

# RADIO *Retailing* TODAY

NOVEMBER 1942

RECORDS RADIO GRAPHS  
*L. J. Barber*



In This Issue ★  
**HOLIDAY STORE DISPLAY—Radios, Records,  
Appliances, Radio-Electronic Maintenance**  
With Chart Supplement in color—**ELECTRONIC CONTROLS**

- 1 Loud Speakers and Their Use
- 2 Superheterodyne First Detectors and Oscillators
- 3 Half-Wave and Voltage Doubler Power Supplies
- 4 Vibrators and Vibrator Power Supplies
- 5 Phono-Radio Service Data
- 6 Automatic Tuning



- 7 Frequency Modulation
- 8 Television
- 9 Capacitors
- 10 Practical Radio Noise Suppression
- 11 Vacuum Tube Volt Meters
- 12 Useful Servicing Information
- 13 Receiving Tube Characteristics

PACKED FROM COVER TO COVER

WITH PRACTICAL INFORMATION

# In This Book Practice and Theory Join Hands To Help You~

The New MYE TECHNICAL MANUAL is a magnificent wartime aid for radio servicemen, engineers, amateurs and experimenters. Helps you make the most of available components.

Written simply in down-to-earth English that gives both radio theory and practice, presenting the latest technical information.

Applies to your every-day servicing problems—a handy companion for the work bench—indispensable for quick solutions to the home set difficulties you must overcome to "Keep 'em listening."

408 pages, 8½ x 11 inches, profusely and accurately illustrated, durably bound in hard cloth covers.

Invaluable—if you are a veteran—because it contains much data heretofore unpublished; if you are new at the business—because it is so easy to understand, as well.

*Your nearest Mallory Distributor will supply you.  
Price \$2.00—while the supply lasts.*

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

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



Approved Precision Products



**TOO BUSY to Bother With Unnecessary Service Calls?**

**SEND FOR THIS TIME-SAVING**

**HOME CHECK-UP CHART**

**RADIO out of order?**

With all new radio equipment headed for the fighting fronts, your radio service man is heavily swamped with repair work these days.

Help him to conserve his time and save the expense of unnecessary service calls.

**MAKE THIS SIMPLE HOME CHECK-UP BEFORE YOU CALL YOUR SERVICE MAN**

**A FEW TIMELY "DON'T'S"**

ANOTHER FRIENDLY SERVICE FROM... **Admiral** RADIO AMERICA'S SMART SET

**FREE** POCKET-SIZE HOME CHECK-UP CHART, COME IN AND GET A COPY

One of the most annoying incidents, so we've been told, in the overworked radio repair shop is the *unnecessary* service call. There's too much *essential* work to be done these days . . . and customers invariably are reluctant to pay for something they could easily have done themselves.

Perhaps here's the answer . . . in this time-saving home check-up chart which you can paste up in your store window. The chart illustrates a host of simple things anyone can and should do before calling a radio repair man . . . thus conserving your time for more essential work and building good will by saving your customers needless expense.

We've also had this check-up chart printed in a handy pocket edition. Should you like a supply for free distribution to your customers, as well as the poster-size chart, just drop us a line. There's no cost or obligation . . . just a friendly service from Admiral to you and your customers.

**Continental Radio & Television Corp.**  
3800 W. Cortland St., Chicago, Ill.

Tune In—CBS, Sundays, 2:30 P.M. EWT, for Admiral "World News Today"



**SAYS COMMANDER McDONALD...**

**"ONE OF THE MOST CONSTRUCTIVE**

**POST-WAR MESSAGES I EVER READ..."**

**This is what** the well-known President of Zenith Radio wrote us after reading the newspaper advertisement you see reproduced on the facing page . . .

His letter continues: "Crystal gazer's dreams of post-war items, if they were to carry on as they have in the past, would do a great injury and injustice to American industry by creating false hopes in the minds of the public. That is why I believe so strongly in what you had to say in your recent page in the Chicago Tribune. Keep up the good work!"

Commander McDonald is one of many leading business executives who wrote us thoughtful, praiseful words about our "POPULAR SCIENCE RAISES A RESTRAINING HAND" advertisement. Would you like copies of their letters? They're well worth reading.

And—how do you feel about post-war products? After you've read the ad, we'd be much interested to get your comments.

This advertisement recently appeared in dominating space in leading newspapers from coast to coast. Reprints available upon request—with our compliments. Write — Stephen P. Glennon, Adv. Director, POPULAR SCIENCE Monthly, 353 Fourth Ave., New York 10, N. Y.



# POPULAR SCIENCE MONTHLY raises a restraining hand

**Keep your shirt on, America!**

Too many of us see Victory too close, too easy.

And too many of us, in the same glance, see parked on the great American doorstep, comes Peace, a wondrous new world . . . a kind of post-war paradise piled high with all sorts of marvelous things.

**Such marvelous things . . .**

Automobiles like no automobiles we ever saw before—plastic-topped, beetle-sleek, super-powered. Airplanes that handle like a baby buggy, cost like a Plymouth, perform like a P-38. Revolutionary refrigerators that would look good in a living room. Washing machines that do everything but sing lullabies to the laundry.

Full-color, three-dimensional home "talkies" . . . electronic devices that will turn out a daily newspaper while we wait . . . books on metal spools that will be read aloud by machinery . . . All these, and more, right away *quick*, tomorrow . . . F.O.B. Victory.

**Don't you believe it!**

We don't. And we of all people should . . . for since 1872, publishing this news-picture magazine of science and industry, we have been in on the beginnings of almost every major scientific brain child . . . from Edison's electric light to Kaiser's Liberty Ships.

We know what the giants of science and industry are capable of. The miracles have been many. But we also know that even miracles take time and test and sweat—sometimes tears. We know that American industry owes too much to the people who pay the return on its invested dollars to dump any untried "quickies" in your lap.

**This will be no flash-in-the-pan Futurama!**

That is why, speaking for the war-busy "men-who-make-things" of this country, we urge you to look at tomorrow with a realistic eye. Keep your head in the clouds, that's good . . . but get those feet smack on the ground. You can count on miracles, all right . . . *but don't count on them too soon!* Give industry a chance to catch its breath, to change its clothes, to rest and tear apart and build together again.

There will be plenty of fine products to invest in when we hit the postwar horizon. Many of these first things may not be the dream merchandise you've dizzied your mind with, but this you can count on—*they will be better stuff, of better materials and better design than ever you bought before.*

We have seen, and are proud and satisfied.  
You will be, too.

**700,000 "SELF-STARTERS"** . . . The men who read POPULAR SCIENCE Monthly are an unusual, mechanically-inquisitive group, eager for information about new products and new developments . . . realistic in their analysis of and quick to adopt new things for better home living and business efficiency . . . first to buy when they have the facts . . . enthusiastic salesmen with friends and neighbors when they're sold themselves. Win the high regard of Popular Science readers today and you'll win a great new sales army for tomorrow. There is no audience you can advertise to quite like them today.



**PACEMAKER FOR POST-WAR**

THE NEWS-PICTURE MAGAZINE OF SCIENCE AND INDUSTRY

NEW YORK • CHICAGO • DETROIT • SAN FRANCISCO • LOS ANGELES

# Cinaudagraph Speakers ..

*Where the Going's Tough!*



**Cinaudagraph Speakers, Inc.**

3911 S. Michigan Ave., Chicago



*"No Finer Speaker Made in all the World"*

Reprinted by Popular Request

# RADIO *Retailing* TODAY

NOVEMBER, 1943

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\*SUPPLEMENT: "Electron Tube Uses"—  
Chart in Color—Illustrating Article on page  
48. Chart is backed by two articles: (1)  
Radio Today—Across the U.S.A. and (2)  
Success in Substitute Lines.

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Editor

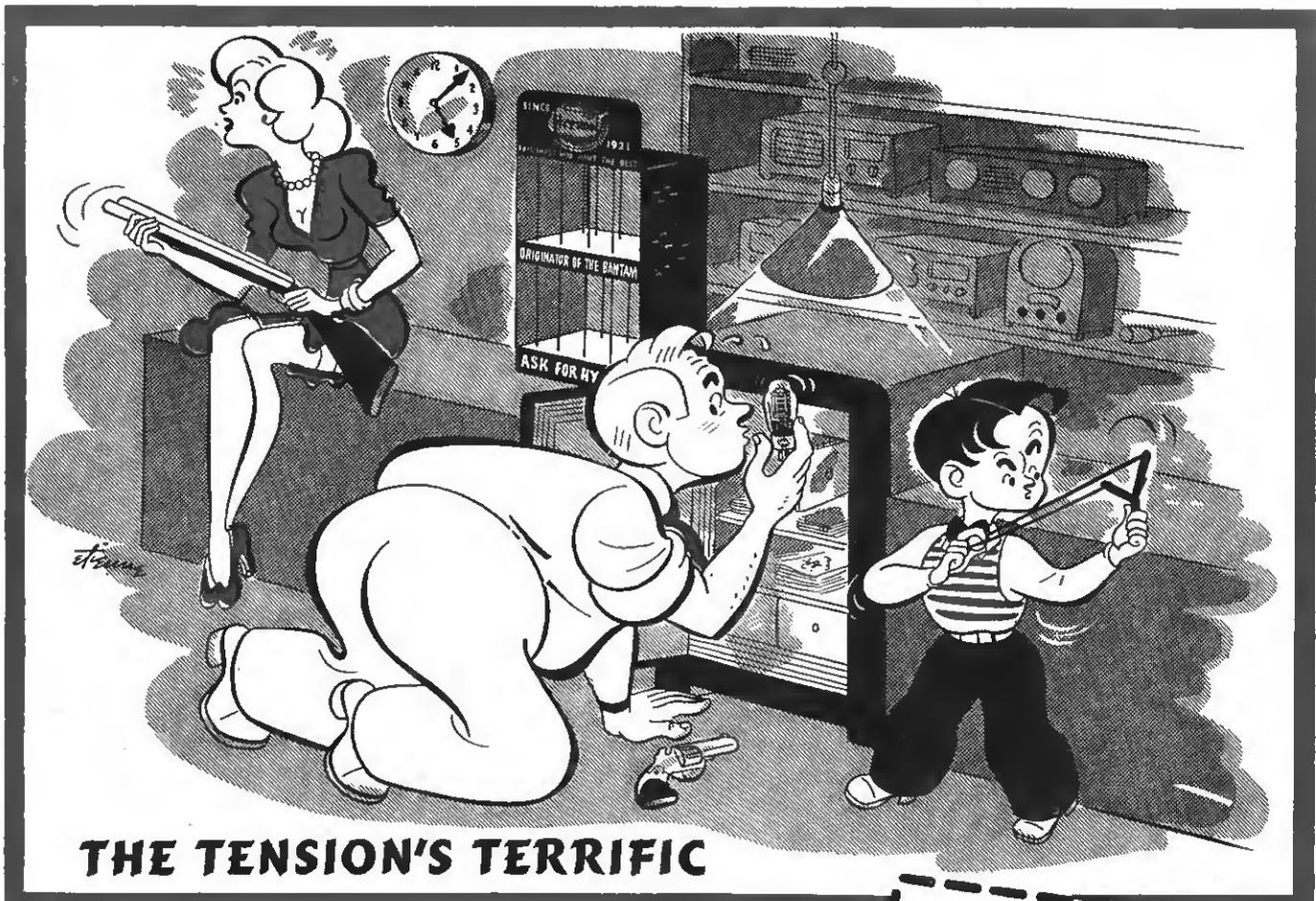
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NEW YORK



## THE TENSION'S TERRIFIC

**...let's hope it eases soon!**

"Careful now! Easy! There she goes — safe for the night! All right, Johnny, you may relax now. Miss Jones you may put away the shotgun and the revolver. Everything is secure."

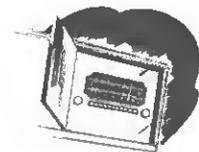
Over-cautious? Maybe — but tubes are precious now; and we'll bet that you dealers have suffered many an anxious moment with them.

We're tense, too, because we have a terrific job to do — keeping Uncle Sam supplied with Hytron tubes. We don't mind, because we know our efforts are helping to bring Victory nearer. Furthermore, our wartime experience will result in better Hytron tubes for you — tubes whose high quality will bring you more satisfied customers — more profits.

### HYTRON HYLIGHTS



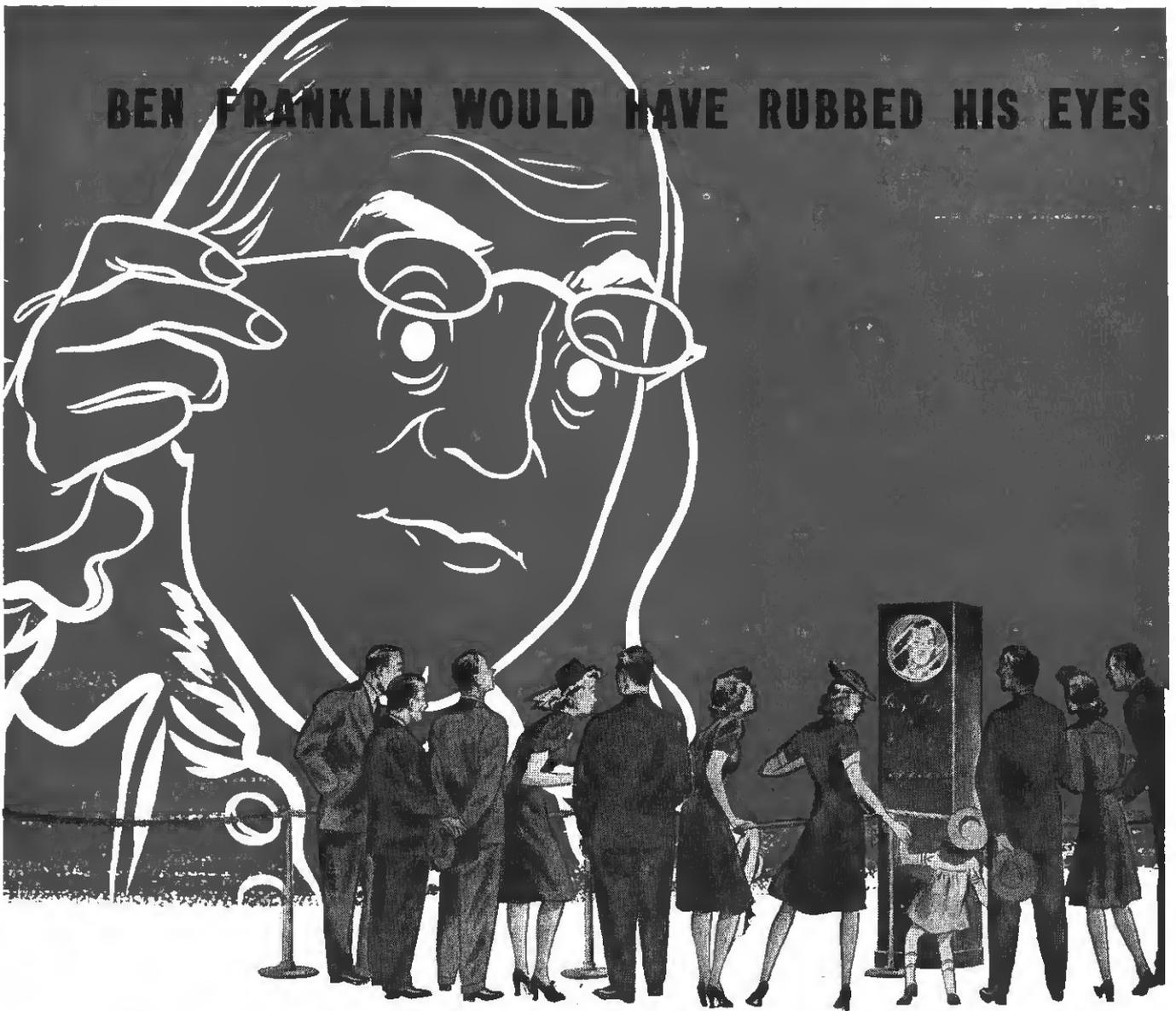
The War Production Board, interpreting for Hytron the Limitation Order L-265, has made it clear that any kind of replacement tube covered by the order may be shipped on orders bearing L-265 certifications. Authorized Hytronic distributors have, therefore, been informed that Hytron transmitting and special purpose tubes may be obtained under L-265. Since Hytron is concentrating on these types, good deliveries of them are being made against L-265 orders, because scheduled deliveries against rated priority orders are being maintained by expanded production facilities.



OLDEST EXCLUSIVE MANUFACTURER OF RADIO RECEIVING TUBES

**HYTRON**  
CORPORATION ELECTRONIC AND RADIO TUBES  
SALEM AND NEWBURYPORT, MASS.

**BEN FRANKLIN WOULD HAVE RUBBED HIS EYES**



**at this demonstration of a great new industry**

Near where Ben Franklin revealed his electrical discoveries, other American scientists in 1934\* first demonstrated to the public a new modern-day wonder . . . *electronic television.*

Using equipment developed and built by Farnsworth engineers, the showing drew crowds to Philadelphia's famed Franklin Institute to see a practical exhibition of electronic television.

Today, television is no longer a novelty. War has slowed its public

growth, but advanced its technical development. Retailers, alert to merchandising opportunities, share the conviction that television will be one of America's great post-war industries.

The greatest opportunities in this promising industry will be *yours.* For tomorrow's television dealers will come from the ranks of today's radio retailers.

Hastening the day of television are Farnsworth's 100% war production,

Farnsworth research, and Farnsworth consumer advertising.

For all Farnsworth advertising is directed at *your* post-war market, creating demand for better television, sooner — with business possibilities you can scarcely imagine!

*\*No. 3 in a series of advertisements depicting milestones in the history of television.*

Look for the Farnsworth Television advertisement in: November 15 *Newsweek* and November 27 *Collier's*.

**FARNSWORTH  
TELEVISION**



• Farnsworth Television & Radio Corporation, Fort Wayne 1, Indiana. Farnsworth Radio and Television Transmitters and Receivers; Aircraft Radio Equipment; the Farnsworth Dissector Tube; the Capehart, the Capehart-Panamuse; the Farnsworth Phonograph-Radio.

