an area of 69,400 square miles, embracing portions of seven different states throughout the South. The transmitter is to be installed atop Clingman's Peak, towering 6,600 feet above sealevel. Will operate on a channel of 44.1 megacycles.

The army is reported currently working on a sizable number of FM units (two-way operation) for use by tank forces and other branches of the service.

The latest compilation by FM Broadcasters, Inc., show 43 FCC construction permits granted with 51 applications still pending for FM licenses.

A special open meeting was held at the Hotel Roosevelt, New York on April 2 to discuss the various developmental problems currently confronting FM. Meeting sponsored by FM Broadcasters, Inc., and it was opened to all interested parties in frequency modulation transmission. Among topics discussed, were recent FCC order No. 79, newly authorized studio-transmitter links and other important matters.

## New Bill to Restrict "Chiselers"

CHICAGO—The "Little Business Men's League of America" report that they will get behind the new unfair sales bill recently introduced in the Illinois legislature. The bill is said to go a long way in its restrictions on price cutting, and other forms of allegedly unfair trade competition. The "League" explained that this bill will follow closely the provisions in a similar California law.



VETERANS AND NATIONAL DEFENSE—Chicago chapter, Veteran Wireless Operators As'n, shown at recent dinner meeting to discuss their part in national defense. Left to right, speaker Wm. Dornfield, veteran Australian op, George I. Martin, RCA Institute, retiring chairman and new chairman, W. J. Halligan, president of The Hallcrafters Co.

## Majestic Appoints

### E. A. Tracey General Manager

CHICAGO—E. A. Tracey, formerly vice president in charge of sales for Zenith Radio Corp., has just been elected chairman of the board and general manager of Majestic Radio and Television Corporation.

In connection with his new assignment, "Gene," as he is familiarly known, states: "it is our plan to develop the Majestic distributor franchise in such a manner as to insure distributor profits and security of inventory. We have decided upon a controlled retail distribution which, through restriction of the number of retail franchises to carefully selected dealers will, we expect, be a long step towards the elimination of excessive trade allowances and other competitive practices that have been so costly to retailers during past years."

## More Refrigerator Price Advances

NEW YORK—The New York Philco Distributors, Inc., announced on March 17 that the two lowest priced refrigerators in the Philco line, models MU6 and MR6, would be increased in price. The first unit formerly listed at \$114.75 will retail at \$119.95 and the second model (MR6) listing previously at \$122.50 was increased to \$129.95.

Paul H. Puffer, general sales mgr., Norge division, Borg-Warner Corp. on

March 13 gave notice that there would be a price advance approximating \$5.00 per model throughout the Norge Rollator refrigerator line. Puffer stated: "Increasing costs of raw materials have dictated the advances which is general throughout the industry."

## C. William Rados With Crosley

CINCINNATI—As part of the Crosley Corporation's new program of increased service to dealers and distributors, appointment of C. William Rados, previously of Detroit, as sales promotion manager of the refrigeration division of the Crosley Corporation was announced by L. Martin Krautter, manager of advertising and sales promotion for the Corporation.

Rados was formerly a business editor and writer and joined the staff of Trade-ways, Inc. in 1929 to become a teacher of salesmen. In 1938, he was appointed manager of the National Salesman's Institute, established by the Kelvinator division of Nash-Kelvinator Corporation.

## Champion Discontinues Tubes

DANVERS—As of March 22, the Champion Radio Works, Division of the Consolidated Electric Lamp Company has decided to withdraw from the radio tube field. The closing of its radio tube division does not effect in any way the operations of other divisions.

## "Album of the Month"

### by RCA Victor

Introduce new record promotion

CAMDEN—RCA Victor is testing an "Album of the Month" Club plan in Hartford, Conn., preparatory to introducing the promotion on a national scale.

Similar to the already widespread and highly successful "Book of the Month" Clubs, the plan offers each month, well in advance of its normal release date, an outstanding Red Seal album selected by an eminent musical jury. Purchase of any four of these selections within a year's time carries with it a bonus of 25 per cent in additional Victor recordings. A further \$1, single, 12-inch, Red Seal record is offered to subscribers within the first month as an inducement to early action.

Twenty five Victor dealers in Hartford and environs are cooperating during the incubation period under the supervision of Peter J. Carr of the Post and Lester Company, RCA Victor distributor.

Extensive advertising schedules will announce the club to the Hartford area along with a wide variety of promotional aids. Dealers will have available promotional kits including streamers, fliers, counter cards, booth hangers and envelope enclosures.

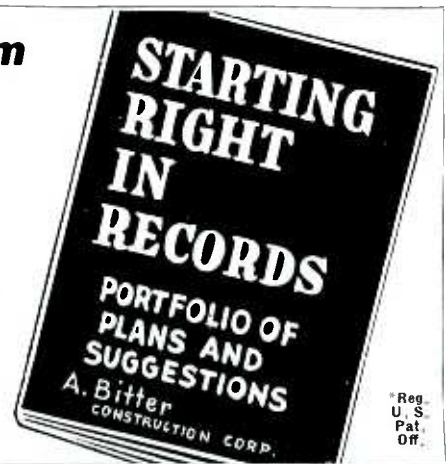
## MODERNIZING? Here's Help from Headquarters!



If you're opening a new Record Department, or planning for *more sales* in your present one, you'll find many valuable ideas in our book. Write or 'phone today for your free copy; no obligation, of course!

### A. BITTER CONSTRUCTION CORP.

Originators of the famous RECORD BAR®  
Brewster Building, Long Island City, N. Y.



## Cash-In on "FM" With the NEW HOWARD FREQUENCY MODULATION RECEIVERS

Incorporating the most modern of all chassis, these new 14 tube FM-AM receivers are truly representative of HOWARD quality, beauty, progressive design, performance and value. Complete tuning range includes the Frequency Modulation band from 41 to 50 MC and three AM standard broadcast and short wave bands from 540 KC to 22 MC. The beautiful tone from the full fidelity, push-pull 12 watt audio system with separate bass and

treble controls and special 12" Jensen electro-dynamic speaker is a positive revelation to every music lover. A highly sensitive and selective superheterodyne circuit with two I.F. stages, brings in foreign and other distant programs with ease and clarity. The unchallenged value and desirability of the new HOWARD FM-AM Receivers can mean big profits for you. Send for the full information today!

MODEL 718-FM  
**\$109.95**

Export and Pacific  
Prices Slightly Higher

*America's Oldest Radio Manufacturer*

**HOWARD RADIO COMPANY**

1731-35 Belmont Av., Chicago, Ill. - Cable Address: HOWARDCO, USA





**JOB WELL DONE**—Vice-president *Peter L. Jensen* (left) and general sales manager *O. F. Jester* look over the first copy of the new Utah catalog. Judging from their expressions the booklet should have both instructive and interesting data for the trade

## RCA To Erect Large Research Plant

E. W. Engstrom named director, with Dr. V. K. Zworykin and B. J. Thompson as associate directors

NEW YORK—The world's largest radio research laboratories will be built by the Radio Corporation of America, at Princeton, N. J., according to a recent announcement by David Sarnoff, President of RCA. It will be known as "RCA Laboratories," and will be the headquarters for all research and original development work of RCA, and for its patent and licensing activities. The new organization is planned to promote the growth of radio as an art and industry, and to meet the expanding demands of national defense.

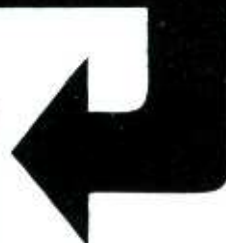
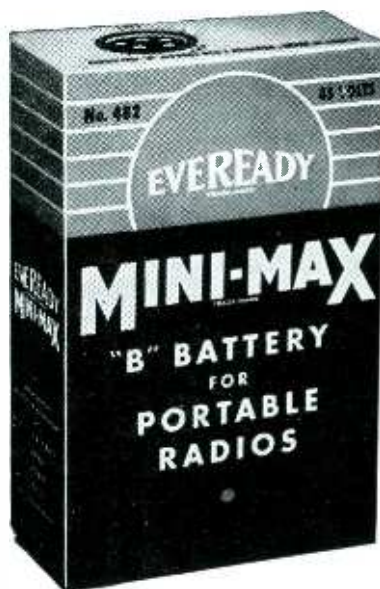
A further purpose, Sarnoff said, will be to facilitate the creation and development of new radio products and services which will provide new business and new employment for the post-war period.

Otto S. Schairer will be vice president in charge of the laboratory which will include the Patent Department. Ralph R. Beal, research director, will have general direction of all research and original development. Dr. C. B. Jolliffe who has been in charge of the RCA Frequency bureau has been made chief engineer, and will direct the engineering policies. E. W. Engstrom will be director, with Dr. V. K. Zworykin and B. J. Thompson as associate directors.

## Marsh With Allied

CHICAGO—A. D. Davis, president and general manager of Allied Radio Corp., Chicago, announces the appointment of Walter F. Marsh to the position of sales manager of the Chicago metropolitan district. Marsh has been identified with the radio industry for past 23 years.

**HERE'S THE BIGGEST-SELLING BATTERY IN THE PORTABLE FIELD TODAY!**



**AND HERE'S WHY:**

1. "Eveready" "Mini-Max" "B" Battery No. 482 FITS MORE THAN 90% OF THE 2,000,000 PORTABLE SETS NOW IN USE!
2. IT LASTS ALMOST TWICE AS LONG AS ANY OTHER BATTERY OF EQUAL SIZE!
3. IT COSTS NO MORE THAN ORDINARY PORTABLE RADIO BATTERIES!