RADIO Retailing TODAY • November, 1943

# An Award and An Acknowledgment



The Employees of The Rola Company Inc., now wearers of the Army-Navy "E", wish to acknowledge a debt...and express a word of appreciation...to certain people outside the Rola organization. They are far too numerous to mention by name but they include:

-  *The Personnel of the Army and Navy Air Forces with whom we have worked.*
-  *The Prime Contractors who have entrusted us with orders.*
-  *The Suppliers of our equipment and materials.*
-  *The Transportation Companies who have handled our shipments.*
-  *The many others on whom we have had to depend.*

To all those at home who have *helped* us, and to our former associates, now in the armed services, who have *inspired* us, we express our deep gratitude...and with them we proudly share the honor of this Award. The Employees of THE ROLA COMPANY INC., Cleveland, Ohio.

# ROLA

MAKERS OF THE FINEST IN SOUND REPRODUCING AND ELECTRONIC EQUIPMENT

## Remember radio's first Feathertouch Tuning?



Another General Electric "first" that helped sell hundreds of thousands of radios...and, after the war, General Electric's new and improved Automatic Tuning will be an even greater sales feature for you!

Who could forget the first popular-priced electric touch tuning? It was the radio industry's outstanding development in 1937.

G.E. is still proud of this development. But G.E. has something now that's a whole lot better—a new lightning-fast *Feathertouch* that will set an all-time high for automatic radio tuning performance!

We can promise you a mighty pleasant surprise when—after the war—you are introduced to the

new push-button tuning planned for you by G.E.

And this is only one of the many important sales-makers awaiting you when G.E. brings out its post-war FM radio for the home. *Electronics Department, General Electric, Bridgeport, Connecticut.*

Tune in "THE WORLD TODAY" and hear the news direct from the men who see it happen, every evening except Sunday at 6:45 E.W.T. over CBS. On Sunday listen to the G-E "All Girl Orchestra" at 10 P. M. E.W.T. over NBC.

GENERAL ELECTRIC IS BUILDING MORE MILITARY RADIO EQUIPMENT THAN ANY OTHER HOME-RADIO MANUFACTURER

# GENERAL ELECTRIC

175-812

RADIO Retailing TODAY • November, 1943



PATENTED BY ELECTRONIC LABORATORIES, INC. U.S. PAT. NO. 2,107,000

## NOT HERE, Hirohito!

● So sorry, son of heaven, but the answer is "NO! You can't land here!" . . . Not with these gallant little sluggers, the PT boats, on the job. They're tough. They're fast. They never sleep. And whatever the occasion demands, they've got what it takes.

As a concentrated package of poison for the Axis, the PT boats are an outstanding example of the way American engineers, workers and manage-

ment are teaming together to produce the deadliest weapons the world has ever known. And naturally, we're proud that *E·L* equipment is giving a good account of itself on PT boats.

The widespread use of *E·L* Vibrator Power Supplies as standard equipment—on land, sea and air—for radio, lighting, communications, etc.—wherever electric current must be changed in voltage, frequency or type—is evidence of the efficiency and rugged dependability of *E·L* products.



*Electronic*  
**LABORATORIES, INC.**  
 INDIANAPOLIS

*E·L* ELECTRICAL PRODUCTS — Vibrator Power Supplies for Communications . . . Lighting . . . Electric Motor Operation . . . Electric, Electronic and other Equipment . . . on Land, Sea or in the Air.



**For Operating AC Radio Receivers from DC Current—*E·L* Standard Model 262 Power Supply.** Input Voltage: 115 V DC; Output Voltage: 115 V AC; Output Power: 250 Volt-Amperes; Output Frequency: 60 cycles; Dimensions: 10½" x 7¾" x 8¼"; Weight: 28½ pounds.

# Retailers: Here's a prize 'package' worth waiting for



**When it's again possible** for us to meet consumer demand, you'll be able to sell SONORA Radios "over-the-counter" just as easily as you sell any minor appliance . . . under the SONORA "Package Plan."



**There's a reason** why SONORA will continue to be one of America's fastest turn-over radio lines. SONORA models and designs always have been—and always will be—in tune with popular tastes.



**Check SONORA'S big full-page**, full-color national advertising campaign in the American Weekly, Life, Esquire, American Magazine, Redbook, Cosmopolitan, Time and American Home.



**With a minimum inventory**, you'll be able to satisfy any demand for radios and radio combinations . . . when you feature SONORA. It's a complete home entertainment Line.

## **SONORA Radios always will be distributed through the jobber**

You can depend on him to work shoulder to shoulder with you in making the SONORA line the most popular, most profitable of all electrical items in your store . . . when we can again deliver civilian radios.

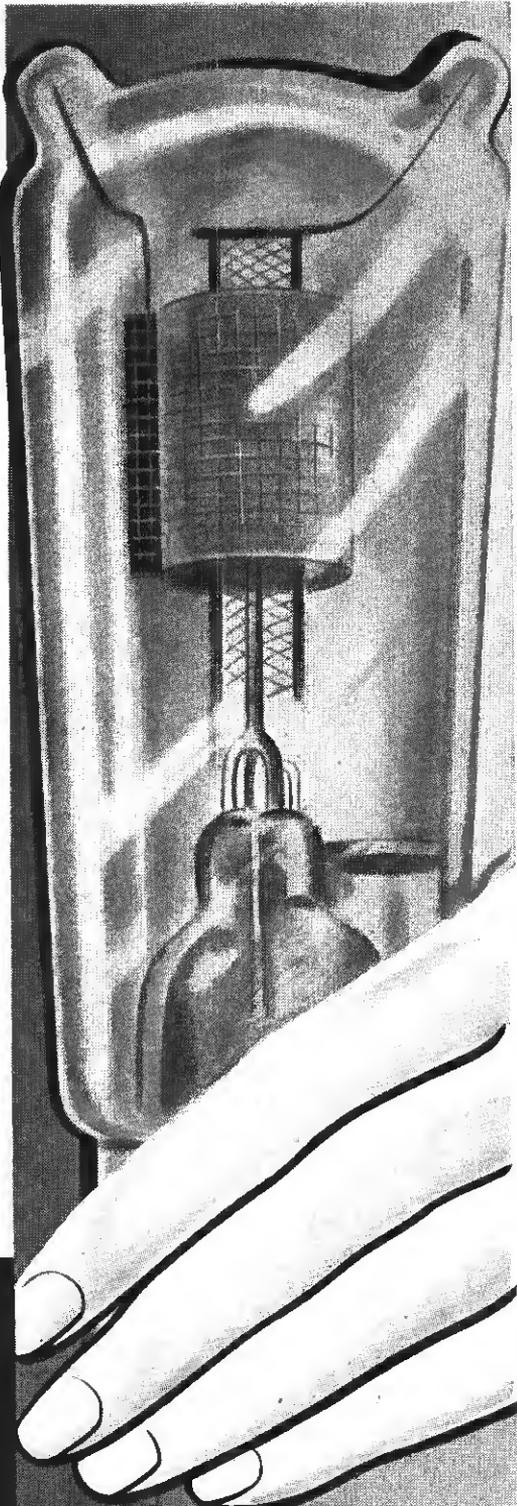
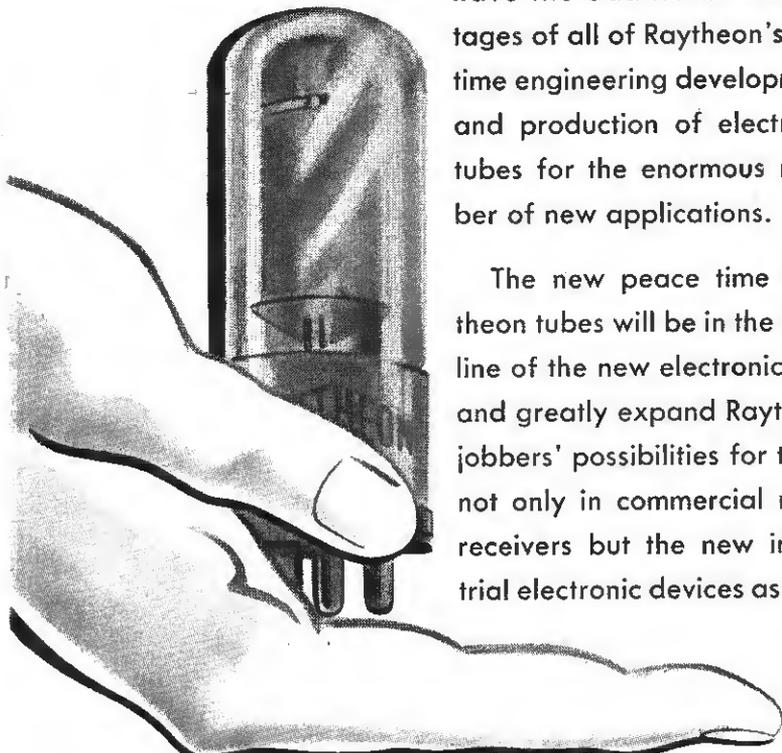
SONORA RADIO & TELEVISION CORPORATION • 325 N. Hoyne Ave., Chicago

**Sonora**   
Clear as a Bell

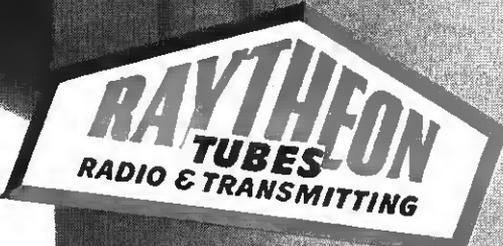
THE ONLY NATIONALLY ADVERTISED JOBBER-DEALER RADIO

Over 12,000 highly skilled Raytheon employees are producing for the military . . . when we again return to peace time pursuit of normal business, the Raytheon jobber dealer and servicemen will have the additional advantages of all of Raytheon's war time engineering development and production of electronic tubes for the enormous number of new applications.

The new peace time Raytheon tubes will be in the front line of the new electronic era, and greatly expand Raytheon jobbers' possibilities for tubes not only in commercial radio receivers but the new industrial electronic devices as well.



# THE RAYTHEON JOBBER HAS A NEW JOB!



**RAYTHEON PRODUCTION CORPORATION**

NEWTON, MASS.; LOS ANGELES, NEW YORK, CHICAGO, ATLANTA  
 DEVOTED TO RESEARCH AND THE MANUFACTURE OF TUBES FOR THE NEW ERA OF ELECTRONICS

# *the Diary of a Loud Speaker*

**(Censored) date**—Leaving Chicago in a soldier driven communications truck outfitted with radio transmitting and receiving equipment, to join an army of many thousands of mobile radio stations.

**(Censored) date**—Loaded aboard ship at censored seaport, and convoyed over thousands of miles of submarine infested seas to far away India.

**(Censored) date**—Arrived in India. The radio equipped truck is partially dismantled and the 7,000 pounds of truck and equipment flown in a huge cargo plane high over the Himalayas, most perilous and difficult flying route in the world.

**(Censored) date**—Delivered to General Stillwell's army to fulfill our mission—helping to save the lives of American soldiers and helping to kill the Japs.

**Jensen**  
RADIO MANUFACTURING CO.  
6601 SO. LARAMIE AVE.  
CHICAGO 38, ILL.

*An Announcement*  
TO THE RADIO INDUSTRY

MISSION BELL RADIO

ONE OF THE COUNTRY'S OLDEST  
SET MANUFACTURERS

AND

*Mitchell-Hughes*  
Custom Built

CUSTOM BUILDERS OF RADIO-PHONOGRAPH  
COMBINATIONS FOR ARTISTS AND CONNOISSEURS

HAVE COMBINED THEIR FACILITIES  
AND MANPOWER INTO THE

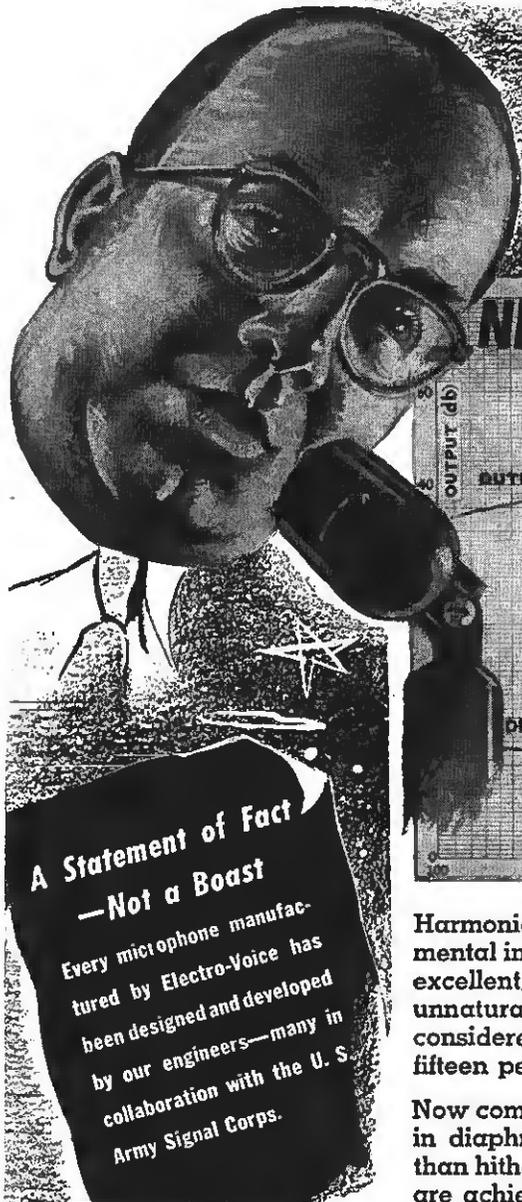
**Hoffman**  
RADIO CORP.

3430 SOUTH HILL STREET • LOS ANGELES, CALIFORNIA

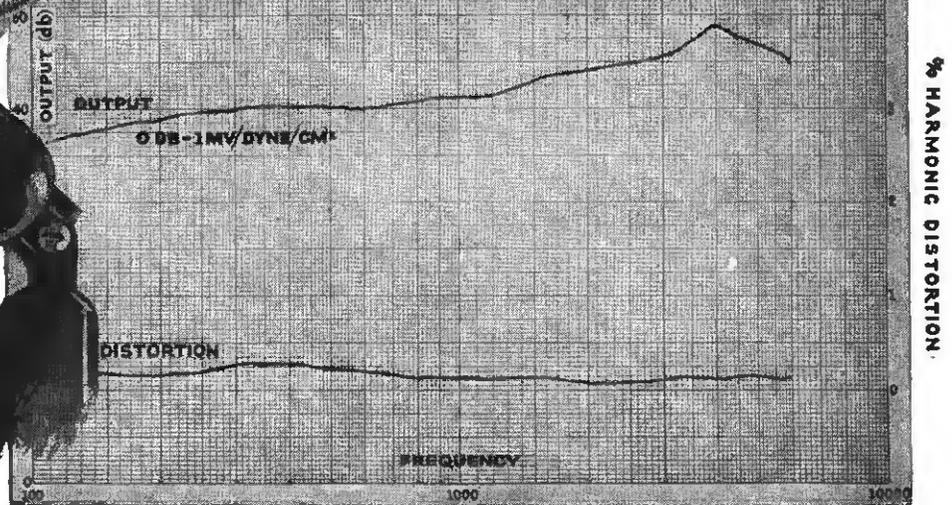
PRODUCING FOR VICTORY — PLANNING FOR PEACE

As one of the country's leading  
builders of communications and  
precision measuring equipment  
for the armed forces

With a complete line of Radios  
and Radio-Phonograph combina-  
tions aggressively advertised and  
merchandised



## NEGLIGIBLE HARMONIC DISTORTION

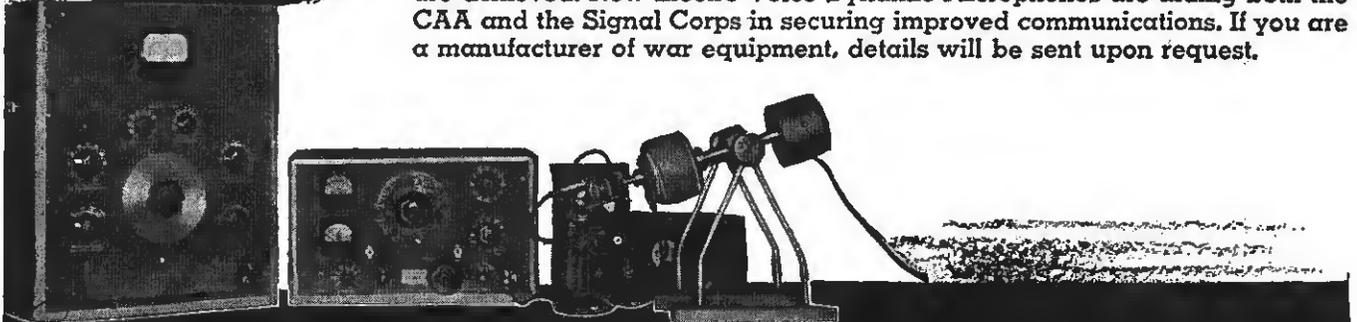


### A Statement of Fact —Not a Boast

Every microphone manufactured by Electro-Voice has been designed and developed by our engineers—many in collaboration with the U. S. Army Signal Corps.

Harmonic distortion is the addition of spurious frequencies to the fundamental in definite harmonic relationship. Though the frequency curve may be excellent, harmonic distortion turns up as raspy reproductions, with an unnatural twang, in microphones, amplifiers and speakers. Five percent is considered a satisfactory upper limit for good reproduction, and as much as fifteen percent is allowable for speech communication.

Now come new Electro-Voice Dynamic Microphones with radical innovations in diaphragm fabrication, reducing harmonic distortion to a lower degree than hitherto possible. Cleaner, crisper, more highly intelligible reproductions are achieved. New Electro-Voice Dynamic Microphones are aiding both the CAA and the Signal Corps in securing improved communications. If you are a manufacturer of war equipment, details will be sent upon request.



The Harmonic Wave Analyzer measures the presence of spurious frequencies introduced by microphone distortion. To the ear, such frequencies give the feeling of ragged and false speech quality that may be unintelligible under the stress and strain of battle.

Electro-Voice engineers have found a way to eliminate harmonic distortion in microphone design, as proved by the Wave Analyzer; and the completely natural reproduction from the new Electro-Voice microphones.



# Electro-Voice MICROPHONES

ELECTRO-VOICE MANUFACTURING CO., INC. • 1239 SOUTH BEND AVENUE • SOUTH BEND, INDIANA  
Export Division: 13 East 40th Street, New York 16, N. Y. — U. S. A. Cables: ARLAB

The weight of withering fire that this improved Bofors gun is capable of hurling — its fire power, range and manoeuvrability are military secrets that might "comfort and aid" the enemy. Secret, too, are the improvements of the FADA Radio that will "comfort and aid" your post-war customer. Major research and experiments, aimed at applying our wartime "know-how" to peacetime production will set new FADA standards of tonal faithfulness, performance and durability.

PLACE YOUR FAITH IN THE

# FADA Radio

OF THE FUTURE

*Famous Since Broadcasting Began!*



**MILITARY SECRET**

**FADA RADIO AND ELECTRIC COMPANY, INC., LONG ISLAND CITY, N. Y.**

# "How do you spell 'phooey'?"...



"My boss is mad.

"He's writing a friend who wants to know why we haven't been promising the world to dealers... telling them about things like television in your own helicopter... hot and cold running water in your radio set, and stuff like that.

"My boss says 'phooey'!

"He says there are only three things *anybody* can promise dealers after the war, and they are the things Stromberg-Carlson is already planning now for its dealers:

- 1. Soon after this war is won you will have a fine line of Stromberg-Carlson radios to sell... a line that will win customers and retain their goodwill... a line that will offer value and fine performance in a range of prices.**
- 2. The Stromberg-Carlson name in radio will be even more widely and more favorably known than ever before.**
- 3. The Stromberg-Carlson policy of distribution will permit every authorized dealer to have a real opportunity for profit on the Stromberg-Carlson line.**

"By the way—I forgot to add this post-script: *There's nothing finer than a Stromberg-Carlson!*"



**STROMBERG-CARLSON**  
ROCHESTER 3, NEW YORK

O. H. CALDWELL, EDITOR  
480 LEXINGTON AVE.,

# RADIO *Retailing* TODAY

Including Radio and Television Retailing

M. CLEMENTS, PUBLISHER  
NEW YORK 17, N. Y.

## SUBSTITUTE CIRCUITS —

A number of servicemen and dealers interviewed in the past few weeks have averaged about two-to-one in favor of making circuit changes where necessary, in order to use available tubes and parts. Those in favor of this procedure explained that while the cost is greater, when compared to the simple job of plugging in a tube, members of today's buying public are fully aware of the shortages in many lines and prefer to have their sets in working condition rather than idle. This is also in keeping with policy of making equipment last for the duration, where practicable, rather than buying new.

Those service shops which did not recommend circuit changes, used the "higher-cost" angle as their answer. Many of the substitute changes are simple and require a very few minutes work on the set. It is true that elaborate changes requiring removal of sockets and extensive wiring changes may put the cost above the practical range. Nevertheless, the customer is the judge in this matter and he should be given the option of whether the job is to be done or not.

**COVER**—Dealer C. W. Perdue, of Perdue Radio Co., 8 So. Park St., Montclair, N. J., dresses his Christmas window, assisted by Miss Agnes Aiello. Perdue's attractive showroom displays some large radio receivers, records and record accessories. And his service department is favorably known for miles around.



## ***The Struggle for Victory and the Plan for Peace***

Radio manufacturers, distributors, maintenance men, and dealers unaniously agree that the war effort comes first. Top speed in production is the order of the day in our warplants. Many distributors are important subcontractors and suppliers to war agencies. Dealers and servicers all over the country are rendering valuable services to the war and to vital civilian activities.

And at the same time it's perfectly natural that they're looking forward to the future. In the first place, we're all sure of the outcome. Victory *will* be ours, so we are perfectly justified in contemplating it.

Then, too, we are fighting for simple things as a nation. We want to be let alone to resume our democratic, peaceful pursuits. We want to do business at the old stand again. We want to exercise freedom, initiative and resourcefulness. We have no greedy aims in the world of tomorrow. We only want what we have always had.

So it's definitely in order to plan for the peace while we struggle for the victory.

## ***Less Than 2% of Radios Inoperative, Gallup Finds***

Dr. Gallup, whose investigators have searched out many obscure facts about the American scene, has just conducted a survey to discover the number of home radios not working because of lack of repairs or tubes. He concludes that only 1.61 per cent of the nation's homes are in need of radio servicing or new tubes—also pointing out that even many of this small group have alternate sets they are using.

Applying the sample survey method, the Gallup Poll, as of October 28, shows that about 500,000 families now need radio repairs or parts, tubes especially. Against a background of 31,000,000 homes with radios, this represents a ratio of only 1.61 per cent of homes as needing radio repairs. On the other hand, taken against the total of 60,000,000 radios in use, it constitutes less than 1 per cent of our total radios as being inoperative.

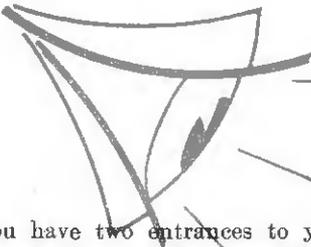
## ***It Means Skilled Maintenance!***

With greater numbers than ever before staying home this winter, the radio becomes an increasingly important factor in their lives. With the admitted shortages of many radio parts, the radio serviceman can still give a high degree of service to his customers with simple changes and adjustments.

It is always an improvement to any radio to inspect, clean and better the insulation on antennas, grounds, record-player attachments and also the electric appliance cords, lamp sockets and switches which are often a source of interfering noise. Set alignment and cleaning are simple things that take little material and produce results. Try featuring some of these services for more income and business reputation.

# EYEWAYS TO

**"Sunday, Monday and Always" Your Show  
Make the Display Create a Favorable Impression**



● You have two entrances to your store, and they both leave a definite impression on your customers and your prospective customers. Through your doorways, your customers enter your store. Through your "eyeways," your windows, prospective customers' eyes and thoughts enter your business.

Your windows, and how you use them, how you dress them, what you display in them, have a very important bearing on what people think of you and buy from you.

What you display in your windows, and how, must depend upon the particular purpose you wish to accomplish. There are many types of window displays, to which the reactions of window shoppers differ. But there are certain basic laws which apply to all window displays. To be of any value, every window display must accomplish the following:

- a. Catch the eye and hold it
- b. Stop the prospect, and arouse interest
- c. Convey the message you wish

Light, color, motion, are the usual tests with which the experienced "catch the eye." But the mere use of these is not a guarantee of a successful window, for if you use them improperly you may catch the eye, but be unable to hold it.

## **Invitation to Buy**

The use of powerful, exposed lights is always bad, but they will "catch the eye." But there are many tricks in the use of light which are good. A dark, or low level, window, with a bright colored spotlight on a single focal-point display is usually good. Slowly changing the colors of a series of spots, flood, or hidden fluorescent lamps will certainly attract attention, and is often better than a single spot.

Lights which are controlled by photo-electric cells, which change intensity, or color, or both, as persons

pass the window, will demand their attention.

Color, too, is quite important. As black and purple are the colors of sorrow, and red, white and blue the colors of valor, purity and sincerity, so also red and green are the colors most conveniently associated with the Christmas season. Use color freely, but be sure your harmonies, or contrasts are what you really want, tell the story you want to tell, and do not clash.

## **Window Personality**

With light, with color, with motion, you can catch the eye of every passer-by. Whether they stop, and look, depends upon other factors.

Do you want to introduce a new item? Then place it in the center of your window, about eye-level. Focus attention on it by a spotlight with ribbon or paper streamers converging from top, bottom and sides on the merchandise. Point out all of its features and uses, with small descriptive cards, which are brought to view one by one, on an endless belt.

## **Pictures vs. Words**

'Tis said, and it has been proven times beyond number, that "a good picture has the power of a thousand words." Your cards of features and uses will tell a better story there if they are in the form of pictures, rather than printed words, or if pictures predominate.

A little ingenuity and thought will tell you a dozen ways you can combine light, color, and motion to attract the eye, stop the prospect and convey a message with such a window.

But perhaps you want to attract attention to your assortment of gifts. Then into your window should go representative pieces of merchandise in your assortment, with several attractive signs. Gifts for all being the central theme, group your gift-suggestions under appropriate headings,

Mother, Father, Brother, Sister, Soldier, Sailor, WAC, Wave, Sweetheart, all or any others.

Do not get so much in your window as to confuse. Tell your story so it will be surely understood. Keep your background in the background and use lights, color, and motion in the foreground.

If your purpose is "prestige" or "goodwill," then merchandise should be subordinated.

If you want a window which will be "talked" about, there are dozens of ways of doing that.

## **Christmas Suggestions**

For Christmas: The Star of Bethlehem, the Christ-Child, the Shepherds, the Wise Men, the Manger, all in miniature, in color, and in motion. Show the "Night Before Christmas" with "tiny reindeer" moving from house to house across the miniature village and snow-covered landscape. Something unique, or not generally known, will always cause comment.

Souvenirs of the war, medals of the local heroes, a collection of medals, decorations and ribbons of our Army, Navy, or Marines.

Flags of all the Allied Nations, with miniature men and women in native costume.

An assortment of ammunition from .44 caliber to a 3-inch cartridge case.

Uniforms in miniature of our Army from 1776 to 1943.

Miniatures of our Naval Ships from the Constitution to the New Jersey.

Or just the children hanging their stockings over the fireplace.

All of these, and many more, would attract attention, cause forcible comment, and cause the name of your store to be mentioned favorably and often. One great failure of most windows is that they contain too much, and are unchanged too long.

Only if you are trying to focus at-

# YOUR STORE

**Windows Tell a Story About Your Business.**

**—Bright Interiors Are Important Too.**

tention on a sale of large quantity of merchandise should a mass display be used in your window, and even then it may not be good, for long.

## **Interior Tie-ins**

Interior, or selling display should always back up your windows. In these days of man-power and merchandise shortage, you should give serious thought to your interior display, make it help you most, serve you best. You can do much to make your displays help you sell, and relieve much of the pressure on your clerks. A few basic principles to follow may be helpful.

- a. Keep your merchandise in the open, plainly visible.
- b. Keep your merchandise grouped by price, by size, by color, by kind.
- c. Keep merchandise plainly priced.

- d. Keep some pre-wrapped if possible.
- e. Use self-service selling displays where possible.
- f. Keep all displays and all merchandise clean, neat, and in perfect condition.
- g. Keep "most wanted" merchandise at rear of store, to expose all your other merchandise to the largest number of customers.
- h. Use signs liberally, with each display telling what it is, why it is, how much it is, and any other pertinent information.

You may be reasonably sure that most people will see your windows much more often than they will see you or your store. And the impression they have of your store will be influenced at least as much if not more by your windows than by your store itself.

**CATCH THE EYE** with light, color, motion.

Stop them with an "out-of-ordinary" theme or display.

Convey your message with merchandise, pictures, cards, directly and plainly. Elaborateness is seldom a measure of merit.

If your display "tells a story" you may be sure it will "leave a message."

Make sure it leaves the message you want it to.

If you have simple good taste and the very simplest of materials and tools, you can create window displays which will increase your goodwill and your sales.

*Ewing Galloway photo*



# They Never Fail



Chester A. Wagner, head of The Electric Servant Co., Yonkers, N. Y., stresses fine points of washing machine operation to his office manager, Miss V. Holloway.

## **Dealer Lives Up to Motto in Wartime—Here's How He Can Pledge Vital Appliances for All in N. Y. County of Half-million People.**

• “We Never Fail!” Since 1922 that’s been the motto of The Electric Servant Co., 14 Main St., Yonkers, N. Y., and it’s still the motto despite the difficulties of operating such a business in wartime.

Since this business was founded twenty-one years ago by the present owner, Chester A. Wagner, it has sold over four million dollars worth of appliances, and in one year its sales amounted to \$450,000.

So with appliance manufacture long since stopped, it is interesting to see what The Electric Servant Co. is doing now, and how it undertakes to make good its pledge to the Westchester Lighting Co. and to the half-million people living in the county.

Listing radios, refrigerators, laundry equipment and vacuum cleaners as “vitally necessary” for the home-front morale, Electric Servant has pledged that “no one in Westchester County need be without any of these appliances for the duration.”

That’s a big order! It sounds like an impossible task for an independent dealer to take on his shoulders, but Chester Wagner has the formula to

do it; the desire to see it through, and is accomplishing it *right now*. The way it’s done is simple. Through telephone canvassing, door-to-door calls and contacts with junkmen and salvagers of all sorts, Electric Servant is making an extensive drive to have people sell broken or unwanted appliances. Owners of such equipment are urged to sell so that others who are in need of vital household appliances may have them without delay. “We appeal to the people’s patriotism in urging them to release all the equipment they do not need,” said Mr. Wagner.

### **Gets In Used Appliances**

The response has been terrific, and today Electric Servant has a large stock of appliances being rebuilt, ready for resale or in the process of being broken up for badly needed parts.

But, the reader will want to know, how does Electric Servant live up to its pledge that no one need be without such equipment for the duration? And here’s the way it’s done:

If you have only one radio, and it

fails, Electric Servant will lend you one while it is being repaired. This same thing holds good for refrigerators, laundry equipment and vacuum cleaners, and it is a free service being extended the Westchester public in times like these!

Electric Servant also rents equipment of all sorts to people whose needs indicate this sort of arrangement.

All rebuilt equipment sold is rigidly guaranteed, and the firm at this time is maintaining twenty-four hour service, and that includes Sundays and holidays.

### **Operates Own Ration Plan**

That this man Wagner is a business idealist—and a man who’s in the business because he loves it—is seen from his methods of operation now, and those he practiced in the past. Right now his angle is to render exceptionally good service; contribute to the war effort by keeping appliances going, and not to take unfair advantage of customers. So, in order that all will get a square deal, his organization has put into effect a rig-

idly observed "ration" plan. Electric Servant appliances are sold *only* to those who really need them and will use them. "People who 'think' they need this equipment, or want to buy something just because they've got more money than they know how to spend," are advised by Wagner to "buy war bonds."

Electric Servant has done a big business in radio in the past. The company sold General Electric, Philco, Emerson, Stewart-Warner, Fada, RCA-Victor, Zenith, Crosley, Pilot, etc. Today a number of new sets, and many used receivers of all makes and sizes are in stock. Customers bringing in radios for repair are given an honest opinion about the condition of their sets, and if Electric Servant feels that a repair is not practical, the customer is offered a new or reconditioned radio, and his old set is purchased for parts salvage.

A well-equipped radio repair shop is on the second floor. On this floor there is also a large refrigerator rebuilding department. Laundry equipment is reconditioned in the basement.

#### **Irons and Cordsets Available**

One of the scarcest of all household items today is the electric hand iron. Yet through its aggressive buying campaign, this firm has a big stock of rebuilt irons on hand. Customers who bring in their old appliance cordsets are able to purchase 10,000 cycle cords, bearing the gold

underwriters label from Electric Servant. "We are fortunate in being able to supply our customers with these heavy, safe cords," says Mr. Wagner.

RADIO RETAILING TODAY's representative, expressing surprise at the large stock of washing machines, vacuum cleaners, ironing machines, refrigerators and radios, as well as the big stock of parts, was advised by Mr. Wagner that he could sell this accumulation of appliances and parts to dealers in "no time at all," and this is entirely believable. "But," says Wagner, "Electric Servant expects to stay in business, and to do a big selling job after the war, so we desire

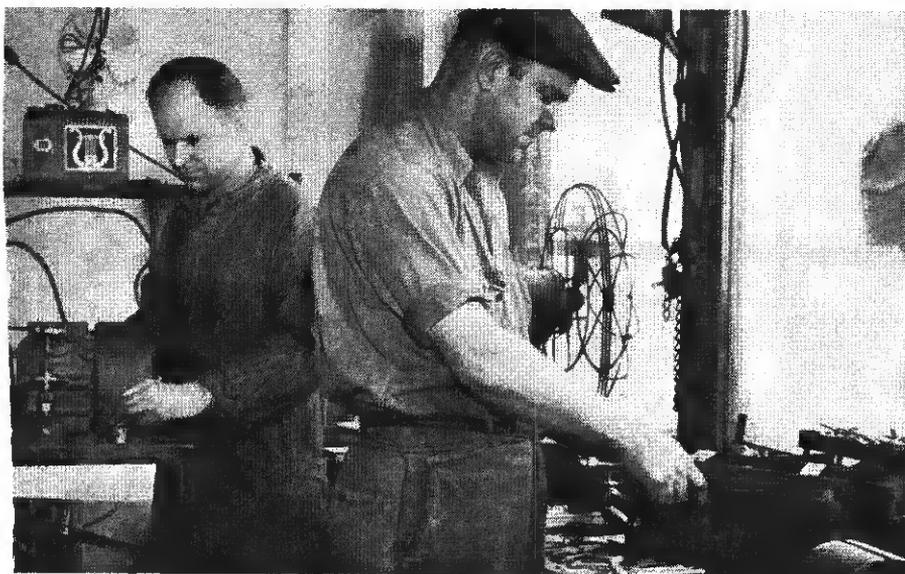


**B. Mayers, radio service manager, keeps 'em playing. If customer has only one set, Electric Servant lends another until repair is completed.**



**▲ Al Shelley, manager of laundry equipment repair, goes over a job with Ted McKinnon. Dick Baker at rear.**

**▼ A section of enlarged refrigerator repair department. C. J. Purgerson (right) and Stanley K. Bayorek.**



now to render a real, honest service to the customers who have made our growth possible. Therefore, we sell only at retail, and we do strive to see that all our appliances go into the hands of the people who need them the most."

There are seventeen people in the organization now. At one time there were sixty. The radio department charges \$2.50 for a call outside, and \$1.00 for test in the shop.

#### **Refrigerator Selling Technique**

Rebuilt refrigerators are rigidly tested. When the repair is completed, the job is run for 24 hours with a 200 watt lamp burning in the cabinet interior.

In connection with the sale of refrigeration, Mr. Wagner states that his organization was able to get

*(Continued on page 64)*

# Radio Trade Trends

• Since the first corn was stacked and the first winter wheat began to show green on their fields, Ohioans have settled down for many a long, cold winter but *not unprepared!* This same spirit of fortitude is true today of her radio sales and service men, who are weathering the chill winds of wartime scarcities as well, if not decidedly better, than most independent businessmen.

RADIO RETAILING TODAY's reporter found many instances of that forward-looking eye with which a successful farmer watches the weather. Due to lack of space, we cannot tell each man's story in detail, but will endeavor to give some high spots of

our course through the Ohio radio-men's terrain.