**GET IN ON THIS PROFIT OPPORTUNITY NOW!**

**FREE PREMIUM OFFER!  
ASK YOUR DISTRIBUTOR ABOUT IT!**

**Here's the battery for "personal" or "camera-type" radios!**



"Personal" or "camera-type" sets were designed around "Eveready" "Mini-Max" Radio "B" Battery No. 467. It packs 67½ volts in a space 3⅝" x 2¼" x 1⅝". Folks in your neighborhood will ask you if you have it. Order now!

**"EVEREADY"**  
**"MINI-MAX"**  
**RADIO "B" BATTERIES**

**NATIONAL CARBON COMPANY, INC.**

*Unit of Union Carbide and Carbon Corporation*



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

**FREE! Replacement Guide for portable receivers! Tells the proper batteries for portable sets. Accurate! Up to the minute! Write Dept. A-1, National Carbon Company, Inc., P.O. Box 635, New York, N. Y.**

# In a Hurry for F-M?



Use the Meissner

## F-M RECEPTOR

for immediate satisfaction!

The Meissner F-M Receptor is a complete, self-powered, 8-tube converter, designed to add F-M reception to any regular receiver—feeds directly into the input of the audio system! With this inexpensive unit you can have all the advantages of F-M—hi-fidelity, staticless, noise-free and interference-free reproduction—right on your own radio set! Power output and tone quality are limited only by your present audio system.

RF stage provides maximum reception range and noise rejection—tuning indicator for accurate adjustment—only two controls. Extremely compact—only 13" wide, 7" high and 6¾" deep—beautiful, hand-rubbed walnut cabinet. For 110-volt AC operation only; also available without cabinet if desired. List price, ready to operate, only \$39.95!

See Your Jobber Today!

### 1941 INSTRUCTION MANUAL



Now Ready!

Contains complete instructions for all Meissner Kits  
Circuit Diagrams  
Parts Lists  
Pictorial Diagrams  
Charts and other useful data  
ONLY 50c NET!

WRITE TODAY FOR FREE 48-PAGE COMPLETE CATALOG

Address Dept. R-4



CRC JOBBER AT BRIDGEPORT—A. Van Antwerpen (right) head of Milwaukee's Radio Specialty Co., visits the Columbia Record plant, and is shown here with Paul Southard, CRC sales manager

### CRC Record Promotion

NEW YORK—Columbia Recording Corp. released the news that they have discontinued using the old style record supplements for sales promotion and in its place are substituting vari-color mailing pieces designed to dramatize record merchandise rather than catalog it.

Columbia's new development in record sales promotion was announced the first part of March to distributors and dealers in a presentation by Patrick Dolan, CRC promotion manager. Dolan says: "The ready reference handbook is going to be a big help to record dealers. Each month it will contain an alphabetical listing of all releases since last catalog and will be designed for counter use."

### Hotpoint Produces One Millionth Range

CHICAGO—On March 24th the Hotpoint electric range No. 1,000,000 came off the assembly line in the Hotpoint, Edison General Electric Appliance Co., Chicago Plant. It is estimated that well over 2,500,000 electric ranges are in use in American homes. They say Hotpoint is the first manufacturer to produce one million of them.

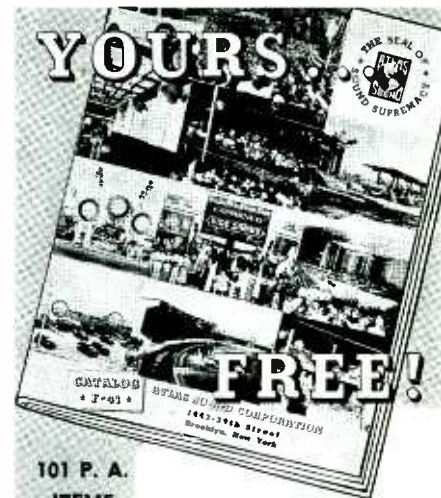
A number of exact replicas, including gold trim, have been produced for itinerant display, and 24-karat gold "Hotpoint" nameplates, duplicating the one in the original Millionth model, have been made available for other models.

The Hotpoint range sales division has prepared a complete plan of merchandising, advertising, and publicity, commemorating the event. It has also prepared special invitation mailing pieces, which retailers may use for inviting the public to visit their stores to inspect a replica of the one millionth range and receive a special commemorative gift. Retailers are being advised of Hotpoint's complete plans through a trade announcement broadside.

### Now With Radex

CHICAGO—Ray Wilson, formerly associated with Zenith Radio Corp. is now with the Radex Corporation of Chicago, in the development of test equipment.

## NEW P. A. GUIDE



101 P. A. ITEMS

— PLUS —  
ACTION SHOTS OF SOUND JOBS

★ If You Are SELLING SOUND You can't afford to do without this helpful public address catalog. Sound installations are always better when you use Atlas Sound speakers and accessories. ★ You'll be proud to own this illustrated P. A. Guide listing 101 sound products — PLUS 22 pictures of actual p. a. installations to help you SELL SOUND more profitably.

ATLAS SOUND CORPORATION



1448—39th STREET  
BROOKLYN, N. Y.

WRITE DEPT. RR-4 TODAY!

## THE EASY WAY TO CUT HOLES IN RADIO CHASSIS



Here's a handy tool to help the radio worker save many hours of work when cutting holes for sockets, plugs, connectors, and meter holes in radio chassis. No tedious drilling, reaming, or filing is necessary. A cap screw is inserted in a small drilled hole, and the punch is easily forced into the die by a few turns of the cap screw with an ordinary wrench. Ten punches are available for cutting 3/4, 7/8, 1, 1 1/8, 1 3/8, 1 1/2, 1 5/8, 1 3/4, 1 7/8, 1 1/2 and 2 1/4-inch holes. Write for more information.

GREENLEE TOOL CO.  
1708 Columbia Ave., Rockford, Ill.

### GREENLEE TOOL CO.

1708 Columbia Ave., Rockford, Ill.

Please Send Information On Greenlee Radio Punches.

NAME .....

ADDRESS .....

CITY ..... STATE .....

## Philco Meetings

Present new portables and outline new 3-way promotion on refrigerators

PHILADELPHIA — Philco announced its 1941 plans on triple-refrigeration promotion at a series of 5 sectional distributor's meetings held at Philadelphia, March 24; Chicago, 25; Memphis, 26; Atlanta, 28; and San Francisco also on the 28.

Also presented at these meetings were the new line of portable radios and portable air conditioners. Thomas J. Kennally, general sales manager, stated: "Philco's three-way promotional refrigerators should make sales history for the industry."

## Record Refrigerator Sales

NEW YORK—The National Electrical Manufacturers' Assn. reports February sales of household electric refrigerators amounted to 333,335 units, slightly under the record January total, but ahead of any previous February. Sales for the first two months this year totaled 683,236 units, against 479,578 for the same 1940 period.

Sales of electric ranges in February were 51,700 against 32,998 a year earlier.

## Forecast Good Prospects

NEW YORK—Pierre Boucheron, g.s.m., Capehart division, Farnsworth Television & Radio Corp., at a recent metropolitan New York convention told the dealers and servicemen present that the New York market was prime *now* for the sale of the new Capehart combination-radio instruments, ranging in price between \$2,000 and \$8,000.

Apparatus recently introduced, features new extended and remote control installations.

## Freed Joins Freed

NEW YORK—Arthur Freed, until recently head of a merchandising and sales service, has just been appointed general sales manager of the Freed-Eisemann organization, according to an announcement by its President, Joseph D. R. Freed.

# 1942? **FACTS** About Next Year's Models!

**FACT 1.** It takes a long time to build a really GOOD test instrument—to get the "bugs" out—to prove, and improve, its performance and reliability. Then—when it's REALLY good—why change?

**FACT 2.** Today's SUPREME Instruments are as modern, as accurate, as dependable as test equipment can be built.

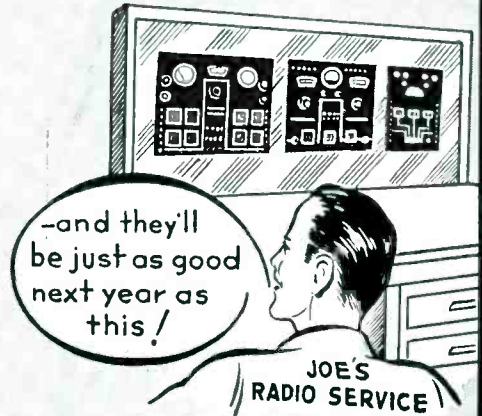
**FACT 3.** That is because SUPREME believes in, and practices, a policy of continuous improvement instead of just "putting a new coat of paint on an old chassis."

**FACT 4.** A new SUPREME model is never announced until progress in radio has developed a definite need for such an instrument.

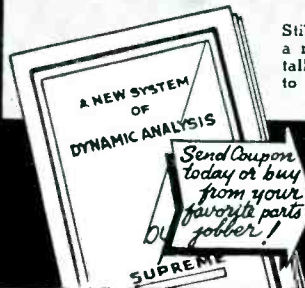
**FACT 5.** Therefore, SUPREME will announce NO "new" models at the June radio show. Which proves that SUPREME Engineers know their business—that they know, and are guided by, YOUR requirements.