## Dealer in City A (Population 37,154)

Here we found a most amazing story of tubes and servicing, as well as sales, that would speak well for any good merchandising man in *any* field. In the face of shortages and occasional dealer doubt of jobbers' fair distribution under these conditions, this dealer refused tubes from "unknown" suppliers (who offered scarce tubes on a "deal" involving other minor purchases). Champions his jobber and believes him an essential part of his (the dealer's) operation. A typ-

ical forward-looking Ohioan, this retailer stocked well two years ago. Specializes in used radios. Has bought out two wholesalers and other radio men who came to him to sell because of uncertain future conditions . . . and because this dealer kept after them to sell! Makes trips to neighboring large cities and buys slightly used *expensive* sets (in the \$1,200 bracket), reconditions and sells them at *substantial* profits. One point he is stern on, and that is only in accepting parts in perfect condition from his jobber. If parts are not absolutely perfect, they are returned to the jobber immediately. Only the best parts are put into rebuilt sets. Re-

Owner A. Margolis of the Rex Radio, 43 E. 3rd St., Dayton, Ohio, believes in getting in a good stock of tubes—first—with which he has been doing a fine business—both in radio sales and service. Other lines can be seen in this picture such as: phonographs, record players, record accessories—and well—he "keeps going"!



# in OHIO

sult—an excellent reputation and a good business built thereon.

This dealer is planning, even now, to expand his quarters—already a good size and a neat job. Makes minimum charge of 75 cents for checking tubes. No outside service calls. Customer brings set in. Cheaper if taken out of cabinet.

## **Dealer in City B (Population 46,747)**

This is a war plant town where servicing has increased to a maximum. One serviceman we interviewed has the enterprise to do not only manufacturer servicing, but has taken on the repair work of department stores, and has bought out the remaining service outfit in town, and is planning to expand his present quarters. All in all, this dealer does the service work for about 13 retail radio dealers, the department stores and automobile dealers. This gives him the department stores' supply allotments of tubes and parts as well as his own. Has two helpers, draft deferred. Closes his place to the public two days a week, in order to keep work up to date. Promises repairs in two weeks. When he gets behind this quota, he takes two weeks' work and stops.

## **Dealer in City C (Population 70,662)**

Dealer 15 years in business. Radio servicer in 1920 in neighboring town and from then on to owner of his own store in this city in 1935. Originally sold major and minor appliances, radios, and combinations. Five years ago took over the sponsorship of the local airplane model enthusiasts, a group of 15-year-old boys whom the local "Y" turned away. Underwriting their expenses as a club, and their appearances in the neighboring towns in the state at competitions, this retailer offered them the playroom of his own home for their meeting place. From there on he finally

## **RADIOS KEEP TUNE IN OHIO!**

The Buckeye State gives a good account of itself in the line of radio sales and maintenance. Radio men keep their businesses at the same stands. Find lucrative means of adding to their sales in other lines with some temporary and some of permanent value. Ohio's radio pioneers can weather bad times as well as good, just as the original Ohioans found they could withstand the changes of the seasons—when Ohio was part of the Northwest Territory. A state which produced Thomas A. Edison, finds its radio men eager to live up to this honor!

interested the Exchange Club's local chapter in this juvenile activity, from whom he received restitution of his initial investment. Note—During all that time he sold airplane models to the club and to older enthusiasts, as well (their fathers and grandfathers). Now this retailer is keeping his contacts with his former home-owner appliance and radio customers through their continued interest in airplane modelling, which finds its sales center at his store.

## **Dealer in City D (Population 343,148)**

"Main point is to keep going!" is this dealer's remark. Originally operating four stores in the same city, this dealer now has one, but it is operating at full capacity for sales and service and the overhead does not cut into his "profits." This dealer sells every line of radio, and purchases through jobbers and direct from the manufacturer. Has one of the largest tube stocks in Ohio. Built up a good business on straight lines. Now

sells radios, phonographs, combinations, record players, public address systems (which he *never* rents!). Also has done a good turnover in recording needles and discs for home use. Servicing department has expanded in accordance with the demand of current times, but does not wish to continue servicing after the war. Acquired tubes through following government releases, on which he bids; makes monthly cross-country trips to buy up retail stocks; pools with other dealers in the state. Has not taken on records because he has no room. "Radio is a business—not a sideline" is his motto—and he sticks to it!

## **Dealer in City E (Population 31,487)**

Overflowing with war-workers, this city has an adjoining "trailer" community of some 1,500 people. This radio electronic maintenance operator is a "natural" radio engineer. Starting as a boy, he learned to construct sets. Has been in this type of work

(Continued on page 32)

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now for the past 15 years. Does the service for dealers around town. No service on appliances; concentrates on radio, and when he has given a diagnosis of a radio's troubles, it is worth the best specialist's diagnosis of your best friend! There are lots of circuit changeovers, he claims, but even the tubes for circuit changeovers are run-

fact that about 5,000 of *this* city's inhabitants have migrated to other towns to take war plant work. Originally doing a business in appliances and radios of approximately 125 to 150 thousand dollars a year, this retailer is still at his own stand, despite shortages! Does complete electrical appliance service work for the

setup and endeavor to protect the dealer on price. Would like to carry three or four radio lines. Believes jobber is essential to the dealer. Advocates keeping the price of radio up on a good model. Hopes manufacturers will so protect one number for at least a year. Otherwise, he claims, the history of the radio business will repeat itself with many dealers going broke again, due to the difference in operation between dealers and chains.

Makes a point of maintaining good salespeople. No change in his sales personnel in the past 12 years. Pays good salary, plus commission. Six clerks on the floor always. Service work has increased, but is not solicited. Merchandise on hand is rationed out within bounds of his ability to deliver to customers and keep sets or appliances efficiently serviced.

### **The Present Situation as Ohio Jobbers See It**

Three distributors interviewed in one of Ohio's larger cities had very interesting reports to make. Jobber A reports doing big priority job on service parts and sells all over the country to war plants, through the Army-Navy electronic production agency's recommendations. Despite this fact, however, this jobber manages to take good care of his radio dealer customers, among whom he has many resourceful individuals. One of his customers, he reports, makes a specialty of buying up used portables which he reconditions for re-sale. For instance, out of three or four damaged sets this dealer can produce one in first-class condition, realizes a good profit in this specialty.

Jobber B in this same city has been in the combined automotive and radio supply line for many years. Starting in the automotive parts business some 30 years ago, he added radio parts 17 years back, and had to drop his radio department about a year ago. He expects, however, to resume this portion of his business just as soon as the war is over.

### **Postwar Views**

This distributor's postwar thinking on radio parts and supplies is most constructive. Through his affiliation with the National Wholesalers



Where service work is in great demand: Mervin Buker, radio electronic maintenance man at 54 W. Church St., Newark, Ohio, makes every minute count to get sets out on time. Mrs. Buker helps him in shop and watches the more difficult troubleshooting. Son Carl, 7 years old, helps by putting the screws into the chassis!

ning low. With a very good set of complete equipment and an innate understanding of radio troubles, this serviceman does an excellent job and is recognized for it in his city. Because even the mailing facilities of jobbers in the war plant areas are slow, this serviceman bands together with his friends in the state and they collect their purchases by car, the gas for which they have found to be sufficient in allotment from their local boards. "Persons alone in a small city—new workers—bring small sets with them—for which they need scarce tubes. New worker alone in a strange town finds his radio his only friend, and when it doesn't work, his only friend is dead!" That's the reasoning behind this man's efforts to keep war-workers' sets playing—and we believe in so doing he is preserving civilian morale.

### **Dealer in City F (Population 37,651)**

Quite a different tune here is the

county. (After the war he wants less models available in each line, so he can take on all lines.) Now rents his former serviceman space in back of his store to do radio service work. Takes advantage of the declining population by buying used appliances and radios of persons moving out of the area—reconditions and sells them as used items, now in great demand.

### **Dealer in City G (Population 1,138,000)**

In business for the past 20 years, this dealer operates three stores in this city. Specializes in combinations at from \$200 to \$800. Carried records when first popular and now has reinstated them. Records, in addition to sporting goods, appliances, ice boxes, pianos, and dinette furniture, comprise the bulk of this retailer's substitute lines. Does not believe television sales will soar for some time after the war. Hopes manufacturers will change their policies in pre-war

Association in connection with his jobbing of automotive parts, he is endeavoring to protect the market on these goods after the war by having the government agencies supervise the release of the Armed Forces surpluses, to prevent their flooding the market. This could be done, he suggests, by the government agencies returning each manufacturer's surplus to him, requesting that he ration its sale along with newly manufactured parts after the war; thus keeping factory output moving and preventing a drop in price. Radio parts are not included in this plan, unfortunately, but it is a possibility for radio part suppliers to be meditating upon.

### **Optimistic About Radio Future**

This supplier continues by adding that the automobile industry—now an established one—has had from its beginning up until now, 1,852 different manufacturers' makes. Radio, he

claims, is in its infancy, comparatively, which, he believes, offsets the current seemingly high dealer mortality rate.

### **Car Radio Repair**

Jobber C in this area has a slightly different setup than the other two. His dollar volume of business is done on wholesale sales of radio parts to dealers, which he buys direct from manufacturers. Spends about 90% of his organization's time on service. In this respect their contact is with auto dealers, used-car dealers, out-of-town branches of car radio manufacturers.

Repairing car radios is their speciality and mass production takes place here at a rapid clip. Do some servicing of home sets, also, on which, despite current shortages in labor and parts, they are only two weeks behind. With eight service men in their extensive and well-set-up shop they are service specialists and are very satis-

factorily known for their work.

Their men have been in the radio repair business for the past 15 to 20 years and their knowledge of switch-over circuits and the ins and outs of radio repair is extensive. Each man in the shop is familiar with certain types of sets as his particular specialty. Present shortages in tubes for the newer sets finds many an old set being brought in for rehabilitation, as tubes are more likely to be available for their reconditioning.

### **Post-War Surpluses A Danger Signal**

The manager—so far as postwar views are concerned—is worried about the surpluses that will result in the postwar period if the government dumps all the unused stock of parts on the market. He claims, however, on the other hand, surpluses have always been a problem in the radio field, so if no adjustment is made, they will have to carry on as they have in the past.

**This dealer believes in catching them young: Note young man with his mother about to voice a selection in children's records—of which Atlas Radio, 714 Prospect, Cleveland, Ohio, have an excellent stock. And that's not all that Owner Louis Balantzow sells. If you could look behind the photographer you would see sporting goods, pianos, and more records—as well as the ice-boxes and dinette furniture to be seen in the background of this picture.**



# SHRYOCK SHOWS THE

**Veteran Quaker City Dealer Opens at New Location—  
Pays Profits—Big Job Now in Sales and Maintenance Assures**

● “Crepe-hangers,” and other super-duper pessimists, who go about crying that radio businesses are folding up, *shouldn't* visit the Shryock Radio & Television Co. at its new location, 1615 Walnut St., Philadelphia. Shryock's is just no place for them, unless they want to see their pet theories “block-busted” right in front of their eyes.

A few months ago Richard Shryock moved his business from the Penn Athletic Club Building, 18th St., near Walnut, to the present location in the business heart of Philadelphia.

The interior of the new place had been carefully mapped out in advance. It goes without saying that Mr. Shryock had plenty of headaches equipping the new location—with help and material conditions as they are—but equip it he did, and today it is seen as an outstandingly beautiful and efficient showroom; a modern radio repair shop, capable of rendering any service to a radio that a factory can do; a planned-in-advance

record self-service department, a modern office, and other departments definitely laid out for future construction.

## **Studied “Self-Service”**

Before the “self-service setup” was constructed, Mr. Shryock made an extensive study of such “serve-yourself” applications in department and other stores. It was also tried out in The Loomis Temple of Music, 832 Chapel St., New Haven, Conn., in which business Mr. Shryock is a partner with C. W. Emley, of Pittsfield, Mass. The Loomis store, an extremely successful operation, is being run by two resident managers, Raymond Hemming and William Mulvey. From the results of his examinations of these other self-service installations, evolved the present one in this new Philadelphia store.

A large show window, attractively neon-lighted, allows pedestrians to see the entire length and breadth of the showroom. The walls are of natural wood, and are flanked with shelves

containing albums. In order to get the display value of the album covers, the shelves are tilted slightly toward the wall, and in each receptacle, one album is placed, cover out. It is interesting to note that these shelves are all built to accommodate small radios when they are again available.

## **Record Display of Records**

With the exception of a few radio-phonographs on display, the entire showroom is devoted to records. All records are prominently price labelled. A number of “pyramid” record holders are placed at intervals, but there is plenty of aisle space between them.

As *all* the record stock is visible, inventory taking is simplified, and a splendid mass effect, without a cluttered appearance, is achieved. There are five panelled and attractively furnished listening booths. The big air-conditioned showroom is lighted exclusively with fluorescent ceiling fixtures. Heavy linoleum is used for floor covering.

Near the rear is an “island” counter used for wrapping, and also to accommodate the cash register. Because this is well set off from the wall, the clerks have plenty of room to move about.

The record business here is booming. The department is capably managed by Mrs. Shryock, assisted by Miss Mary Rath. Classical numbers lead in sales volume, and it is noted here that these classical numbers are bought chiefly by regular customers, while transients account for most of the popular sales.

## **Room for “Tomorrow's” Sets**

Partitioned between the rear of the showroom and the repair shop, there is a large room now housing a few consoles, “combinations” and television sets. This room is being planned for the future showing of fine sets, and will be finished in tone-enhancing materials. A mezzanine will be erected over the sound-treated showroom.

Where they'll hear the de luxe sets perform. Showing Shryock's “quality” radio department now being sound-conditioned. Some high grade receivers are still on hand here, and there'll be plenty more in the boom days to come.



# WAY

## Modernistic Disc Display Strong Future Position

As Shryock Radio & Television Co. has been in every branch of radio work except broadcasting, it boasts one of the finest equipped radio repair shops to be seen anywhere. Four skilled servicers are employed, and the organization is never stymied in its endeavor to "keep 'em playing." Having a big stock of parts and tubes, and the best obtainable in testing equipment, repair work is kept rolling.

Efficiency in handling service work is at a peak here. Production methods are modeled after factory procedures. The whole setup is streamlined. Where a needed tube is not available, circuit changing is practiced as a matter of course. This firm gets a good price for its work, charging \$3 per hour, plus 10 cents a mile, lapsed time, door-to-door, on outside calls.

In addition to regular repair work, this organization has done special



Four skilled servicers keep the big bad bottleneck away from Shryock's. Latest and best test equipment helps too. This firm isn't afraid to ask adequate service charges.

marine work on electronic equipment for the Coast Guard and for war plants, and is distributor for a number of well-known manufacturers, including Hallicrafters. The business was founded in 1926. Mr. Shryock is the sole owner.

Shryock Radio & Television Co.,

successful Capehart and General Electric dealer, not only is doing a big job with records and with radio service now, but is investing in the future as well, stressing the "vision" in television and other progressive electronic improvements looming on tomorrow's horizon.

Striking display effects are achieved in this ultra-modern new store. All record stock is visible and each item is priced for customer convenience.



# Turntable Discussion

**Interview With J. J. Hallstrom, Merchandising Manager, Record Division, RCA Victor Division, Radio Corp. of America**

**Q.** Should the dealer anticipate a record sales slump after the war?

**A.** Today records are the mainstay of many a dealer's operation and in some cases this is due to a lack of the other specialty items which the dealer used to carry. Now in postwar with the availability once more of many other lines of merchandise, if some dealers should relegate records to a subordinate position, then we can expect a record slump, specifically for the dealer who eases up on his record merchandising.

As far as the overall industry is concerned it does not seem to be good reasoning to anticipate a slump. Record sales are a direct function of the quantity of turntables in the country. Postwar will see a resumption of turntable distribution. This means increased record sales. Roughly figuring, the market for turntables is around 10 per cent saturated at present. Merely increasing the distribution of turntables to a point of 25 per cent saturation, which is extremely low, would mean a better than doubling of the industry's volume. On this basis alone I should say that the record business faces an exceptionally bright future.

**Q.** What can be done now to assure postwar continued sales?

**A.** Recognizing that dealers are up against very tough problems on delivery there is no reason why careful promotion and intelligent merchandising done now cannot establish these dealers more firmly in the community and enhance their record selling opportunities when merchandise is more freely available. If I were a dealer I would take these "seller's market" days to become more experienced in selling across a broader portion of the catalog. I would avoid the old habits of concentration on a relatively few standbys. By this I mean that while the old standbys may not be available in the quantities demanded, some of the lesser known items may be avail-

able. Sales experience gained in these brackets today will come in handy later.

I would get to know more about my customers. I would recognize that every dollar spent on a record collection increases the importance of records in a customer's mind and leads to future sales. The best way to have a good customer postwar is to have as close a contact as possible with him now.

**Q.** What will the public buy this Christmas?

**A.** It is to be presumed the public will buy almost anything it can lay its hands on. There is already evidence of a very much restricted availability of merchandise. Obviously, then, records will be all the more in demand by a public confronted with innumerable shortage of things it would like to buy as gifts. The attraction of records should be substantial and there should be more meaning than ever in "The gift that keeps on giving." It can't be denied that there will be a greater demand for records than the supply. Here again is an opportunity, however, for dealers to do a related selling job by shopping their distributors for substitutions on favorites not sufficiently available, and for the less popular items which can, none the less, be sold if smartly handled. Dealers would be smart to move in on "shopping" their distributors early.

**Q.** What is the manufacturer doing to promote future record sales?

**A.** I should say that one of the major contributions of our company in the development of the record business was the stimulation which we gave to the widespread distribution of turntables. This we are not doing now, of course, but you can be sure that our plans for postwar involve extensive promotion and merchandising of record playing devices. Currently we are spending considerable money in consumer advertising, advertising

which in respect to the diminished supply of merchandise is hard to justify on a dollars and cents basis. We have, however, a major concern in keeping the idea of recorded music before the public. I should not neglect to point out that we are currently spending substantial sums of money on many Commercial Research projects involving new and more effective ways for packaging, merchandising, promoting, and advertising records. Many of the dealers' basic problems are under intensive study and, as in the case of our pioneer work on self-service and open display, the results of this research will be released to the trade in due time. I might also point out in this connection that we will not be motivated by any opportunism to rush to the dealers with a new idea which will involve their spending money until we have conclusively proved to ourselves that the idea is to the dealer's best interest.

**Q.** What are the chief advantages of self-service?

**A.** I do not like to confine my observations to the exclusive implications of self-service with regard to the record business. Self-service is essentially an extension of the fundamental advantages of open display and therein the record business has been most weak. The advantage of open display is, it seems to me, quite obvious, and that is, you show the customer what you have to sell. This point of view is fundamental in almost every other business whether it be flowers, hardware, table china, books, or silk stockings. In the record business, however, we have for the most part hidden our light under a bushel and with the exception of the relatively few picture albums have exposed only the thin edge of a green stock envelope to the customers' eyes. The extent to which a customer can see what is available is the extent to which he will buy.

As far as self-service is concerned, in its fullest application, the advantage

*(Continued on page 38)*

# It Made Prewar History



Just as it made history before Pearl Harbor, the Recordio will again take the lead in Home Recording-Radio-Phonograph Combinations. Just now,

of course, Wilcox-Gay is busy with war work, but when that is over they will again offer you a new, more sensational Recordio.

## WILCOX-GAY CORPORATION

CHARLOTTE, MICHIGAN

Manufacturers of the Recordio, Famous Home Recording-Radio-Phonograph Combination

RADIO Retailing TODAY • November, 1943

37

# DISC SELLING



• "I sell music and I love it," said Miss Roselle Desnowski, pretty manager of record sales at the Rak Radio Shop, 5142 W. Fullerton Ave., Chicago.

How capable Miss Desnowski has been is seen in the inventory's steady growth. Two years ago when she took over the record department stock amounted to a mere \$100; today the shop's inventory is more than \$1,000.

Miss Desnowski's personality radiates friendliness. "I believe a friendly attitude is most important in business. Nobody enjoys a moody person. In selling music friendliness is especially important."

Much business is done in "populars." Miss Desnowski displays the Hit Parade listing weekly. An "Old Favorites" list is also used as well as publicity on the classics.

This manager is eager to help customers. Occasionally a customer hasn't enough money with him to pay for an album selected. "We always allow the person to take his purchase home after a part payment," said Miss Desnowski. "We have yet to suffer a loss. The only thing we require is that the person leave his name and address."

"Since we're in a residential district, with a high school near by, we do much business with the younger crowd who go in for jive."

In the two years that records have been sold, profits derived from the sale of radios have been replaced by those from records. In the opinion of the owner, Joseph Rak, records are a permanent part of the radio store.

Owner Rak looks to the future when, after victory, he will expand his present quarters. Volume of business being done now makes his plans for the future possible.

## Turntable Discussion

(Continued from page 36)

tages depend on sufficient space being available. A complete self-service incorporates all of the advantages of open display, relieves the record girl to circulate among customers to do a thorough-going selling job rather than spending a lot of her time with her back to the customer rummaging among the shelves. Customers instead of crowding around a counter (and I consider a counter as a barrier to sales) may in self-service circulate about the store doing a selling job on themselves. Self-indulgence is a far more effective sales stimulus than a direct sales effort, and one is far less inclined to resist his own natural inclination to sell himself up than he is to resist a sell-up from a salesman. Dealers will find through a qualified application of open display, or through a complete application of self-service a much broader sales activity across the entire catalog and many items known as "sleepers" will come to life and produce welcome additional sales volume.

Dealers who are concerned about breakage and pilferage have only to visit any china and glassware department of a department store to see the extensive application of open display and the lack of concern for breakage.

### Q. What are the pitfalls of self-service or open display?

A. I should say that the pitfalls might be in an inclination to apply self-service and open display only to those items which the dealer has generally sold well. In other words, I don't think that most dealers will be inclined to go far enough. Then, there will also be a tendency to feel that open display or self-service will automatically perform the job of a sales person. The real function of this new approach to merchandising is to free the sales person's time for more selling, to reduce sales resistance, to

increase the opportunities for sales effort. Anyone who considers self-service as a substitute for sales effort has missed the basic implications of the whole idea.

### Q. What is the best layout for open display and self-service?

A. We are not yet prepared to answer this question. When it can be answered authoritatively I believe that we will be the folks who can do it.

For well over a year we have been conducting extensive tests in actual operation. There are many of our conclusions which we might have rushed to the trade with but we were more concerned with testing them thoroughly. Within the near future we expect to release the real story on open display and self-service.

### Q. How can the sales of record players be most successfully pushed?

A. By considering past history and anticipating the future. Present activities are restricted due to the lack of merchandise. Past history indicates that our company was largely responsible for the real impetus given to the distribution of turntables and this mainly through the Victor Record Society plan. It was from this basic start that most other manufacturers followed in the incorporation of turntable devices and combinations in their lines. As far as the dealer was concerned the function was one of taking a very short profit on the low priced turntable devices in anticipation of continued sales and profit on records to be sold. On combinations the attractions were the obvious ones of the sell-up, the bigger unit sale. Now it seems to me that notwithstanding the anticipated incorporation of turntable units in most instrument manufacturers' lines in the postwar era, the record trade should most actively cooperate in as broad a merchandising program as possible on turntable attachments. We should all, and by all I mean the distributor and dealer, as well as the manufacturer, be willing to consider a turntable attachment or its equivalent essentially as a sales promotional device through which the profits of recurrent record sales are obtained.



## TWO-MAN TORNADO!

**THE BAZOOKA . . . ANOTHER SPECTACULAR AMERICAN "SECRET WEAPON" . . . ANOTHER DRAMATIC STORY OF PHILCO AT WAR**

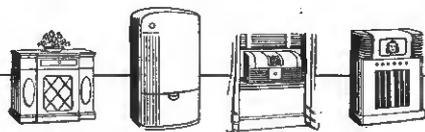


**T**WO MEN AND A BAZOOKA . . . more than a match for sixty tons of steel! Yes, that's the latest story of American ingenuity and productive skill.

A single soldier carries and fires it, his teammate loads it . . . and 60 ton enemy tanks, concrete pill boxes, brick walls and bridges wither under the fire of its deadly rocket projectile. It's an amazing achievement of ordnance design, conceived and developed by the Ordnance Department of the United States Army. And it's another stirring chapter in the fascinating story of Philco at war.

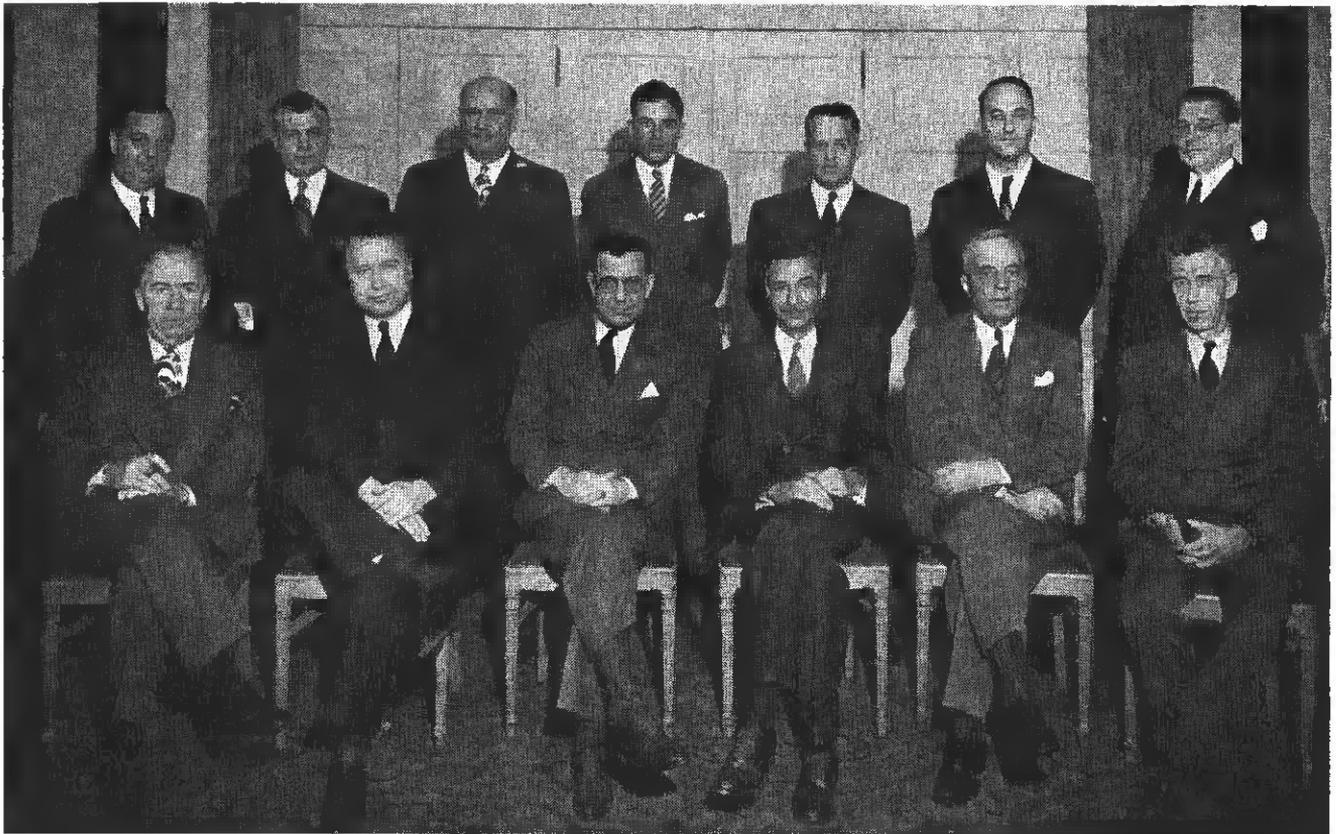
The men and women of the Philco *Metal* Division, whose huge presses produce the metal parts of peacetime Philco radios, have played a leading part in the final perfection and production of the Bazooka. With

their colleagues in the Philco *Radio* Division, they are turning out miracles of war equipment. After victory, their new knowledge and skill will bring you the newest achievements of modern science in radio, television, refrigeration and air conditioning under the famous Philco name.



Philco war research today will produce a greater Philco tomorrow. And, more than ever, the most valuable dealer franchise in the appliance field.

# PHILCO CORPORATION



**Radio Technical Planning Board Members at Recent New York Meeting**

First Row—Paul V. Galvin, president RMA; Howard Frazier, representing NAB; Dr. W. R. G. Baker, chairman RTPB; Haraden Pratt, representing IRE; Bond Geddes, treasurer RTPB; K. B. Warner, representing ARRL. Second Row—E. J. Content, representing FM Broadcasters, Inc.; Fred D. Williams, alternate RMA; A. S. Wells, representing RMA; B. J. Thompson, alternate IRE; H. W. Holt, representing Independent Broadcasters, Inc.; Dr. G. T. Harness, representing AIEE; Frank J. Martin, observer for NEMA.

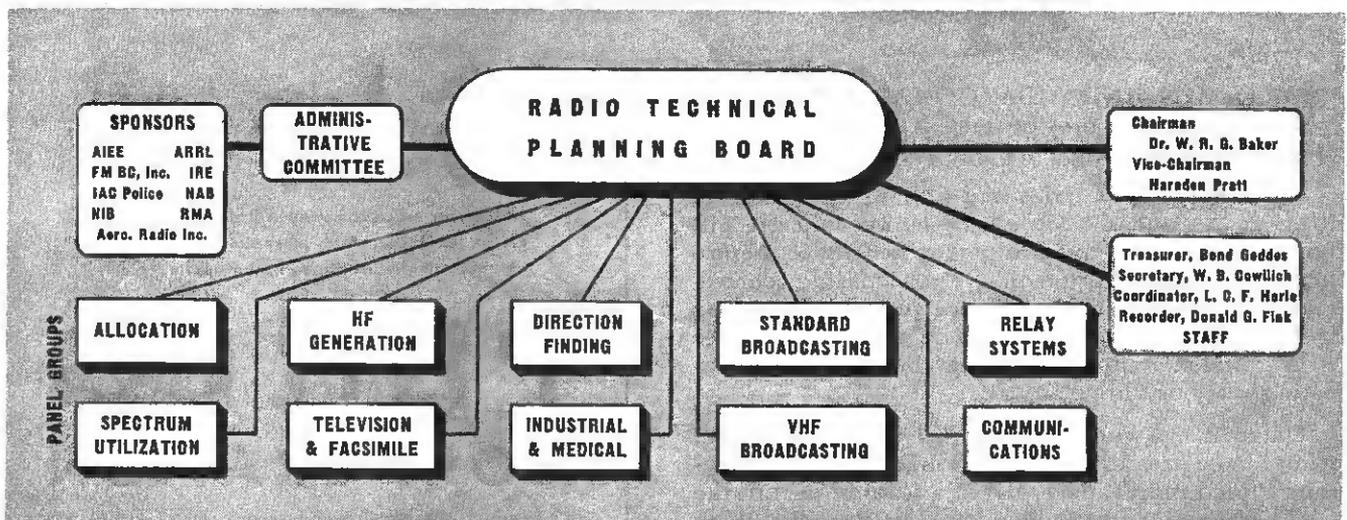
# For Postwar Radio

● To study postwar technical radio problems, the new Radio Technical Planning Board, sponsored by the Radio Manufacturers Assn., and the Institute of Radio Engineers, held its first meeting in New York recently.

Dr. W. R. G. Baker, a General Electric Co. vice president, was elected chairman. Haraden Pratt, vice president and chief engineer of Mackay Radio, and past IRE president, has been mentioned as vice

chairman, but no definite appointment has been made as yet. Bond Geddes, executive vice president of RMA, was elected treasurer, and the new secretary is William B. Cowlich, IRE. L. C. F. Horle is "coordinator."

Planned set-up of the RTPB, including some appointments not yet completed.



# Why Is an RCA Electron Tube



## Like Sherlock Holmes?



THINGS that were beyond the ken of ordinary mortals were "elementary" to the man in the fore-and-aft cap.

And why was this?

Simply because Holmes could analyze more deeply, see more thoroughly into the core of things, be more observant of little things than anyone else.

A modern Sherlock Holmes is the RCA Electron Tube employed in an electronic device to check tungsten wire leads for radio tubes.

With this difference: Sherlock master-minded *after* the crime. The electron tube in this device is the Magic Brain that detects microscopic flaws in wire leads *before* they can cause harm!

For with the aid of this device, powered with an RCA electron tube, a tiny flaw in a wire can be discovered instantly—and the faulty wire rejected before it finds its way into a completed tube assembly resulting in a leaky tube.

This is electronics in action *now*—at RCA.

Tomorrow many of you Distributors and Servicemen may be selling, installing, and servicing electronic equipment. The "electronic future" now developing should find you in an enviable position to cash in on your experience and familiarity with radio tubes, circuits, and parts. RCA, too, will be playing a leading part in tomorrow's electronic era—*because the Magic Brain of all electronic equipment is a tube—and the fountain-head of modern tube development is RCA! RCA Victor Division, RADIO CORPORATION OF AMERICA, Camden, N. J.*

**TUNE IN "WHAT'S NEW?"—RCA's great new show, Saturday nights, 7 to 8, E.W.T., Blue Network.**



To detect flaws in wire leads for RCA tubes, wires are tested by placing them in the magnetic circuit of one of two radio-frequency electronic oscillators. These oscillators are coupled to produce a beat frequency which is dependent on the relative frequencies of the two oscillators. Since a faulty and a perfect wire produce different beat frequencies, as shown by an output meter, an observer watching the meter can instantly detect and reject the faulty piece.



## RADIO CORPORATION OF AMERICA



With both legs amputated and both hands crippled, Nicholas De Vries, foreground, carries on, with Mrs. De Vries helping. Radioman Peterson, beside her, completes staff.

and the work is turned out in record time, thus keeping customer goodwill at a high level, and bringing in quick cash returns for the work done.

Naturally, some sets represent fairly difficult problems, but there is no particular difficulty experienced in repairing them. "We never have sets waiting here for parts or tubes," said Edward Peterson, Arlington's serviceman, who's been in the business for the past 15 years. "Circuit changing is the answer to that situation," he declared.

Arlington Radio Service is now open evenings and Saturdays. Mr. De Vries is carried to his bench at least once a week, and Mrs. De Vries spends a lot of her time in this busy shop, where she does estimating, testing and some repairing.

#### **Repair Appliances Too**

The De Vries organization does repair work on major and minor appliances as well. During normal times, Arlington did a big appliances sales business. Mr. De Vries won recognition for selling the first hundred of a well-known make receiver in Brooklyn. Refrigerators were delivered here in carload lots. Now, Arlington has a few small appliances on hand.

## **Can't Stop Dealer De Vries!**

• Nicholas De Vries, who for the past 20 years has operated the Arlington Radio Service, 158 Jamaica Ave., Brooklyn, N. Y., isn't quitting, three strikes or not! In an endeavor to arrest the ravages of an attack of arthritis, De Vries allowed himself to be stung 871 times by bees. He underwent an attack of malarial fever, induced by the sting of infected mosquitos, and when these drastic medical treatments and all others failed, poor circulation made it necessary to have both legs amputated. The right leg in 1941, and the left in 1942.

With money set aside to buy artificial legs, De Vries put his savings into war bonds. "To hell with the legs," he declared. "They'll have to wait for the end of the war, because henceforth I'm going to put all my savings in bonds."

#### **No Undue Repair Delay**

And De Vries isn't going to quit radio servicing either. "In these trying times people need radio," he said, "and Arlington Radio Service is going to keep the sets playing."

There's a big jam of work in his shop, but there is no undue delay

The last radio console was sold a few weeks ago.

The De Vries organization buys used radios and other appliances, and repairs them for resale, and has a fairly large stock on hand now.

Present policies of the shop include definite estimates in advance, a 50 cent charge for testing sets in the shop and absolutely no credit.

"I love the radio business," said De Vries. "I'm sure I wouldn't stay in it now if I didn't." De Vries also loves his country, and hopes that the publicity about him will result in the sale of a lot of bonds.

# RADIONICS

with its subdivisions of Electronics, Radio, etc.,  
calls for Smart Post War "Radio Line Strategy"

POST WAR PLANNERS among radio dealers are asking, and may rightfully ask:

"What will a post war radio receiver look like? What will the Zenith Radio lines of the post war period look like?"

While we do not believe in the "blue-sky" type of crystal gazing, we do believe in making concrete plans for the future.

However, these questions can not be specifically answered today. For us to do so, publicly, would be to reveal the cards we hold in our hand, to our great competitive disadvantage.

But such questions can be answered in another way. The answer to them lies in the great and aggressive past of Zenith line and model triumphs, which have brought Zenith to the top of the radio industry.

You are familiar with "Zenith Line Design Strategy" and have profited by this smart strategy.

Every Zenith replete with new and different features—and plenty of them:— the Zenith Big Readable Dial, Radiorgan, the scientific tone blending device, Split Second Tuning, Consoltone, and many others in Zenith's long history of "firsts."

Zenith's "Prosperity Line" of early 1941—and the Zenith 1942 line—the latter the finest all-around line ever designed and engineered—are fine examples of this strategic thinking.

Now—let's "put the question" as have other advertisements of this series.