**FACT 6.** SUPREME Test Equipment for 1942 will be as it is now, your best buy, and "SUPREME BY COMPARISON!"

Write for SUPREME'S current catalog. It pictures and describes the instruments your Jobber has in stock NOW—for 1942. Due to present conditions, prices and prompt delivery guaranteed only until June 1st.



Still time to get your new SUPREME Book explaining a new servicing procedure that makes an ailing radio talk to you like a patient talks to his doctor. Only 35c to cover cost of printing and mailing.



SUPREME Instruments Corp., Dept. RR2 Greenwood, Miss. Gentlemen: I enclose 35c. Please send me your new book referred to above.

NAME.....

ADDRESS.....

CITY..... STATE.....

Introduces . . . the first small, low - priced electric phonograph with fine tone quality and volume!

DESIGNED ESPECIALLY FOR REPRODUCING RECORDED MUSIC

ESPEY MFG. CO. INC.

Manufacturer of Phonographs and Radios

305 E. 63rd St. New York

Make way for a brilliant new leader in small electric phonographs. It makes your market wider than ever. This ESPEY model AWO-3 is AN INSTRUMENT—a remarkable performer, considering its size and price. You needn't blush when you demonstrate it. When your customers see and hear it they won't be satisfied with anything less.

**SPECIFICATIONS**—MOTOR, rim drive, synchronous, constant speed 78 R.P.M., self-starting, air-cooled. 115 Volts A.C., 60 Cycles. **TURNTABLE**, 9" dia., plays 10" or 12" records. **PICKUP & TONEARM**, temperature treated crystal in perfectly balanced, true tangent arm for high fidelity and minimum record wear. **AMPLIFIER**, specially designed for record reproduction, good quality, low distortion. **SPEAKER**, 3" high effi-



ciency, extra heavy PM speaker and transformer carefully matched. **CONTROL**, tapered volume control with on-off switch. **SIZE**, 11 3/4" x 9" x 5 3/4".

WRITE TODAY FOR COMPLETE DETAILS

Licensee of RCA—HAZELTINE—ARMSTRONG Wide Swing Frequency Modulation Patents



# 1921

## MILESTONES

★ Recognize the above gadget? Of course you do, if you're a real old-timer. This was the Clarostat compression-type control used in tricky regenerative receivers and later in B-battery eliminators for controlling output voltages. Even then, as now, Clarostat pioneered in controls and resistors.

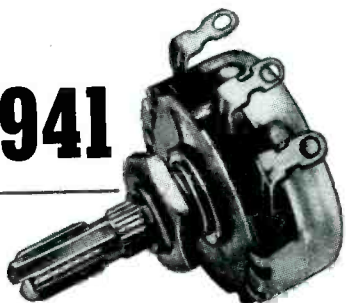
Twenty years have passed since that cumbersome compression-type Clarostat. During that time the Clarostat organization has developed, designed and produced millions of controls—compression type, composition-element, wire-wound. Likewise every kind of resistor. The present popular midget control, shown below, reflects a pioneering experience second to none in the industry.

Indeed, you'll never know how good a control can be until you've tried today's Clarostat midget control. Continuous refinements and innovations have raised this control to brand new standards of performance. Just try one!

### Ask for DATA . . .

In addition to outstanding controls—composition and wire-wound alike—Clarostat provides exceptionally complete replacement data. Ask your jobber for the latest Clarostat Service Manual. Or write to Clarostat Mfg. Co., Inc. Dept. RR-3, 285-7 N. 6th St., Brooklyn, N. Y.

# 1941



## Defense Listening Posts

F.C.C. to set-up 24-hour watch for subversive propaganda

WASHINGTON—Establishment of special national defense "listening posts" to record, translate, transcribe and analyze foreign short-wave broadcasts is being undertaken by the F.C.C. in cooperation with the Defense Communications Board.

A 24-hour watch for subversive and other pertinent radio propaganda from abroad is being set up at primary monitoring stations strategically located throughout the United States and its possessions.

A picked force of 350 technicians, translators, clerks, propaganda analysts and other experts will work in eight-hour shifts to keep abreast of all overseas emissions which may involve propaganda intended for persons in this country or neighboring countries.

## NTSC Recommends 525 Lines

WASHINGTON—Change in the standard number of scanning lines per frame from 441 to 525 lines was the principal new recommendation made by the National Television System Committee to the F.C.C. prior to March 20, formal hearing on television. The NTSC also made an important change regarding synchronization standards, to provide for use of interchangeable synchronizing signals, with tests during the commercialization period for later recommendation of the general standard by an RMA or other industry committee.

## Hallicrafters Ups Higgins

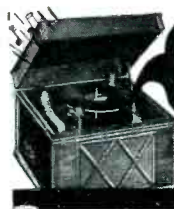
CHICAGO—Royal J. Higgins, for past five years in charge of sales promotion for The Hallicrafters Company, Chicago, has just been appointed Director of Advertising and Sales Promotion. Before joining The Hallicrafters, Higgins was for many years associated with Sears Roebuck and Company.

## Reps Elects New Members

NEW YORK—Chairman Ben Joseph of "The Representatives" announces the acceptance of the following two new members: Leslie M. Devoe, P. O. Box 5907, Indianapolis, Ind., and L. D. Lowery, 7101 Westchester Pike, Upper Darby, Pa.

## Motor Products Appoints S. M.

CHICAGO—Willard L. Morrison, manager of Deepfreeze division, Motor Products Corp., on March 7, announced the appointment of Norwood D. Craighead as sales manager. Craighead is well known in the refrigeration industry, having been associated with the sale and promotion of major appliances for the past 18 years.



## RECOTON NEEDLES FOR FINEST REPRODUCTION

Perfect clarification. Eliminates surface noises. Makes record playing sound like a live performance.

ASK FOR  
RECOTON NEEDLES.

### Because!

- *Transcription*, round-pointed, high-polished steel, extreme hi-fidelity.
- *Superior*, special shaft, round point, minimum scratch
- *Automatic*, hand-turned steel, reinforced shaft for record-changers
- *Acoustic*, brass plated steel alloy, acoustic and electric phonographs, loud and brilliant emphasizing bass frequencies.

- **STEEL CUTTING** . . . fine steel, high polish; smooth, quiet groove on acetate.
- **SAPPHIRE CUTTING** . . . hardy, precision-ground gem; extra-long life, fine quality; for acetate.

- Stock and display RECOTON needles today . . . our national advertising is creating consumer demand.

**RECOTON CORPORATION**  
42 WEST 15 ST. NEW YORK, N. Y.



## The trend is toward OXFORD speakers

Of course we ain't made any surveys recently . . . but if sales curves and charts mean anything the boys are hollerin' for OXFORDS on many more occasions than ever before . . . you know the old story of the better mouse trap.

Somehow or other you can make more money with OXFORD Replacements . . . and the customer is ALWAYS SATISFIED. That's a good thing to remember.

**ALWAYS SAY  
OXFORD**

**OXFORD-TARTAK**  
RADIO CORPORATION  
915 W. VAN BUREN ST. • CHICAGO, U. S. A.



known in the refrigeration industry, having been associated with the sales and promotion of major appliances for the past 18 years.

### Moss Leaves NRPDA

NEW YORK—From George D. Barbey, president of National Radio Parts Distributors Assn., comes word that Arthur Moss has tendered his resignation as executive secretary, to take effect at the annual meeting of the Association at Chicago, June 10.

### Dealer Helps

**LOG BOOK**—RCA has a new 32-page radio log book which lists the newly assigned frequencies of all domestic stations. The book is being released through *RCA Tube and Equipment* distributors throughout the country. Stations are listed three ways: alphabetically by states and cities, by call letters, and by frequency. Also contains log of foreign short-wave stations.

**ORDER CARDS**—Presto Recording Corp. offers to furnish disc order cards imprinted with the name, address and telephone number of the service organization which can be left with the home owner when the serviceman is called to adjust pushbuttons for new frequencies or other repair work. New disc cards can be obtained by writing direct to *Presto Recording Corp.*, 242 W. 55th Street, New York City.

**FLOOR DISPLAY**—Noblitt-Sparks Industries, Inc., of Columbus, Ind., has a new *Arvin* stand which will display seven models. Free to dealers with an order for one each of six different models.

**P.A. GUIDE**—Atlas Sound Corp. releases its new sound catalog F-41 which describes 100 different speakers, mike stands, and many accessories. Included are a number of photos showing typical installations to help the sound man sell P. A.

**TUBE BROADSIDE**—A new folder entitled, "Selling Helps for Ken-Rad dealers," just off the press, by *Ken-Rad Tube & Lamp Corp.*, Owensboro, Kentucky. Describes a wide variety of aids, including signs, streamers, mailing cards, et al. Copy available through distributor or direct.

**AUTO DISPLAY BOARD**—Galvin Mfg. Corp. has a new car radio display which holds 5 different *Motorola* models, each of which can be demonstrated right on the board. Illuminated top and bottom with indirect lighting. It is known as the "Torpedo" display. *Motorola* has worked out a plan whereby its dealers can secure it at no cost.