ZENITH RADIO CORPORATION, CHICAGO 39, ILLINOIS

**BETTER THAN CASH**  
U. S. War Savings Stamps  
and Bonds

**ZENITH**  
LONG DISTANCE RADIO  
RADIONIC PRODUCTS EXCLUSIVELY—  
WORLD'S LEADING MANUFACTURER

## Question:

Which of my radio lines in pre-war times, gave me the "Line Design Strategy" enabling me to best merchandise the line as a whole?

- Best Line  
Design Strategy \_\_\_\_\_
- Second Best Line  
Design Strategy \_\_\_\_\_
- Third Best Line  
Design Strategy \_\_\_\_\_
- Worst Line  
Design Strategy \_\_\_\_\_

Answer these questions genuinely. Spend some time in thinking about them—and you'll be a long way toward crystallizing your own post war thinking about radio lines.

Think about design. Think about what the post war prospect will want. Think about what has sold well in the past. Think about models—but also about merchandising an entire line of models.

Analyze the "line design strategy" of your manufacturers. Get the answers. Put them down. Write Zenith if you have other questions. We shall try to answer them sincerely.

# Jobbers On The Beam

## Golling-Alexandre Is New Wholesale Firm

Jules E. Alexandre, sales manager for the past nine years for Pierce-Phelps, Philadelphia radio and appliance distributors, has opened his own wholesale distributing firm in Harrisburg, Pa., in partnership with G. G. Golling, president of the Gable Co. there. Called the Golling-Alexandre Co., Inc., Mr. Alexandre disclosed that his new firm has been appointed exclusive wholesale distributors for the Crosley line of radios and refrigerators in the Central Pennsylvania territory, with offices and showrooms at 111-117 So. Second St.

One of the first steps taken by his new company, he said, was the setting up of a service department equipped to give complete repair and rebuilding service for radios and appliances.

## Sun Radio Co. Changes Its Name

In order to associate the firm's activities more closely with the rapidly developing electronic field, the Sun Radio Co. of 212 Fulton St., New York, long-established distributors of radio and electronic supplies, has changed its name, and henceforth will be known as Sun Radio & Electronics Co.

Established in 1922, the company is presently devoting its efforts to furnishing priority requirements for radio-electronic supplies to industrial organizations, research laboratories, schools, colleges, training centers, U.S. Army Signal Corps, U.S. Navy, telephone-telegraph companies, broadcasting stations, public utilities, civilian defense leagues, aircraft plants, shipyards, railroads and others engaged in the war effort.

## Emerson-New York Opens Parts Display Room

The new and attractive display of radio parts and tubes in the dealer sales department of Emerson-New York, Inc., 111 Eighth Ave., New

York, is making a big hit with the constant stream of dealers and servicemen visiting there daily.

Featuring well-known national lines in addition to Emerson parts, prominent display is given to hundreds of items regularly carried in stock. The dealer counter is manned by an experienced staff.

## Takes On a New Line

Philco Distributors, Inc., 1717 Sansom St., Philadelphia, Pa., local distributors for Philco radios and appliances, has taken on a new line. The firm has been appointed distributor of the Locke Stove Co., Kansas City, Mo., for the line of Warm Morning Coal Heaters.

## HEADS A WPB SECTION



Gerald W. (Jerry) Weston, who has been associated with the National Electrical Contractors Assn., has been appointed chief of electrical repair section, service trades division, in the Office of Civilian Requirements, WPB.

## Says Parts Situation Improving Daily

Samuel Gross, president of Emerson-New Jersey, Inc., Newark, N. J., reports that the radio parts situation is improving daily, and states that his firm is doing all in its power to "keep them listening" by supplying

the parts necessary to "keep them working."

According to Mr. Gross, Emerson-New Jersey is doing a splendid business in cabinets and tubes for replacement, with servicemen and dealers coming in from all over the state to pick up needed supplies.

About a month ago this organization added the Cornell-Dubilier line to its stock, and also a big assortment of phonograph needles, ranging in price from 50 needles at 25 cents to individual needles at \$1.50.

## Staying in Business

In a series of interviews with prominent distributors appearing in the "anniversary" issue of Zenith's "Radio-organ," the fact that dealers are staying in business is highlighted. Many suppliers have made surveys, and find the dealer mortality rate very low. Among firms reporting this encouraging condition are: Wayne Hardware, Fort Wayne, Ind.; Edgar Morris Sales Co., Washington, D. C.; Walker Electric Supply Co., Terre Haute, Ind., and Seattle Hardware Co., Seattle, Wash.

## Jobbers Successful With Substitute Lines

Distributors are really going to town with substitute lines, and despite shortages continue to keep in close contact with dealers, offering them alternate selling items and merchandising advice.

Reinhard Bros. Co., Minneapolis, Minn., has taken on paint and linoleum. Eskew, Smith & Cannon, Charleston, W. Va., has added a complete line of furniture to offer dealers, while Morley-Murphy Co., of Milwaukee, is stocking industrial items, furniture, paint and general housewares.

Other distributors active in selling other lines include 555, Inc., and Williams Hardware Co., both Little Rock, Ark.; Miller-Jackson Co., Oklahoma City, Okla., and Onondaga Supply Co., Syracuse, N. Y.



## Remember when you went Sunday driving?

**Y**OU told Joe at the gas station, "Fill 'er up," and you drove fifty miles to your favorite picnic spot.

Now you know that you took this great American institution too much for granted. What about that other great American institution — the radio jobber?

Because of the war he can't give you the sudden service you took for granted. And, chances are, he is helping along the war effort with what reserve stock and contacts he has.

*For example, just before our attack on Attu, certain radio tubes were sorely needed. The factory could supply them in 90 days. The Signal Corps appealed to a West Coast jobber who found them after contacting seven different branches of the armed services with which he did business. The tubes were shipped on time to do their stuff in the Aleutians.\**

You, too, would join Sylvania in congratulating the radio jobber if you knew all the facts about his wartime service — usually rendered in an emergency, often at the expense of good will.

The radio jobber plays fair with you, to the best of his ability, with what he can get. Always remember that he, like every other patriotic American, must put first things first in the matter of supplying war plants and the armed forces.

When the war is over, manufacturer, jobber and retailer will be the team to supply a great market for radio and television.

/ / /

*\* An actual case from our files, details of which must now be withheld for reasons of military security.*

••••• **SYLVANIA**  
**ELECTRIC PRODUCTS INC.**  
 Emporium, Pa.

RADIO TUBES, CATHODE RAY TUBES, INCANDESCENT LAMPS, FLUORESCENT LAMPS, FIXTURES AND ACCESSORIES, ELECTRONIC DEVICES  
 RADIO Retailing TODAY • November, 1943



S. T. Murray, proprietor of Rex Radio Service, Birmingham, Ala., left, and helper, work on a car radio—and not out in the weather, either.

## ***They Really Like Them!***

***Car Radio Repairing, Bugaboo for Many Radiomen, is Specialty of Alabama Firm. Drive-in Feature a Hit. Offer Customers 24-Hour Service***

• Catering to the automotive radio business is a specialty with Rex Radio Service, Birmingham, Ala. Like a garage, it has a drive-in through the front, so car radios may be worked on out of the weather. There is room in the shop for 3 cars.

S. T. Murray, proprietor, of the concern was "raised" on Birmingham's "automotive row," formerly working for his father who operates a tire recapping plant and store. From the day he opened his radio shop he began to get automotive radio business, owing to his location and the fact that he was well known in automotive circles.

As the business developed he saw the need for drive-in facilities and in opening a new place recently he in effect built it around the drive-way. In arrangement it is somewhat like the deck of an aircraft carrier with

shop benches and shelves being located on one side and the drive-in or "take off" space occupying the central area. Now he handles auto set repairs for a number of automobile dealers and garages as well as taking care of the general public.

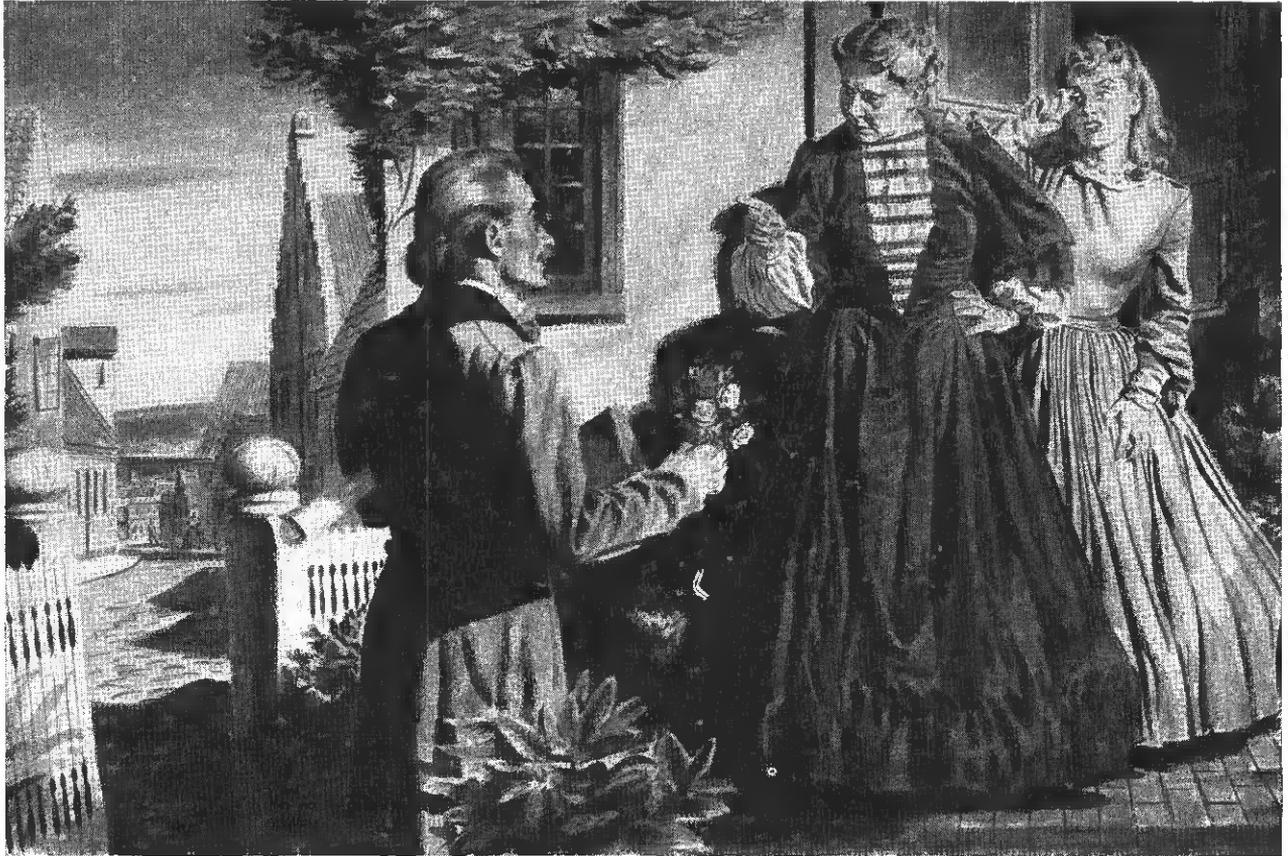
Mr. Murray said that more than 60 per cent of his work was on automotive sets. He likes to work on this type of set and that's why he specializes in it. His chief associate, C. M. Mink, was formerly associated with an automotive electric concern, and he too likes this specialty.

The policy of the company is to give 24-hour service in which cases most sets are repaired without removal from the car. If the job takes longer, then the set is usually removed so the owner can have use of the car. About 60 per cent of car radio troubles can be attributed to

the vibrator or buffer connection, Mr. Murray said. Another 30 per cent can be traced to rectifier trouble and the balance to miscellaneous causes, including grounded aerial. Because troubles are usually centered in these areas, the set can be repaired, as a rule, more quickly than is the case with house radios. This concern has a good stock of parts for auto sets.

Although no new radios are available, Murray still makes quite a number of installations, mostly where an owner has traded his car for another and wants to switch the radio.

After the war, Murray figures that more cars will come equipped with radios, but there will be installations to be made in some and service on all of them from time to time. He expects to continue to specialize in this field and to keep his location on automotive row.



One of a series of dramatic incidents in the lives of immortal composers, painted for the Magnavox collection

## How the world's greatest love song was born

"HE is a nobody," said her mother, "he has nothing, and he writes music that nobody cares to listen to." After all, only two copies of his first printed songs had been sold.

Barred from the house of his beloved, young Edward Grieg sought refuge in his art and composed the most popular love song ever written—the unforgettable *I Love Thee*.

Eventually, however, he succeeded in marrying the girl who had inspired the song—and later achieved international renown as a composer. The simple folk-songs of his native Norway were the inspiration for much of his finest work. He interpreted the spirit of

his homeland with exquisite lyrical feeling.

To appreciate the true worth of Grieg's *I Love Thee* or *Peer Gynt*, or any of the other musical treasures inherited from the past, you should hear them played by Magnavox radio-phonograph. Know the pleasure of having an instrument in your own home that so worthily reproduces the music of the immortal composers.

In the Magnavox rendering you will instantly remark an amazing clarity. Its trueness of tone captures all the subtle beauty that is the essence of great music. This explains why Rachmaninoff, Kreisler, Ormandy, Horowitz, Rodzinski and many of the most illustrious

masters of our time have chosen the Magnavox for their own personal instrument.

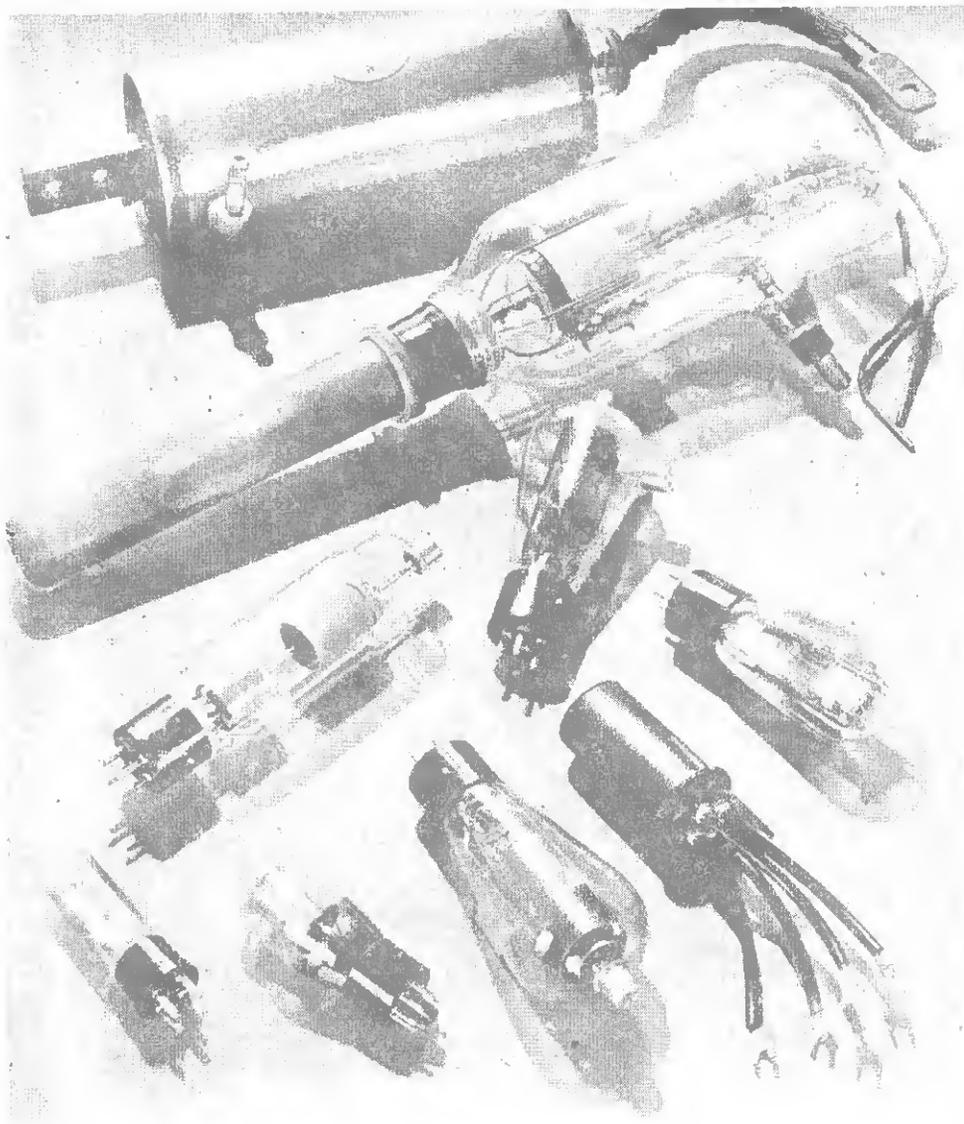
 Today the Magnavox Company is producing electronic and communication equipment for the armed forces and music distribution systems for warships—and has won the first Navy "E" award (with White Star Renewal Citations) to be given to an instrument manufacturer. When the war ends, Magnavox will again take its place as the pre-eminent radio-phonograph combination. The Magnavox Company, Fort Wayne 4, Indiana.

Buy War Bonds For Fighting Power Today — Buying Power Tomorrow

**M**agnavox. *The choice of great artists*  
RADIO PHONOGRAPH



► Although the manufacture of the Magnavox radio-phonograph has been discontinued for the duration, some dealers still have a few models available. Inquire at your nearby Magnavox dealer's. Now that opportunities for outside amusement are curtailed, it is more important than ever to have good music in the home.



Industrial tubes including the ignitron, thyatron, phototube, water-cooled triode and high vacuum control tubes. Courtesy General Electric Co.

phenomena. Electron tubes are used both to start these effects and to measure the results.

The tubes do not know or care whether they are plugged into measuring circuits or process controls, so that the accompanying RADIO RETAILING TODAY chart is planned to cover the general conditions met with in all such fields.

A tube itself is a controlled instrument; some sort of driving potential must be applied and some other effect is delivered. In either case there is a wide variety of functions that can be tied up with a tube's characteristics.

#### Eight Basic Sections

In all sections of the chart many symbolic representations are made and the actual circuits may contain other necessary equipment, such as operating power supplies, etc. One symbol, however, may be new to some; the inclusion of a small dot within the tube symbol indicates a gas filled tube.

Those circuits in the left half of the chart are dependent on amplitude characteristics. That is, some effect which deals with displacement, either electrical, magnetic, physical or in any other field of technical activity, is called upon to control another

# USING TUBES IN

● Many high speed and automatic manufacturing processes are calling for adequate control and measurement apparatus. Here is a new frontier for the ever useful vacuum tube. When manufacturing processes and methods were relatively slow, mechanical control was in most cases adequate. Modern production systems require fast acting electronic control and measurement methods to keep up with the output.

The radio serviceman of today will be the Electronic Maintenance man tomorrow. His contact with radio tube circuits of many types and his general knowledge of the functioning of electronic apparatus makes the serviceman the ideal candidate for this important work. In order to promote this coming trend, RADIO RETAILING TODAY has prepared a four-page chart of circuits included as a supplement with this issue to serve as a basic lead to the knowledge of circuit functions that will be required. The material given in this electron

tube control chart will prove useful in showing the trend of applications of radio tubes to industry.

#### Industrial Electronics

The unwritten rule of design is "when some unusual effect has to be provided, find some way to make an electron tube do it."

In a majority of industrial problems electronics deals with combination of vacuum, gaseous, or photoelectric tubes with many types of presently used controls. Due to the nature of an electronic device itself such correlation is first concerned with electrical control appliances: relays, electric switches, motors, solenoid magnets, etc. The mechanics of physical movements in all other fields is but little different, from a basic viewpoint, and it is but a step further to bring into the picture such matters of temperature, color, magnetism, acoustics, noises, humidity, pressure and dozens of other physical

amplitude effect of a different magnitude and possibly at a different rate.

In section (I) at the upper left, basic methods for securing linear conversion are listed, (II) methods of selective control where the control transfer occurs only when some condition of threshold level, rate of change, frequency, etc., is reached. In (III) is shown basic methods where tubes are used to introduce non-linear factors for stabilization or other control functions. (IV) shows how tubes are used to produce outputs following definite non-linear expansion or contraction laws.

In the right half of the chart are numerous conversion systems using tubes wherein some time factor is involved. The sections take up timing circuits (V) which initiate single or a series of pulses having specific characteristics, methods whereby the controlled function depends upon the integration (VI) of the varying controlling effects, or the converse where the output is proportional to the rate-

# ELECTRONIC

# MAINTENANCE

## TODAY

★ RADIO, TELEVISION AND INDUSTRIAL SERVICE ★

of-change (VII) of the controlling effect, or dealing with either delay or phase (VIII) conditions.

These circuits are all based on the use of commonplace radio tubes. No reference is made to any of the special-purpose electron tubes that use beams of electrons controlled as to their direction or velocity as distinguished from the control of their density.

### Linear Amplitude Magnification

This application uses a vacuum tube in its most elementary form—as an amplifier. Industrial usage generally deals with problems of handling large amounts of power and of selecting a tube and its operating conditions to match a given load. In common with most other radio circuit operations, the impedance of the load will depend on plate resistance, and for a first approximation, the value of the anode circuit loading listed in

pedance load. Here, if the impedance of the cathode circuit is designated  $R_k$ , the input impedance is —

$$Z_i = R_k / (R_k G_m + 1) \text{ where } G_m \text{ is in mhos.}$$

When a multistage amplifier is used at low frequencies, a two-electrode gaseous tube such as a neon lamp is frequently used as an interstage coupling link, Item 5. A higher bias voltage on the second tube makes up for the current passed by the lighted lamp. Although, unlike the communication problem, amplifiers in industrial applications may not have to handle a wide range of frequencies, certain conditions may exist where improved operating characteristics or a wide band of frequencies may have to be covered. Inverse feedback amplifier connections, of which there are numerous types, may be used. One plan, Item 6, uses a shunting connection to feed back a signal from the output of a tube to its input cir-

In Section II certain useful arrangements are shown wherein tubes function only when certain conditions are met. Item 9 shows a basic limiter circuit where the pulse level output remains constant no matter how much the input exceeds a predetermined level. This circuit is also used in FM receivers. As shown in the curve relation 10, negative swings are clipped when the signal exceeds the grid cut-off point, while positive swings are clipped due to a high bias appearing in the grid circuit as soon as the grid "goes positive."

### Tubes as Discriminators

Another arrangement which will produce similar effects (Item 11) uses a double rectifier arrangement. This is a very early system for reducing radio interference in communication receivers. The two diodes are connected in parallel but series opposing. If both tubes had identical characteristics they would balance out. However, one diode is biased for high sensitivity and the other so that it will function only on strong signals. There is, therefore, a certain operating range over which the balancing effect is ineffective.

A basic discrimination circuit of value, which makes a circuit operation immune to minor variations in control signal (interference, etc.), is that in Item 13. Here a tube is biased so that it will act only when a strong signal is received.

### As a Circuit Component

Another circuit which has the reverse effect, Item 14, passes weak signals but is more or less immune to strong ones. This action is due to an auxiliary pair of tubes (6SJ7 and 6H6) which take note of the incoming signal levels and produce a bias potential that chokes off amplifier action in the 6L7 tube when the signal gets too strong. The level at which this occurs is adjustable. The resultant output can even show "voids" when strong overloads occur. This must be considered when the use of this circuit is contemplated. It is a common form of "static" reducer in communication receivers.

In Section III are listed a few  
(Continued on page 50)

## INDUSTRY

standard tube characteristic tables can be used.

Item 1 shows the basic tube circuit with a load connected in the plate circuit. The impedance of the grid circuit can be either low or high, as required by the set-up, since a grid is a voltage-operated electrode. Generally speaking input impedances of more than one megohm should be avoided as many circuits become unstable with higher values.

A vacuum tube is sometimes used as an impedance converter (Item 3) when a low impedance load is to be supplied.

Item 4 is a system of connecting a low impedance source to a higher im-

pedance load. Item 7 indicates a series feedback connection permitting a potential due to the anode current in the last stage to be fed back to a previous stage with correct phasing to improve the amplifier characteristics.

A multistage amplifier wherein the successive tubes are coupled through condensers will not successfully amplify frequencies below a few cycles per second. Item 8 shows a two-stage amplifier without coupling condensers that will amplify direct-currents of a slowly varying nature as well as higher frequencies. A VR-150 regulating tube prevents the current through the final tube from adding degeneration to the first stage.

### ELECTRON TUBES FOR CONTROL

The four-page supplementary chart with this issue is a source of basic circuits and facts for radio and electronic maintenance men. Study it in connection with this article.

## TUBES IN INDUSTRY

(Continued from page 49)

basic applications of electron tubes as circuit varying and stabilizing elements. A pentode has the very interesting characteristic that the plate current passing through the tube is practically independent of the voltage applied (at least when the latter is greater than about 50 volts). Item 15 calls attention to this property where slope of the plate voltage-plate current curve is zero. Tube characteristic curves for any pentode show the conditions where this is true and those whereby the current level can be pre-selected.

The use of a tube as a variable resistance is also common (Item 16). In Item 17 is shown a practical application of a tube as a resistor. Here a triode is connected in series with the load. Its control grid is coupled to a voltage regulator VR-105 and an amplifier tube (6JS7) in such a way that any change in the input voltage or any change in the load factor is immediately noted and the resulting voltage change in the output corrected. These stabilizers for power supplies are in wide use in many fields of activity.

A tube can also be used as a negative resistance. Item 18 shows a system of connections where a negative resistance element can be applied to another circuit, using a feedback connection. Here  $E_c$  must be several times as large as  $E_p$ , and  $E_c$  is about  $0.1E_c$ . There are many variations of this effect and many applications of value in industrial control. Item 19 shows the peculiar curvative of the characteristic curve of the tube wherein a decrease in voltage at  $X$ , results in an increased current. Negative resistance effects occur in this region. This is characteristic of tetrodes.

The use of a vacuum tube as a variable impedance is shown in Item 21 where modulator tubes  $T_1$  and  $T_2$  alter the operating characteristics of the self-excited oscillator  $T_3$ , to produce an output whose frequency shifts in unison (and if desired over quite wide ranges) with potential variations applied to the input circuit of the modulator tubes.

In Section I arrangements were shown wherein a linear relation exists between the input and output levels of a tube. In many control functions it may be necessary to alter this proportionality factor in accordance with some other law. Section IV lists a few electronic possibilities along this line. A general circuit, Item 22, which permits the magnification factor to increase as the input increases (expansion) or to decrease as the input increases (com-

pression) at will, by using the switch, and according to an adjustable incremental rate.

Other circuit elements having non-linear characteristics can be combined with tubes to produce similar effects. Item 23 shows copper oxide or selenium barrier layer cells (which have a non-linear input-output characteristic) connected as a cathode load (see Item 3). This circuit is useful in making a single instrument scale cover large ranges in the applied control level. Item 24 shows a similar effect using vacuum tubes of the double-diode type.

Items 25 and 26 show typical circuits using tubes of the remote cut-off type, which have been purposely designed to have non-linear input-output characteristics. There are numerous styles of tubes with such characteristics available. In order to function in this way, a separate rectifier is provided on each stage, to provide a bias which becomes more negative as the signal increases. These tubes can be adjusted to show logarithmic characteristics over a certain range, but several stages can be connected in tandem to produce logarithmic action over wide ranges (Item 25).

A tube can be connected (Item 27) so that any input signal is amplified and rectified and the rectifier output connected so that it will block off the amplifier action if the signal gets stronger than a certain value. In 27, the relay releases when an appreciable signal is applied. The variable resistance  $R$  which can be of the order of one megohm can be used to adjust the threshold of this effect.

### Circuits Involving Time

In Section V numerous arrangements are listed by which a delay



"Madam, with tubes and parts what they are, it would be simpler for you to get a new husband."

function can be introduced. Simple RC (Item 28) and RL (Item 29) networks are common in all kinds of electrical circuits. They are quite effective in connection with vacuum tube arrangements since the latter are usually high impedance devices and substantial delay action can be obtained with high  $R$  values even if the  $C$  value is small. Inexpensive combinations are therefore available.

There are numerous low-frequency oscillator arrangements where a series of pulses having prearranged intervals can be generated for timing purposes, or if desired a single pulse can be produced after a given delay for process control.

Such circuits are used in weld timing, cathode ray time-base generators, inverter devices, and other applications. Item 30 shows a self-excited oscillator that generates a few cycles of energy charging up the condenser  $C$  by grid rectification. This charge has to leak off through a high resistance  $R$  before oscillations can start again. This intermittent recurring action is controllable by the adjustment of RC combination. In 31 the condenser  $C$  is quickly charged by thyatron and slowly discharges through  $R$ . In 32 it slowly charges through  $R$  and rapidly discharges. In either case a relay in series with the condenser will operate each time the thyatron fires.

### Electrical Integration

The recording of the cumulative or resultant value of a varying quantity can be accomplished electrically in several ways. A simple LC filter changes a rapidly pulsating potential into a more or less smooth one. Integration or averaging circuits can also be based on  $L$  and  $R$  values (Item 36) or RC values. In Item 37 an electrometer tube (one arranged to have no appreciable grid current when used at low anode potentials, say six volts, so that no grid leak need be used) connection is shown. In this application, light, as from a star, permits a photocell to slowly charge on  $C$  by rate of change of anode current as indicated by the relation shown at Item 37. At frequent intervals it is necessary to discharge  $C$  using a key or switch.

A similar use, Item 38, permits the charge to accumulate on  $C$  for a definite interval whereupon it is discharged through the tube input circuit. The tube and its attached load are ballistically operated.

A curious circuit, used at times in electronic counting of discharge rates (as of alpha particle ionization effects) is the flip-flop circuit in which one or the other of the tubes is always operated. A suitable pulse applied to the input circuit will cause

(Continued on page 56)

Miss Alma Kraushaar, Manager, Record Department, Haynes Griffin, New York.



# HAYNES GRIFFIN, MADISON AVENUE

## —CAPTURES THE CARRIAGE TRADE



Attractive interior of Haynes Griffin store on Madison Avenue.

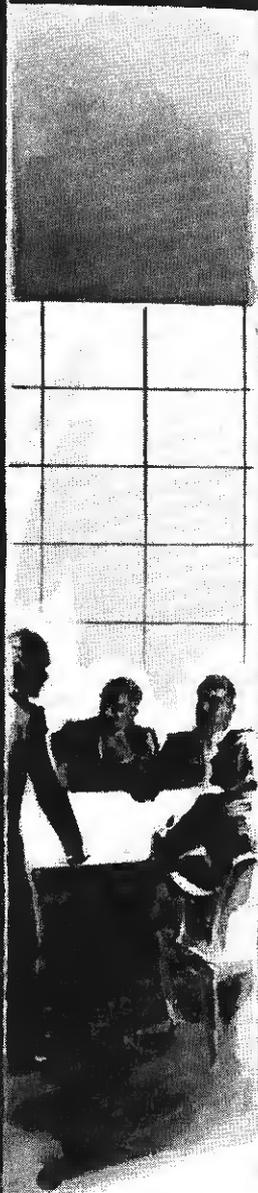
**S**UCCESSFUL phonograph record retailers on Madison Avenue—and Park and Fifth—merchants responsible for sales to New York's better-class customers—long ago recognized the enormous, steady appeal of such artists as Hildegard, Carmen Miranda, Jean Sablon, Richard Tauber, Mary Martin and certain others, recorded exclusively for the Decca Personality Series. . . .

If you want to attract and hold more of the "upper-bracket" business in your community, feature these records in tastefully designed, eye-catching albums. Talk to your regular Decca Representative.

### DECCA DISTRIBUTING CORPORATION



*Majestic*  
CONFERENCE ROOM



Sit in with  
Majestic's  
post-war planning  
conference

  
*Majestic*

**MIGHTY MONARCH OF THE AIR**

*In Wartime as in Peacetime*

**Write your letter now!**

**\$1,000 PRIZES IN WAR BONDS**  
for your assistance

**Contest closes  
December 31**

Majestic announced its \$1,000 idea contest last August. It's been going, going, and soon, December 31, 1943, it will be GONE. But where's the bid from YOU?

Listen, men, this is more serious than just a friendly War Bond competition. This is far more—more to you—than just another prize contest.

This is your opportunity to express yourself on what you consider sound, business-like radio merchandising policy for post-war years. Now is the time to crystallize thoughts you may have which can help shape merchandising and distribution policies that will make the future position of the radio distributor and dealer stronger, sounder and more profitable than it has ever been in the past.

\$1,000 worth of War Bonds is only the ante in the game. The REAL PRIZES for which you can and WILL receive consideration, if you wish it so—will be coveted dealerships under Majestic's Post-War Controlled Distribution Plan.

What is that plan, and why so valuable?

Well, the plan is just what it says and it's valuable for the same reason.

Controlled Distribution means that dealerships will be limited. It means that Majestic Distributors will select and negotiate with active, experienced, capable dealers, qualified to represent the post-war Majestic Radio with constructive merchandising methods.

It means that you will be supported, first, last and always with a fair margin—with a large measure of protection against UNFAIR COMPETITIVE ATTACK—that you will have the backing of sales-minded factory executives who regard the position of the independent distributor and carefully selected dealers as the key salient in the first line of the drive for sales.

It means, also, in your arsenal of "sales weapons" you will have that combination of features, style, appearance and value that will appeal to the public—*instantly*.

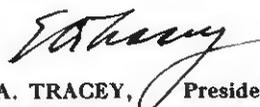
Put on your thinking cap. Let us have your answers to the three questions below—at once! These questions should stimulate your own post-war thinking—and will be a valuable check against Majestic's Post-War Plans.

**\$1,000 Prizes in War Bonds for Most Helpful Answers to These Three Questions**

1st Prize \$500 maturity value; 2nd Prize, \$250 maturity value; 3rd to 13th, \$25 maturity values. Every one is eligible. Contest ends December 31, 1943. To stimulate YOUR post-war thinking, and to check OUR post-war plans, Majestic offers prizes for the most helpful answers to these questions:

- (1) What types of radios will be in large demand in YOUR locality immediately following victory?
- (2) In what new features or new merchandising policies are you most interested at present?
- (3) What kind of advertising support do you believe will be most helpful to you?

Competent judges will read your answers. It's facts and ideas, not rhetoric, that will count. If any two prize-winning letters are considered by the judges to have equal merit, duplicate awards will be made. Write your answers to these three questions—mail them to me personally, today!

  
E. A. TRACEY, President

**MAJESTIC RADIO & TELEVISION CORPORATION**

2600 W. 50th Street

Chicago 32, Illinois

*Builders of the Walkie-Talkie. Radio of The Firing Line"*





# The extra measure of GAROD stamina

Garod radios require less attention today and give better-than-average reception. This is due to the extra measure of stamina inherent in all of our sets.

Since 1922, we've been doing our own thinking, engineering, building, and testing. Our plant is largely self-contained, equipped to make the critical components that go into the construction of Garod radio sets. And our sets are custom-crafted, not rushed through on a mass-production basis.

Currently, Garod is producing highly complicated apparatus for military use. It may be interesting to note also that in order to speed war production many leading radio manufacturers are testing their own products with equipment designed by the Garod laboratories. Some day, all of our facilities will again be employed for peacetime work. Then, distributors and dealers will find an all-inclusive Garod line, more desirable than ever before. Inquiries regarding post-war franchises are invited.

*Buy an extra measure of security . . . invest in war bonds*

## **GAROD RADIO**

**FOR THE EXTRA MEASURE**



**GAROD RADIO CORPORATION, 70 Washington Street, Brooklyn 1, N.Y.**

# Service Notes

• Radio-electronic maintenance men are finding that they can earn a larger profit and gain more customer good-will through a careful pricing system.

The Radio Equipment Company, 1415 W. Franklin Avenue, Minneapolis, Minnesota, publishes a complete system of flat rate schedules for the

tem. For instance, Rate No. 204, Bookkeeping Charge \$0.25 was borrowed from the refrigerator trade. This is for carrying a repair job or service call on the books for a regular monthly billing when the customers credit is OK. This is a logical charge to minimize bookkeeping and is permitted by the OPA even

Maryland \$2.00, Massachusetts \$2.32, Michigan \$1.83, Minnesota \$1.98, Mississippi \$2.75, Missouri \$1.81, Montana \$2.61, Nebraska \$1.70, Nevada \$1.81, New Hampshire \$1.50, New Jersey \$2.10, New Mexico \$2.50, New York \$2.21, North Carolina \$1.87, North Dakota \$1.50, Ohio \$2.51, Oklahoma \$1.99, Oregon \$2.25, Pennsylvania \$2.01, Rhode Island \$2.12, South Carolina \$2.50, South Dakota \$2.75, Tennessee \$1.50, Texas \$2.30, Utah \$2.72, Vermont \$1.95, Virginia \$1.91, Washington \$2.21, West Virginia \$2.00; Wisconsin \$2.21, Wyoming \$1.86.