**SHORT-WAVE BOOKLET**—Hallcrafters, 2611 Indiana Ave., Chicago, Ill.,

has just released a 12-page illustrated booklet entitled "A Short Story on Short-Wave Receivers." Discusses the communication type receiver explaining the purpose and functions of the various controls, all in non-technical language. Stresses the fact that it calls for no special training to operate this type set. Copies are free. Mention *Radio Retailing*.

**VIBRATOR CATALOG**—The No. 141 listing on ATR vibrators, inverters, chargers and other products has just been printed by the *American Television & Radio Co.*, 300 E. Fourth St., St. Paul, Minnesota. Free.

**CONDENSER CATALOG**—Aerovox has compiled its new 1941 catalog in tabloid form so as to save time and effort for the radioman. Provides all essential data, covering the general line of electrolytic, paper, oil replacements and other condensers. Also describes and lists L-C checker, and capacitor selector. Address *Aerovox Co.*, New Bedford, Mass.

**OTHER CATALOGS**—United Radio Supply, New Britain, Conn. (jobber), announce the release of its 1941 catalog for amateurs, dealers and industrials.

**SALES AID**—Latest sales aid offered with *Walco* sapphire needles, is the dis-



# DESIGNED FOR THE FUTURE

**"PRECISION" Test Equipment is designed TODAY for TOMORROW'S servicing problems.**

Design and Engineering effort concentrated EXCLUSIVELY in the development of BETTER BASIC TEST EQUIPMENT has produced an unmatched selection of apparatus truly magical in accuracy, performance, quality, workmanship and VALUE.

● FOR EXAMPLE — PRECISION SERIES 954 Combination Dynamic Mutual Conductance Type Tube Tester and 20,000 OHMS PER VOLT multi-range AC-DC Set Tester. Ranges to 6,000 volts, 60 Microamperes, 12 Amperes, 60 Megohms, 70DB, etc. . . . and the exclusive "PRECISION" anti-obsolescent tube analyzer circuit . . . a complete, compact, AM-FM-Television-Service laboratory.

ASK or WRITE for the PRECISION 1941 catalog describing Series 954 and more than 40 other instrument models. Prices start as low as \$14.95 . . . See them at your local distributor . . . INQUIRE ABOUT "Servicing by Signal Substitution".

## PRECISION TEST EQUIPMENT

Standard of Accuracy SEE THEM AT YOUR JOBBER

PRECISION APPARATUS COMPANY • 647 KENT AVENUE • BROOKLYN, N. Y.  
Export Division: 458 Broadway, New York City, U. S. A. Cable Address: MorhaneX

# L-C CHECKER



**for resetting those  
PUSH-BUTTON TUNERS**

- You can certainly speed up and simplify that job of re-calibrating the dials and push-button tuners due to the new broadcast frequency allocations, if you use the L-C Checker.

This remarkable aid—often called "The Miracle Instrument"—will help you check the alignment of r.f. circuits, tracking of oscillators, alignment of i.f. circuits, and the checking of the frequency ranges. It will aid in retuning oscillator and i.f. stages to eliminate heterodyne whistles that will develop in certain localities with the new frequency allocations.

Meanwhile, of course, the L-C Checker can be used for many other well-known functions, such as checking effective capacity of condensers; checking for opens, shorts, intermittents, while condenser is still in circuit; measurement of resonant circuits; determining location and frequency of absorption loops in r.f. equipment; resonant frequencies of r.f. chokes; measuring antennae and transmission lines; tuning wave traps, etc., etc.

## Ask to See It . . .

- Seeing is believing! Especially when you hear that the L-C Checker sells for only \$29.50, net, with tubes and manual! It's the biggest "buy" today among service instruments. Ask your jobber to show it to you. Ask for descriptive literature—or write direct.



penser-display card (shown in accompanying illustration), designed to function on counter or shelf as a silent salesman.



Card highlights long playing life and new low price. Address *Electrovox Company*, 424 Madison Ave., New York City.

## Distribution News

**KEN-RAD**—The *Russ Diethert Co.*, with headquarters at 7910 Drexel Ave., Chicago, has been appointed representative for Ken-Rad tubes in the southern part of Michigan, Toledo territory and northern Indiana.

**RECORD SALES**—Alco recording discs made by the Record Sales Company will be distributed nationally by the *National Recording Supply Co.*, of Hollywood, Cal.

**FEDERAL**—Francis H. Brown, Hollywood, Cal., has received the appointment as west coast factory representative for the *Federal Recorder Co.* He will handle seven western states with offices at 1065 Vine Street.

**STEWART-WARNER**—The following four new distributorships were appointed for Stewart-Warner radios, household electric refrigerators, and ranges: *Keith Simmons Co., Inc.*, Cummings Station, Nashville, Tenn., *Appliance Sales Co., Inc.*, 203 Monroe St., Memphis, Tenn., *Arizona Appliance Mart*, 312 E. Congress St., Tucson, Ariz., and the *Alemite Co.*, 315 Yandell Blvd., El Paso, Texas.

**MOTOROLA**—The Galvin Mfg. Corp., has appointed *Duke's Radio Company*, 110 W. 4th St., Sioux City, Iowa, as its exclusive distributor for both car and home sets in the Sioux City territory.

**STROMBERG-CARLSON**—Gross Sales, Inc., Stromberg-Carlson New England and New York representatives, reports that the *Auto-Electric Service Co.*, 1214 Elm St., Manchester, N. H., will distribute the S-C line of radios in the New Hampshire area. . . . Cliff Hunt, Stromberg-Carlson distribution manager, makes the announcement that *Tri-City Radio Supply Co.*, 1921 Second Ave., Rock Island, Ill., has the distributorship for that city.

UNIVERSITY High  
Efficiency REFLEX SPEAKERS  
are the  
STANDARD  
for all  
Modern Sound Systems



The advantages of the high acoustic efficiency obtained from University loudspeakers are of extreme importance in any modern sound system.

High efficiency makes it possible for a single University speaker to project sound for very great distances (up to 4 miles).

High efficiency makes it possible for a single University loudspeaker to produce many times the sound output of the ordinary low efficiency sound speaker. The high acoustic output with University Reflex High Efficiency Speakers make it possible to cut down on the number of speakers required.

The high efficiency makes it possible to cut down on extra power amplifiers.

The high efficiency of University loudspeakers makes it possible to completely eliminate the interference of background noises.

The high efficiency of University loudspeakers is obtained by means of the pioneering engineering design, and the use of the finest magnetic and mechanical materials manufactured to a precision standard.

Write for latest catalogue sheets on new low and high power speakers.

**UNIVERSITY LABORATORIES**  
195 Chrystie St. New York City



Our steady advertising in leading church publications, and our direct mail, brings us live inquiries for chime Carillons, High Power Automatic Reproducers, and Musical Tower Recordings. These we pass on to the rated sound men affiliated with us, to turn into profits for themselves. These profits are substantial for Carillons, Musical Towers and Belfry Chimes run into money.

If you are interested and preferably rated in Dun & Bradstreet, write us at once. We will send literature and confidential information definitely interesting.

### A NEW BIG FIELD FOR YOU

Carillons are bought by individuals and organizations who are sincere in their desire for service and community welfare. They are generous. Into this market the Sunco representative comes with equipment that can be, and is, guaranteed to equal in power and beauty of performance, anything of similar nature, costing ten times its price.

We also produce special recordings of sacred and semi-sacred music of high quality, and have a large repertoire available. This gives our representatives an exclusive advantage, for recordings of this quality and variety are unobtainable anywhere. Write for prospectus and list of recordings today.

**SUNDT ENGINEERING COMPANY**  
4791 Ravenswood Avenue, Chicago, Illinois

**"TO A LONG LIFE"  
PINCOR  
DYNAMOTORS**



**DYNAMOTOR OF THE AIRLINES**

In aircraft operation, where dependability is the ultimate factor, PINCOR Dynamotors are the accepted standard, for there can be no compromise with safety. That is why airlines *specify* PINCOR . . . Available in all sizes and voltages, single- or dual-input and output. Submit your requirements to PINCOR engineers.



**PIONEER GEN-E-MOTOR  
CHICAGO, ILLINOIS**

Export Address: 25 Warren Street, N. Y., N. Y.  
Cable: SIMONTRICE, New York

**Duotone  
CUTTING and PLAYBACK  
NEEDLES**

STEPHEN NESTER, formerly an executive of Recoton Corp., introduces to the trade a most complete line of American-designed and American-made needles calculated to surpass in quality and performance the best hitherto available. There is a specific needle for every purpose, and distributors are invited to communicate with the company immediately for our very attractive proposition.

**DUOTONE COMPANY, Inc.  
799 Broadway • New York City**

**Market for 1,000,000 Vibrator Replacements This Year, Says Radio Jobbers News**

Write for Your  
**FREE Turner  
VIBRATOR Manual**

**Be Ready for Business!**

This New Turner Vibrator Manual has 16 pages chock full of technical information you'll want! Fully explains Turner Push-Pull principle, and how it saves time, trouble and servicing costs . . . yet gives your customers better reception. Write TODAY FOR YOUR FREE COPY!

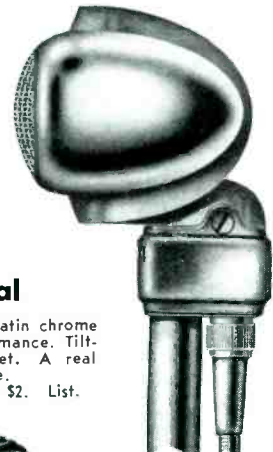


**Engineered to Cut Servicing Costs**

Here's the Vibrator that has the industry talking! Operation on an entirely new and advanced engineering principle, Turner Push-Pull Vibrators eliminate the old-fashioned stack type assembly, and its problems. It offers your customers less drain on the battery, longer life, low mechanical noise. You eliminate your biggest vibrator headaches when you replace with a Turner Push-Pull. Send for your FREE Manual today, and get the full facts! Then get your share of the 40% increase in Vibrator business predicted for '41.

**TURNER Microphones  
Stay Sold!**

Sell units that are reasonably priced and give you more dollars and cents margin. Get on the band wagon and sell the reliable Turner Microphones that eliminate returned-goods problems. Turner Mikes are accurately engineered to give natural reproduction, of both voice and music. No tone distortions with a TURNER!



**Turner 22X Crystal**

A stream-lined model in beautiful satin chrome finish that gives crisp, clear performance. Tilting head and removable cable set. A real value, you can sell with confidence. List . . . \$16.50. With Switch, add \$2. List.



**Turner Model MM  
Magnetic Pick-Up**

Novel clamp for fastening to any stringed instrument. Instantly installed. Gives immense volume without feedback. With 12 ft. cable List . . . \$12.50

Send for Free  
Turner Mike  
Catalog

**TIME TO TURN TO**



**The Turner Co.**  
915-17th St. N.E.  
Cedar Rapids, Ia.

**TURNER**

# More NEW Frequencies

STATION	LOCATION	FREQ.	STATION	LOCATION	FREQ.
<b>MEXICO</b>					
XEMU	Piedras Negras, Coah.	580	XEBJ	C. Victoria, Tams.	1450
XEZ	Merida, Yuc.	600	XEPP	Orizaba, Ver.	1450
XEBX	Sabinas, Coah.	610	XEAU	Tijuana, B. C.	1470
XERJ	Mazatlan, Sin.	610	XESM	Mexico, D. F.	1470
XEFB	Monterrey, N. L.	630	XEJR	H. del Parral, Chih.	1490
XEBZ	Mexico, D. F.	660	XEDR	Guaymas, Son.	1490
XED	Guadalajara, Jal.	680	XECH	Toluca, Mex.	1490
XEN	Mexico, D. F.	690	XERH	Mexico, D. F.	1500
XEAC	Tijuana, B. C.	690	XEAW	Reynosa, Tams.	1570
XEDP	Mexico, D. F.	730	XEMC	Mexico, D. F.	1590
XERC	Mexico, D. F.	790	<b>CUBA</b>		
XERA	Villa Acuna, Coah.	800	CMW	Havana	550
XEFW	Tampico, Tams.	810	CMKM	Manzanillo	560
XELA	Mexico, D. F.	830	CHMI	Santa Clara	570
XEMO	Tijuana, B. C.	860	CMCY	Havana	590
XEUN	Mexico, D. F.	860	CMKV	Holguin	600
XEW	Mexico, D. F.	900	CMJK	Camaguey	620
XEAO	Mexicali, B. C.	910	CMZ	Havana	630
XEBH	Hermosillo, Son.	920	CMQ	Havana	690
XEQ	Mexico, D. F.	940	CMK	Havana	740
XEGM	Tijuana, B. C.	950	CMJN	Camaguey	740
XEFE	Nuevo Laredo, Tams.	960	CMBC	Havana	790
XEU	Veracruz, Ver.	960		Holguin	800
XEHK	Guadalajara, Jal.	960	CMHQ	Santa Clara	810
XEK	Mexico, D. F.	970	CMAX	Artemisa	830
XEJ	Cuidad Juarez, Chih.	970	CMBL	Havana	860
XEFO	Cananea, Son.	980	CMKS	Guantanamo	900
XEXT	Tepic, Nay.	980	CMCF	Havana	910
XET	Monterrey, N. L.	990	CMJL	Camaguey	920
XECL	Mexicali, B. C.	990	CMKN	Santiago de Cuba	930
XEBG	Tijuana, B. C.	1010	CMKB	Havana	950
XEG	Monterrey, N. L.	1050	CMHN	Santa Clara	960
XERB	Rosarito, B. C.	1090	CMKU	Santiago de Cuba	970
XEHR	Puebla, Pue.	1090	CMCK	Havana	980
XEFO	Mexico, D. F.	1110	CMHT	Trinidad	990
XENT	Nuevo Laredo, Tams.	1140	CMKW	Santiago de Cuba	1000
XEON	Tijuana, B. C.	1140	CMX	Havana	1010
XEJP	Mexico, D. F.	1150	CMKG	Santiago de Cuba	1050
XEJS	Cananea, Son.	1150	CMCM	Havana	1060
XECD	Puebla, Pue.	1170	CMJA	Camaguey	1060
XELO	Tijuana, B. C.	1190	CMKX	Banes	1090
XEAT	Mexico, D. F.	1220	CMBY	Havana	1110
XEAT	Parral, Chih.	1250	CMKH	Guantanamo	1130
XEIF	Monterrey, N. L.	1250	CMBO	Havana	1150
XEIF	Veracruz, Ver.	1250	CMCU	Havana	1190
XEDK	Guadalajara, Jal.	1250	CMCO	Holguin	1220
XEL	Mexico, D. F.	1260	CMCW	Havana	1230
XEBL	Culiacan, Sin.	1260	CMJE	Camaguey	1230
XEBM	San Luis Potosi, SLP	1260	CMGF	Matanzas	1240
XEDW	Minatitlan, Ver.	1260	CMHO	Santa Clara	1250
XEBU	Chihuahua, Chih.	1260	CMKC	Santiago de Cuba	1250
XEBF	Torreón, Coah.	1260	CMBF	Havana	1260
XEDF	Nuevo Laredo, Tams.	1260	CMJM	Ciego de Avila	1270
XEDL	Navojoa, Son.	1270	CMHA	Sagua la Grande	1280
XEFM	Leon, Gto.	1270	CMCH	Havana	1290
XEBC	Morelia, Mich.	1270	CMCX	Havana	1290
XEBA	C. Guzman, Jal.	1270	CMKD	Santiago de Cuba	1290
XEFV	C. Juarez, Chih.	1270	CMAN	Pinar del Rio	1300
XEME	Merida, Yuc.	1270	CMJF	Camaguey	1300
XEX	Monterrey, N. L.	1280	CMGP	Jovellanos	1310
XEE	Durango, Dgo.	1280	CMHP	Placetas	1320
XEOX	Los Mochis, Sin.	1280	CMKE	Manzanillo	1320
XELK	Zacatecas, Zac.	1280	CMBG	Havana	1330
XEBW	Chihuahua, Chih.	1280	CMBS	Havana	1330
XERL	Colima, Col.	1280	CMJC	Camaguey	1340
XEAG	Cordoba, Ver.	1280	CMHJ	Cien Fuegos	1350
XEDA	Mexico, D. F.	1290	CMHY	Puerto Padre	1350
XEAP	C. Obregon, Son.	1290	CMC	Havana	1360
XEP	C. Juarez, Chih.	1300	CMOA	Havana	1360
XES	Tampico, Tams.	1300	CMAC	Guanajay	1370
XEC	Tijuana, B. C.	1310	CMJH	Ciego de Avila	1370
XEHV	Veracruz, Ver.	1310	CMHK	Cruces	1380
XEAD	Guadalajara, Jal.	1310	CMCB	Havana	1390
XEAI	Mexico, D. F.	1320	CMBX	Havana	1390
XEKS	Saltillo, Coah.	1330	CMKR	Santiago de Cuba	1390
XEBO	Irapuato, Gto.	1330	CMJW	Camaguey	1400
XELW	Guadalajara, Jal.	1340	CMHB	Sancti Spiritus	1410
XEDH	Villa Acuna, Coah.	1340	CMBD	Havana	1420
XEDK	N. Laredo, Tams.	1340	CMCO	Havana	1420
XEFZ	Coatzacoalcas, Ver.	1340	CMKZ	Palma Soriana	1430
XECA	Tampico, Tams.	1340	CMGH	Matanzas	1440
XECW	Cordoba, Ver.	1340	CMJI	Ciego de Avila	1440
XECF	Los Mochis, Sin.	1340	CMAB	Pinar del Rio	1450
XEJK	Chihuahua, Chih.	1340	CMHM	Cien Fuegos	1450
XEFC	Merida, Yuc.	1340	CMG	Havana	1460
XEXS	Toluca, Mex.	1340	CMKQ	Santiago de Cuba	1460
XEMA	Fresnillo, Zac.	1340	CMJO	Cardenas	1470
XEAA	Mexicali, B. C.	1340	CMJX	Ciego de Avila	1470
XEOK	Mexico, D. F.	1350	CMOX	Santa Clara	1480
XETB	Torreón, Coah.	1350	CMCA	Havana	1490
XEBI	Aguascalientes, Ags.	1360	CMKF	Holguin	1490
XEMR	Monterrey, N. L.	1370	CMBH	Havana	1540
XEAF	Nogales, Son.	1370	CMHD	Caibarien	1560
XEA	Campeche, Cam.	1370	CMCJ	Havana	1580
XEMX	Mexico, D. F.	1380	CMCR	Havana	1580
XEM	Chihuahua, Chih.	1390	CMJO	Neuvas	1580
XEAZ	Reynosa, Tams.	1390	<b>DOMINICAN REPUBLIC</b>		
XEAM	Matamoros, Tams.	1400	HIX	Ciudad Trujillo	950
XEF	C. Juarez, Chih.	1400	HIN	Ciudad Trujillo	1090
XEAJ	Navojoa, Son.	1400	HIZ	Ciudad Trujillo	1350
XEI	Morelia, Mich.	1400	H18Q	Ciudad Trujillo	1470
XEBS	Mexico, D. F.	1410	<b>HAITI</b>		
XEDS	Mazatlan, Sin.	1420	HHK	Leogane	1080
XECZ	San Luis Potosi, SLP	1430	HHW	Port au Prince	1230
XEOK	Progreso, Uuc.	1430			
XELZ	Mexico, D. F.	1440			
XEFI	Chihuahua, Chih.	1440			
XEY	S. L. Rio Colorado, Son.	1450			
XECC	Zamora, Mich.	1450			
XEBO	Torreón, Coah.	1450			
XEDJ	Magdalena, Son.	1450			
XEFK	Merida, Yuc.	1450			
XERK	Tepic, Nay.	1450			
XEXE	Texcoco, Mex.	1450			

# The

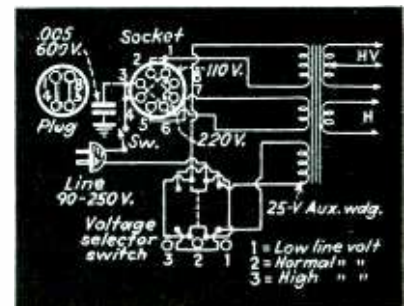
## Series Primaries

To obtain operation on ac voltage inputs ranging from 90 to 250 volts Farnsworth employ the circuit shown in their models BT-600X and BT-601X.

The power transformer contains three windings and connections to the various windings are made by the plug and switch shown. For 110 volt operation the plug is inserted so that the jumper connections complete the circuit to the top winding of the transformer if the line voltage switch is left in the normal position.

For lower than normal line voltage the switch is thrown to the first position. It now connects the auxiliary 25 volt winding in series-opposition to the 110 volt winding and the magnetic fields of the two windings oppose one another and the voltage-turns ratio becomes the equivalent of that of a 90-volt winding.

For higher than normal line voltage the switch can be thrown to position 3. In this connection the auxiliary winding is connected in series-aiding to the 110 volt winding and the secondary windings still provide the same output voltages to the rest of the receiver.

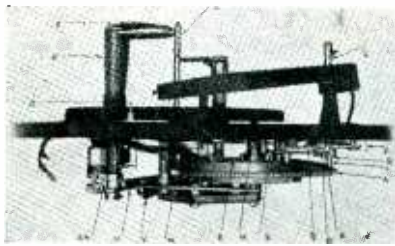


When operation of the receiver is desired on a 220 volt line the jumpered transformer plug is removed, turned, and reinserted. It now connects the center primary winding in series-aiding with the other 110 volt winding. The switch is kept in the normal position for this voltage.

Where the line voltage runs less than this the switch can again connect the auxiliary winding in series-opposition. Line voltages up to and including 250 volts may be accommodated by throwing the switch to connect the auxiliary winding in series-aiding.

Throughout all of the various line requirements the voltages supplied to the rest of the receiver remain at the same values with this circuit.





(E) when it is moved by the sweep assembly (F) attached to the tone arm pivot shaft (G), or by the control lever (H).

The upper side of the main cam (A) raises and lowers the tone arm through the lift pin (I) and swings the tone arm by the sweep assembly (F). A stud in the main cam (A) resets the 10 inch (K) and 12 inch (J) stop levers and throws the mixer assembly (L) to the clear position.

The lower side of the main cam (A) drives the record feed lever (M) and has a notch at one side which latches the main cam (A) in home position by engagement with the homing lever (N).

The control lever (H) of the G-E changer used in model J-1108, is operated by a stud in the control slide (O). In manual position one leg of this lever holds the starting dog (D) out of engagement. In automatic position the starting dog (D) is permitted to fall into engagement but is

reset by another part of the control lever (H). In reject position the control lever (H) engages the latch lever (E), releasing the starting dog (D).

The sweep assembly (F) carried on the tone arm pivot shaft (G) consists of (1) positioning plate (P) which works against the stop levers (J-K). (2) Positive trip lever (Q) which strikes the latch lever (E) when tone arm is swung toward center. (3) Sweep lever (R) which engages the pawl (S) on the latch lever (E) moving same to release starting dog (D) when tone arm swing is reversed.

These three parts are held on a bushing held on the tone arm pivot shaft (G) by a clamp. Connection between the sweep lever (R) and the positioning plate (P) is by a horseshoe spring (T). This horseshoe spring (T) deflects when the tone arm swings in to complete change cycle providing the "kick in" force to enter the needle in the playing groove.



The record feed lever (M) on the under side of the main cam (A) drives the record feed link (U) through the relief spring (V). This lever pulls on the spring in operation and rests against a stud in the record feed link (U) when at home position.

## Treble and Bass Controls

Tone controls for attenuation of the higher audio frequencies usually comprise a variable resistor and condenser combination that supplies a variable bypassing action to these highs when connected from grid or plate of audio stages to ground.

A treble control of this type is shown in the diagram. The circuit however, also includes a bass control that consists of a switching arrangement of the audio coupling condensers.

When the switch is in the maximum bass position the .1 mfd condenser is in parallel with the .07 mfd coupling condenser. This allows the greatest amount of lows to be transferred and yet prevents the circuit from motorboating. Another contact of the switch connects the full impedance of the audio choke into the grid circuit of the driver tube.

With the switch thrown to the medium position the .05 condenser is across the coupling condenser and decreases the total capacity about 30%. This permits essentially the same amount of coupling for the high

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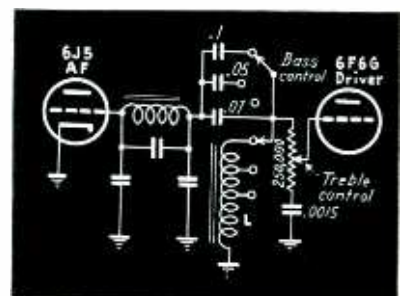
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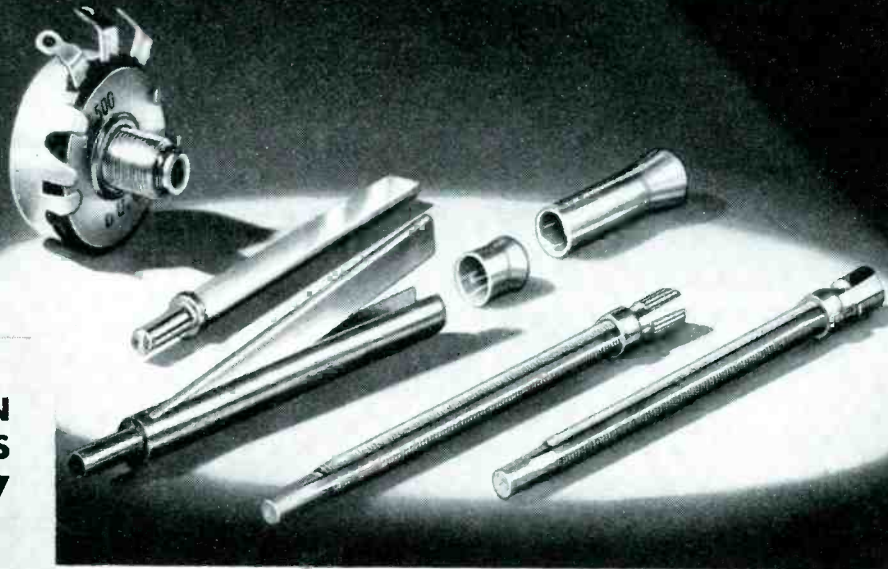
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frequencies but allows less of the lows to pass. The inductance in the grid circuit of the driver is now tapped down and the resulting decrease of reactance bypasses the lows to some extent while the highs remain practically unchanged.

Minimum low response setting of the switch on the V-300 model of RCA carries this action a step further, leaving the .07 mfd coupling condenser and the lowest tap of the inductance in the circuit. Control of the highs is achieved independently of the bass control setting by the variable resistor and condenser in the driver grid circuit.

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*Shaft position in knob requiring 3/32" flat.*



*Shaft position in knob requiring 1/32" flat.*



*How shaft is positioned for set-screw knob.*



*Only edges of shaft are filed for odd types.*

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**12SG7**—Characteristics are the same as the 6SG7 but has a 12.6 volt, .15 ampere heater. *RCA*

**930**—Gas phototube for use in relay applications and sound reproduction. Electrically similar to the 923 tube with high sensitivity and large response to red and near infra-red radiation. *RCA*

**6SF7**—Diode and super control amplifier pentode in one metal shell for use as an i-f amplifier and detector in phono radio combinations to minimize "play-through" from the radio on record reproduction. The pentode section may also be used as a resistance coupled a-f amplifier. *RCA*

**12SF7**—Characteristics are identical to the 6SF7 but tube has a 12.6 volt, .15 ampere heater. *RCA*

**6SN7GT**—Single ended twin triode amplifier with separate cathode terminals for each section. Recommended for use in resistance coupled circuits as a voltage amplifier or phase inverter. Greater flexibility is obtained with the separate cathodes over twin triodes having a single cathode. *RCA*

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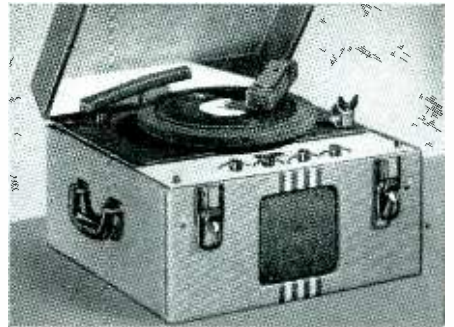
**Frequency Shifts**

The reallocation of broadcast frequencies that took place March 29 may require shifting of frequency in wireless record players and this may be accomplished by removing turns from the oscillator coils.

Listed here is the frequency range that results when various numbers of turns are removed from the oscillator coil in a model VA-20 RCA player and may be used as a rough guide when removing turns from other makes of wireless players using similar coils.

Turns Off Coil	Frequency Range
8	580 to 710
16	630 to 770
24	700 to 850
32	760 to 940
40	850 to 1050
48	960 to 1200
56	1100 to 1400
64	1300 to 1650

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# V T V M's For DC Tests

HOW *dc* voltages can be measured with vacuum tube equipment

By JOHN M. BORST

**V**OLT TIMERS in radio term a "vacuum tube voltmeter" a device that measures a.c. voltage at any frequency by means of a vacuum tube. Some servicemen now use the term to describe an instrument that measures only d.c. voltages and which may properly be called a "d.c. electronic voltmeter."

The main requirements of a d.c. electronic voltmeter are that it shall draw very little or no power from the circuit under test and that the calibration shall not be affected by line voltage fluctuations, age of tubes or other extraneous conditions.

The simplest type is shown in Figure 1-A; it is a triode with proper voltages applied to its elements and with a milliammeter in the plate circuit. Batteries are shown but it can be arranged to operate from the power line.

### Bias Determines Range

The milliammeter in the plate circuit can be directly calibrated in volts. If the permanent bias is so adjusted that there is considerable plate current (amplifier bias) the tube can be used as a zero-center meter requiring no reversing of the leads to measure negative or positive voltages. In most cases, however, the bias is so adjusted that the tube draws only very little plate current (detector bias) and requiring that the positive side of the test circuit be connected to the grid of the tube. This provides a longer scale than the other arrangement.

It is, of course, necessary to limit the range so as to prevent the flowing of grid current, or, in the circuit of Figure 1, the largest voltage that can be measured is equal to the C-bias.

In the second circuit of Figure 1 self bias is employed. The voltage drop across R will increase when a positive voltage is applied to the grid and this makes the cathode more posi-

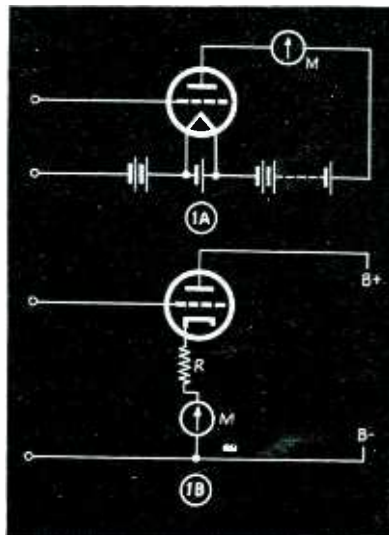


FIG. 1—Battery bias and self bias circuits

tive, partly counter-acting the effect of the test voltage. This degenerative effect reduces the sensitivity but it also enables one to obtain a larger range than with a fixed bias. It also helps in reducing disturbances due to variations in plate supply. The range of the instrument can be adjusted by varying the value of R, furthermore when the resistance is made large the scale becomes nearly linear.

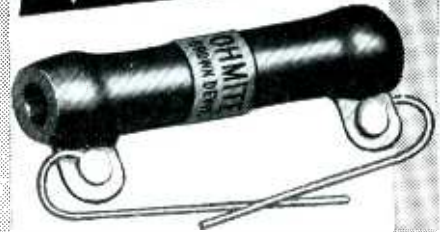
### Bucking Circuits

The steady current which flows when the input terminals are shorted, limits the sensitivity and the range. If this steady current is bucked out, a more sensitive meter can be used and the entire scale of the instrument can be usefully employed. Several of these bucking circuits are shown in Figure 2.

The one in Figure 2A simply employs a battery and an adjustable series resistance as "zero adjuster." A

COMING—An article on vacuum tube voltmeters for ac measurements

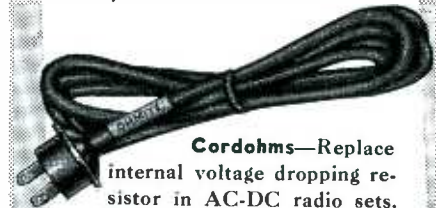
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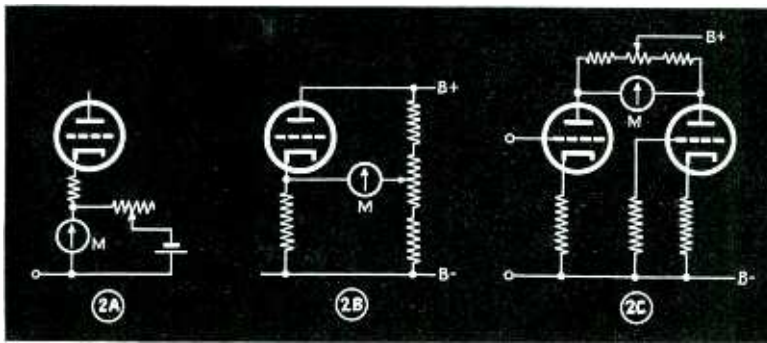


FIG. 2—Bucking circuits for zero adjustment of the meter

more popular one is the bridge circuit in Figure 2B. The meter is connected between the cathode and a point of the voltage divider which normally has the same potential. For purposes of fine adjustments the voltage divider is composed of three resistors in series with the zero-adjusting potentiometer in the middle. The values can then be so chosen that the possible range of adjustment is no greater than necessary. Variations of this scheme are used with the resistor in the plate circuit and the meter connected between the plate and voltage divider.

The third system is employed when

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more accurate measurements are made. Instead of a voltage divider, a second tube similar to the first is used. Any variations in plate or filament voltage will affect the two tubes equally so that the zero adjustment and the calibration will not be affected by it.

#### Accuracy

Besides the conditions already mentioned, the accuracy may be affected by the circuit under test. Any grid current due to gas will pass through this circuit and cause a voltage drop in it proportional to the resistance. The correct calibration then depends on the resistance of the circuit to be measured. This effect is easily detected; when the input terminals are shorted through a high resistance and then the resistance is shorted it will cause a change in the plate current. Its amount will show how much of an error one may expect from this cause. The remedy is in the proper choice of the tube type and filament and plate voltages.

Greater sensitivity can be obtained in the laboratory by employing a more sensitive indicating instrument, special tubes and perhaps a direct-coupled amplifier. However, it then becomes very difficult to make the instrument stable.

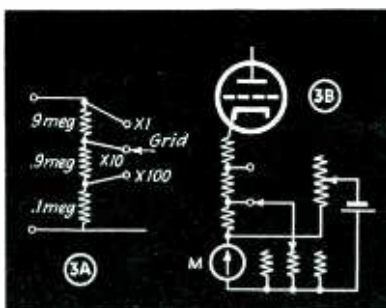


FIG. 3—Two methods for extending the range of voltage measurements

#### Ranges

The range can be adjusted in several ways illustrated in Figure 3. The first one is a simple multiplier in the input circuit. Of course this makes the device draw some current but the resistances can be chosen to make the total impedance high. In the example it amounts to 10 megohms and it provides multiplication factors of 10 and 100.

Another system is shown in Figure 3B. Different bias resistors are used for different ranges. This can be employed with the bucking circuit of Figure 2A; it is then generally necessary to shunt the meter and change the series resistor as well. With such an arrangement, the highest voltage measured must remain about 15 volts below the B supply voltage.

If any a.c. ripple is superimposed on the voltage to be measured it must first be filtered out by a resistance-capacity filter in the grid circuit.

### Audio Frequency

A WET ELECTROLYTIC CONDENSER may show a short when tested after being on the shelf a few months. Reforming can be accomplished by applying dc voltage for a few minutes.

Start with a voltage of about 20% of the working voltage of the condenser and slowly increase to normal working voltage. Polarity must be observed and the power supply used should have a current rating of about 100 to 200 milliamperes.

Voltage output of the power supply should be adjustable with a variable series resistor or voltage divider and tap switch.

If the condenser gets warm, discontinue the process until it has cooled, then repeat. Wet condensers will usually form in less than ten minutes but additional time may be necessary in some cases.

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## TRICKS of the TRADE

### AIR CASTLE

Crackles similar to static . . . replace i-f transformers.

### AUTOMATIC P-57

Oscillates . . . bypass screen of 1N5GT tube with .25 mfd condenser.

### CROSLEY 418

Excessive oscillation . . . grid return of detector goes to ground through a winding on the antenna coil. Ground grid return directly to chassis.

### EMERSON 103

Audio whistle . . . replace 33 tube grid resistor with the highest value that will stop the squeal.

### FIRESTONE S7427-8

Slow magic eye action . . . change 2 megohm resistor in green lead to eye tube to 500 M ohms.

### G-E H 116

Weak on broadcast . . . change 47 mmf oscillator coupling condenser, part C-14, to one of 100 mmf capacity.

### GRUNOW MODELS

Poor tone . . . bypass condensers in plate circuits of power tubes to delimit leaks from high audio peaks.

### MAJESTIC 50

Noisy . . . replace .04 mfd condenser connected from tap on oscillator coil to cathode of first detector.

### MOTOROLA 29-B

Weak . . . change 1 M ohm cathode resistor of r-f stage to one of 500 ohms.

### PHILCO 118

Dial slips . . . clean tuning gang and apply light oil. Also oil pulley shaft keeping oil away from dial cable and pilot bulb leads. Bend plate on which lower pulley is fastened, to allow free movement.

### PHILCO 40-130 Code 121

Broken condenser drive cord . . . replace with heavier linen cord. Do not make a full turn of this cord around drive shaft. Instead fit a 1½ inch length of spaghetti tubing snugly over shaft and let drive belt turn on the spaghetti encased shaft.

### PHILCO 45

Lacks sensitivity . . . change 500 ohm cathode resistor of 6A7 tube to one of 400 ohms.

### PHILCO 40-125

Oscillation . . . connect a .01 mfd condenser from i-f amplifier 7B7 center pin to chassis.

### PHILCO 37-38

Poor tone . . . replace output transformer. Windings short between layers. Oscillation . . . replace screen bypass with larger capacity.

### PHILCO 570

Howls . . . replace detector plate bypass condenser connected after the r-f choke.

### PHILCO 72T

Low pickup . . . to increase sensitivity remove tube shields and realign i-f amplifier.

### PHILCO 620

Loud hum, no play . . . replace 8 mfd filter condenser, 80 filament to transformer secondary center-tap.

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#### RCA K-80

Low sensitivity on short waves . . . connect antenna through a .001 mfd condenser to the C band loop at a point 2 or 3 inches from the low end of the loop.

#### RCA AUTO RADIOS

Unstable when first turned on . . . shunt a .25 or .5 mfd condenser across electrolytic for r-f bypassing.

#### RCA 40-X-30, 31

Burned out first i-f transformer . . . may be due to incorrect connection of loop so that primary goes to avc return. If a grounded antenna is connected to set 110 line burns out i-f coil. Connect low end of primary loop to chassis through a .1 condenser and connect low end of secondary to avc line.

#### RCA 86T

Weak . . . connect a 100 mmf condenser from antenna connection to the oscillator tuning condenser stator.

#### RCA 9K2

Oscillator dead . . . replace 10 M ohm resistor, R-10, located on main chassis and connected to number 4 pin of the magic brain socket.

#### RCA V-205

Crackling sound accompanied by distortion . . . carefully check voltage divider, it changes in value during operation.

#### SILVERTONE 1807

No signals from 800 kc to upper end of dial . . . replace 2 mfd condenser connected at junction of oscillator coil and 10 M ohm resistor.

#### SILVERTONE 1300

Poor tone, tone control inoperative . . . check speaker plug terminals for poor contact.

#### STEWART-WARNER 123 and 123-A

Dead . . . when .01 mfd condenser from 41 tube plate to ground is shorted replace and connect from plate to screen grid terminal.

#### ZENITH 6S152

Squeals at high volume . . . filter condensers lose capacity, replace with full capacity units.

#### ZENITH 91, 92

Poor volume and tone . . . check resistor in screen-cathode-audio center tap circuit. Center tap to cathode portion should read 2500 ohms and the cathode to screen section 10 M ohms.

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## British Need Servicemen

We have just received from a radio dealer in an outer London suburb a suggestion which we think is likely to be of as much interest to you as it is to us. Mrs. M. M. Jackson, proprietor of Queensway Radio, Kent, writes that she is about to lose her last serviceman to the armed forces and wonders if it would be practical to import men from the United States to fill the gap, says she thinks there must be many dealers in England who would be willing to pay transportation expenses.

What are your reactions to this proposal? Probably we ought to point out that the shortage of trained service engineers is further aggravated by the fact that new receiver output has been decreasing here, with the result that the average dealer is turning his operation into a maintenance service instead of a sales organization.

LONDON, ENGLAND    BASIL E. TALBOT  
*The Wireless & Electrical Trader*

## Slidefilm Sources

Since my article "Sound Plus Something to See" appeared in your March issue it has occurred to me that readers might have difficulty locating slidefilm sources of supply.

Large libraries are maintained by manufacturers of projection equipment such as Webster Electric (Racine, Wis.), Electro-Acoustic Products (Fort Wayne, Ind.) and Stillfilm, Inc. (Los Angeles). Another source would be companies such as the Society for Visual Education, Inc., 100 East Ohio Street, Chicago.

CARLISLE, PENNA.    EVERETT L. MILLER

## Discount Racket Solution?

Everyone complains of the discount racket, the selling of radio sets at wholesale to people not entitled to such concessions. Chief trouble seems to involve industrial plants offering discount service to their employees.

Why don't radio dealers form a national Association for the sole purpose of doing something about this situation? Manufacturers are organized. So are distributors. And servicemen.

No meetings, conventions or other expensive propositions would be necessary. A central office composed of one executive and one or two secretaries could handle the job and cost should not exceed \$5,000 yearly, which could be divided among thousands of members.

How would such an organized drive against price-cutters function? Based on the fact that no one likes unfavorable

publicity, it would serve primarily as a "glorified" complaint bureau. Upon receiving an authenticated complaint from a member the central bureau would first send a letter of protest to the offender. A copy would be forwarded to the manufacturer of the equipment involved. The central bureau would, furthermore, publish a monthly bulletin recording all complaints and mail this bulletin to members.

I think concerted publicity of this kind would go far toward correcting the situation.

ELMIRA, N. Y.    HAROLD F. JENKINS

## No, Guess Again

I see by your March issue that "Some Broadcasters Service" and apparently find it distasteful. . . .

For a ten dollar bill we will go to any address in Chicagoland (higher for apartment houses) and remove the last trace of cross-modulation, monkey-chatter, double talk, crosstalk, tunable hum. . . .

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CHICAGO    J. F. WALTON  
*Better Radio, Inc.*

## Record Specialist

I was reading that article in *Radio Retailing* by Henry W. Young, entitled "About a Record Specialist."

I would like to get more information about the record rental plan described, or the name and address of Henry W. Young so that I could write him for this information.

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Write Henry W. Young, 6834 S.W. Burlingame Ave., Portland, Oregon.

## Music to Our Ears

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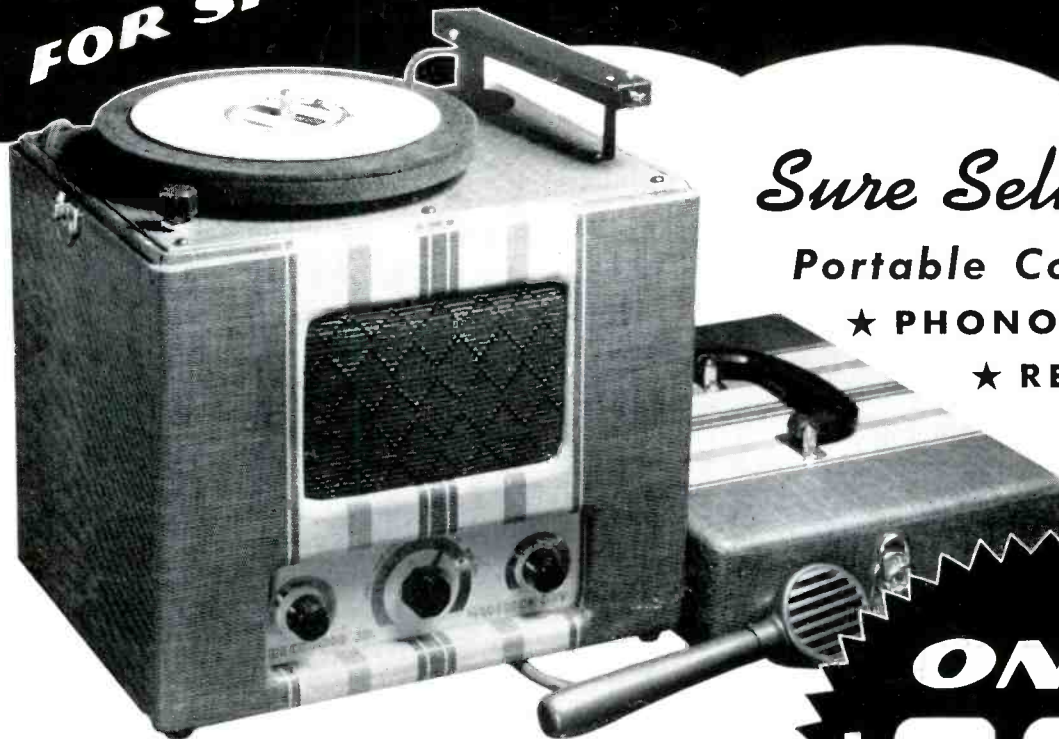
The service department has but one fault . . . its brevity, and the rest of the magazine is grand too.

SAN DIEGO    LAWRENCE L. LA ZELLE

I don't want to miss any issues of *Radio Retailing* so please advise me by return mail when my subscription expires and I will take you up on that offer for the Radio Service Shortcut book.

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