## Radio Service Labs Busy in Ohio

William R. Carter and Charles Horne, co-owners of Radio Service Labs, 213 South 4th Street, Steubenville, Ohio (see photo at left), work eight hours a day in a war plant 22 miles distant and handle a volume service business on the side. Their war work is on electronic equipment and both have been active in electronic maintenance since graduating from high school. They work on varying shifts in the plant but manage to handle a good volume of work.

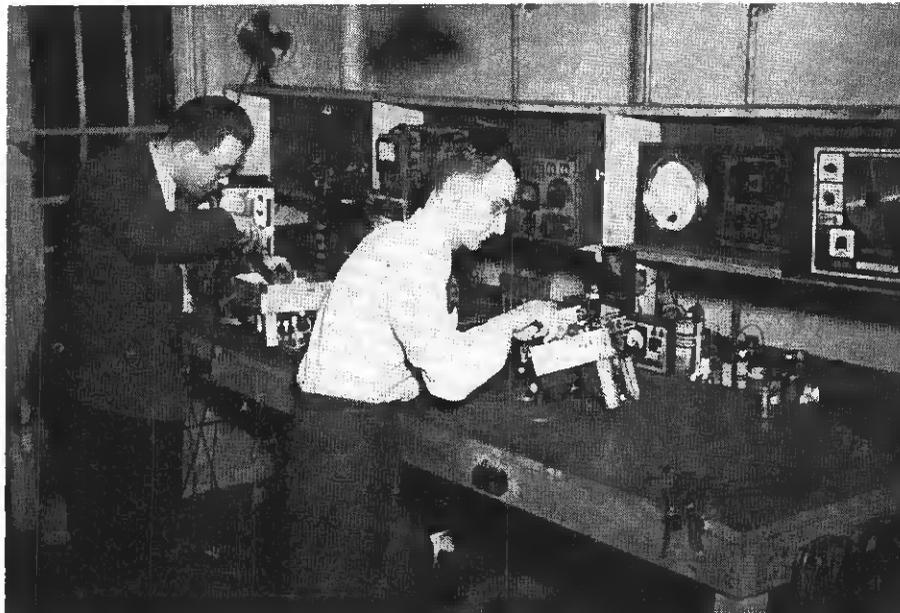
In spite of the fact that Steubenville has lost approximately 5,000 inhabitants to nearby war plant towns, Carter and Horne average about ten radios a day.

## Part and tube shortages

Like most other territories there's a shortage on tubes and some parts. The owners of Radio Service Labs use substitute tubes and circuit changes wherever necessary to get the job out. Shortages in substitute tubes make the changes more expensive, but most customers understand the situation and would rather pay more than have the set useless for an extended period of time. Trading of parts and tubes among the dealers helps smooth out some of the difficulty.

Old radios which have gathered dust in many attics are coming to light as owners realize many of their newer sets are difficult to overhaul because of the tube situation. Servicing of many of these old models requires ingenuity and sometimes extra study.

Radio Service Labs is a well equipped shop and handles the service work for about eight dealers in the Steubenville area. They use a signal tracer, oscillograph, vacuum tube voltmeter, in addition to regular signal generator, multi-meters and tube-tester. A power pack substitute for batteries in portables is used to operate the set during tests.



Servicing in Ohio: Charles Horne and Bill Carter, co-owners of Radio Service Laboratories, Steubenville, electronic specialists in a neighboring Naval Ordnance plant during the day, keep sets playing by working nights.

radio service trade. There are eleven different schedules ranging from \$1.00 to \$3.50 per hour in steps of 25c. That is: \$1.00, \$1.25, \$1.50, etc.

Many radio shops are now using it throughout the United States. Due to the short time it has been in use, the state averages vary more than what may be expected when more shops become familiar with it and adopt schedules that meet their needs. Ohio's average is now \$2.25, which is a decline from \$2.51 last December 31st. Michigan, a nearby state, has increased from \$1.83 to \$2.17. These are two cases where the trend is approaching the national average of \$2.14.

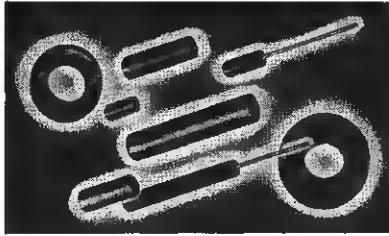
These flat rate schedules take into consideration special expenses required to secure unusual items such as power transformers and other parts that cannot be stocked in the average small shop. The author, R. K. Viles, has handled over 500,000 repair jobs in his own shop and has gathered information from all parts of the country during the past fifteen years to compile this definite pricing sys-

tem, though it was not previously used. There are a number of testing charges along with an explanation of how these actually permit the servicer to charge less for his jobs than what would be necessary if the tests were made free. The OPA permits these to also be added if they have been on a no charge basis before. Information on this subject would fill pages including a recent court case publicized in RADIO RETAILING TODAY. Established rates also carry weight in the courts if they are in widespread use.

The schedule booklets are sold through regular jobbers or can be obtained from the Radio Equipment Co. for 35c a copy or 3 for \$1.00. The rate per hour should always be specified when ordering. A list of the average schedule rates by states follows:

Alabama \$3.00, Arizona \$2.14, Arkansas \$2.12, California 2.46, Colorado \$2.04, Connecticut \$2.00, Delaware \$3.43, Dist. Columbia \$2.50, Florida \$2.34, Georgia \$1.83, Idaho \$1.87, Illinois \$2.09, Indiana \$2.08, Iowa \$1.89, Kansas \$1.62, Kentucky \$1.50, Louisiana \$1.99, Maine \$1.50,

# NEW PRODUCTS

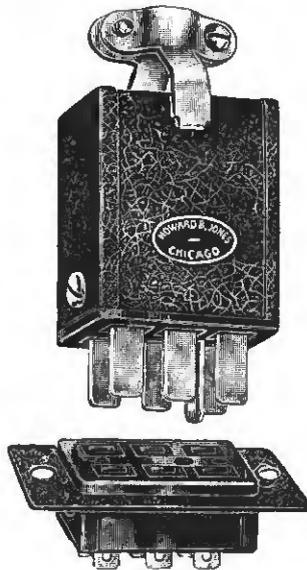


open-face boxes, to retail at 10c each. Cadie Chemical Products, Inc., 621 Sixth Avenue, New York 11, New York.—RRT

**JONES PLUGS AND SOCKETS**, a new line known as the No. 2400 Series is interchangeable with their present No. 400 Series. By increasing the leakage path

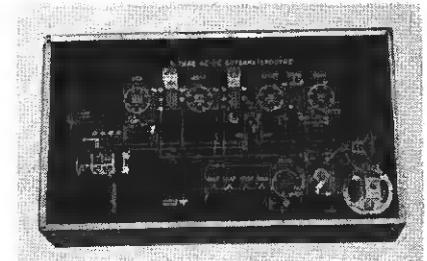
lite moulded according to Navy Specifications 17P4. Sizes range as follows, 2, 4, 6, 8, 10 and 12 Contacts and are furnished with either a shallow bracket for flush mounting, deep bracket for recessed mounting. New type of socket contact developed has four individual flexing contact surfaces. Socket contacts are of phosphor bronze, silver plated. Howard B. Jones, 2460 W. George Street, Chicago 18, Illinois.—RRT

**STACKPOLE HIGH RESISTIVITY IRON CORES**, showing resistance of practically infinity, are recommended for applications where a resistance of 150 megohms or greater is required, and where voltages do not exceed the breakdown value. High resistivity material reduces leakage currents and their resultant noise troubles. Possibilities of voltage breakdown between coils and cores are also reduced. In applications using cup cores, the high resistivity core material avoids the necessity for heavy insulation on lead wires. Stackpole Carbon Company, St. Marys, Pa.—RRT



and incorporating a new type of contact, the current characteristics of a new series has been materially improved. Plug and socket bodies are of BM120 Formula Bake-

**LAFAYETTE DEMONSTRATOR BOARD**, a 5 tube AC-DC Superhet, is laid out schematically in bread board style with actual parts mounted in position for quick removal and replacement to demonstrate function in the circuit.



Terminals provided at all tube elements for measurements. Jumpers provided to open condenser, resistor and coil circuits. Diagram in color according to the RMA code. Lafayette Radio Corporation, 901 West Jackson Boulevard, Chicago 7, Illinois, and 265 Peachtree Street, Atlanta 3, Georgia.—RRT

**CADIE PLASTIC SCOURER** replaces steelwool for pots, pans, etc. A recently developed plastic wool, resembles a mass of coarse thread, is said to have many advantages for home use; there is no danger of injury from steelwool splinters, the new material is practically indestructible . . . it is easily rinsed free of fats, foods, and other foreign matter and remains unaffected by almost all chemicals. Plastic scourer is packaged in individual

## TUBES IN INDUSTRY

(Continued from page 50)

the operation to jump to the other tube. One complete cycle of events takes place after each pair of pulses, so that each set-up as shown will divide the pulse rate by 2.

In 40, another counting circuit is shown. The rectified input signal charges the condenser C. Each time the charge exceeds a predetermined value the thyatron operates and clicks up the counter one unit.

### Differentiation

Many commercial vibration pick-up devices, such as piezoelectric units give an output proportional to acceleration. Therefore, velocity and/or displacement studies can be made with integrating circuits, such as in 41.

The reverse action to integration consists of differentiation. Differentiation involves finding rates of change of some quantity. This function also can be accomplished by electrical circuits as shown in Section VII. These circuits are often used to discriminate between pulse varieties as to wave shape. For example, circuit Item 31 gives a pulse with a sharp front, while 32 gives a gradual wave front and an abrupt falling off. A combination of these pulses which might be used in some remote control system, is shown in the oscillogram, Item 43.

The first derivative of this waveform is shown below as sharp positive and negative pulses, which can be separated by the use of diodes so as to operate the respective relays, as shown in Item 42. The method can be used to provide greater discrimination in counting random effects, when two pulses may take place close to-

gether so as to overlap as in the oscillogram 45.

### Timing by Phase Effects

In Section VIII of the chart numerous methods of producing and using phase effects are listed.

A simple phase-shift network using a two-gang variable resistor is given in 48. The values of R and C depend on the frequency involved. Approximately 180° shift can be accomplished by the adjustment of the resistors. In 52 a similar network is shown using fixed resistors having values equivalent to the impedance of the condensers at the operating frequency. A special condenser with four stator sections and two rotor sections (the latter 90° apart physically on the shaft) is connected to the RC network so that any phase angle over a 360° shift can be obtained.



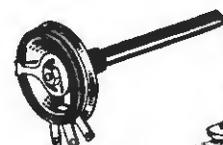
## When the Advanced Post Talks

**UTAH'S ON THE JOB!** . . . Code messages must go through! Every piece of communication equipment must work with precision and perfection.

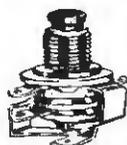
Utah parts have passed the battle test in advanced positions—behind the lines—in the air—on the sea—on scattered war fronts the world over. In the industrial plants, too, when the weapons of war are being forged . . . Utah parts are doing their job . . . helping to hasten the day of Victory.

When that day arrives : : : more, and even better Utah parts will be available to meet *all* civilian needs.

UTAH RADIO PRODUCTS COMPANY, 810 Orleans Street, Chicago, Illinois. Canadian Office: 560 King Street West, Toronto. In Argentine: UCOA Radio Products Co., S.R.L., Buenos Aires. Cable Address: UTARADIO, Chicago.



POTENTIOMETER



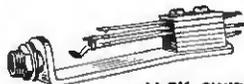
PUSH-BUTTON SWITCH



TU-WAY PHONE PLUG



TRANSFORMER



JACK SWITCH



BI-DIRECTIONAL SPEAKER

# Washington Wavelength

## Says Tube "Bottleneck" Due to Labor Shortage

Compiled from reports of various government agencies, the Office of War Information has issued a statement on domestic broadcasting, in which comment is made on the tube situation as follows: "The chief bottleneck in the manufacture of tubes is not in material but in labor; a number of manufacturers are now setting up feeder-plants for tube making in areas where labor is available."

Stating it is apparent that "a goodly number of American families own more than one radio," the communication nevertheless points out that many domestic receiving sets are deteriorating from age and lack of adequate service, "the greatest difficulty at the present time being the securing of tubes. During the early part of this year large numbers of tubes destined for civilian use were taken over by the armed services, and though the civilian program is being pushed the supply is still tight, particularly for tubes for the AC-DC sets sold in such large quantities just before the war and which, fortunately, seem in most cases to be extra radios in homes."

The report also stresses the fact that the production of batteries has recently been increased to take care of the estimated 3,200,000 battery sets on farms in non-electrified areas.

## Pays \$35,000 for Over-Ceiling Radio Sales

An east coast radio distributor has paid the U. S. Treasury \$35,000 as a compromise settlement of a treble damage claim against it by the Office of Price Administration for sales of radios to retailers at prices above legal ceilings, according to an announcement recently made by that agency's enforcement department.

The OPA stated that over-charges totaling about \$23,000 had been made by the company on several thousand radios sold to retailers from August, 1942, to May, 1943.

The suit was brought under the Emergency Price Control Act which authorizes OPA to sue manufacturers and wholesalers for three times the amount of any charge in excess of ceiling prices.

An official OPA statement said that this settlement disposed of one of the biggest cases it has handled involving violations of price ceilings on household goods, and served to emphasize

the importance of all wholesalers and retailers checking their prices to be certain they are not violating established ceilings.

## WPB Names Capacitor Conservation Committee

War Production Board has announced the following members on its newly created Mica Capacitor Conservation Industry Advisory Committee: Government presiding officer, E. R. Crane; committee members, G. M. Ehlers, Centralab, Inc., Milwaukee, Wis.; Jack Davis, Galvin Mfg. Co., Chicago; T. M. Gordon, Radio Receptor Co., New York; M. R. Johnson, General Electric Co., Bridgeport, Conn.; Byron Minnium, Erie Resistor Co., Erie Pa.; Dorman L. Israel, Emerson Radio & Phonograph Corp., New York; Herbert L. Spencer, Bendix Radio Corp., Baltimore, Md.; F. E. Hanson, Western Electric Co., Kearny, N. J.

## TUNE-INS

"German radio equipment is five years behind our own in design, components and construction." Captain James P. Lipp, Signal Corps officer, assigned to North Africa.

"There is increasing evidence that the production of essential civilian

goods has reached a low point, and that in the future increasing quantities of critical materials will be allocated in the production of these items." Robert W. Johnson, retiring chairman of the Smaller War Plants Corp.

"It seems clear to me that one of the biggest single threats to our whole system of free enterprise is the gradual development of large organizations and monopolies which will tend to squeeze out the small independent operators. When the small business man goes, it is very likely that free enterprise as well as our democracy will go along with him." Chester Bowles, general manager, Office of Price Administration.

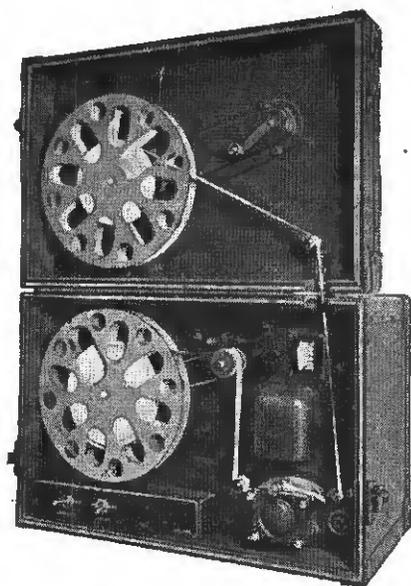
"Our main objective, naturally, is to see that civilians get the best service it is possible to render in a war-time economy." G. W. Weston, chief service trades div., Office of Civilian Requirements, WPB.

"We still have production problems in radio, but we can safely say that this particular bottleneck has been broken," says Charles E. Wilson, executive vice chairman, WPB, commenting upon American mass production methods applied to the diamond die industry, affecting the manufacture of wartime radio.

## RADIO PIONEER IS HONORED



Harry Forster receives Army-Navy "E" award at presentation to Radio Speakers, Inc., Chicago. Left to right: Jim Clements, Gene Strait, Geo. Holly, Helen Erhardt, Henry Forster, Bert Engel, Fred Johnson, J. B. Price, Bill Lelein.



Men in our Armed Forces quickly learn how to receive international code on this Portable Keyer made by Waters Conley. It takes an inked record from paper tape and converts it, by the magic of electronics, into audible code signals.

This companion to the Waters Conley Recorder is another of the war-vital products that take all our time these busy days. But much of the knowledge and experience we are gaining in wartime will help to enrich civilian life when peace comes again... and will open profitable new markets for you.

Phonola

Waters  
Conley

COMPANY

WATERS CONLEY COMPANY

*In peacetime, America's oldest and largest manufacturer of portable phonographs*

ROCHESTER, MINNESOTA

17 East 42nd Street, New York

224 South Michigan Avenue, Chicago

# Letters to the Editor

## Television Complaint

*Editor, Radio Retailing Today:*

As a radio dealer who has sold television sets to his customers, I should like to report that I am getting the blame for having honestly and sincerely promoted a sale of which my customers believe they are the "victims".

The radio industry, as you know put on a television drive with the dealers, with the promise that good television programs were being put on the air and would be maintained, so that a relatively high investment in a television set was justified. Thus the people in the vicinity of New York accepted this, with the idea that they were not only benefitting themselves thereby, but helping to pioneer a new art. Here is what one of my customers has to say:

"For about a year the National Broadcasting Company maintained fairly good programs, the most interesting being the prize fights and wrestling matches, which were lively affairs and not studio programs. Then came the change in program schedule with the substitution of editorially worthless, dumb, and uninteresting movies, so that the owner of a television set today feels he has a white elephant on his hands, and believes he has been the victim of a fraud more deliberate and far worse in character than many of the frauds for which the Federal Trade Commission issues stop orders. I believe that the channels allotted for television purposes should be taken away from present occupants, and that first choice for the desirable channels after the war should be given to broadcasters who by some semblance of decent service to the public in the meantime establish priority by maintaining an interesting program service to the present owners of television sets."

The dealers who sold the sets in the first place were acting honestly and in good faith. They, like the customers, were relying on the words of corporations whose promises in this matter have proved worthless.

CONNECTICUT DEALER.

### *Editor's Note:*

Recognizing the situation above described, we have been surprised at the small number of complaints received by the television departments of the broadcasters. There must be several thousand television-set owners who feel that their investment was a poor one in view of the almost complete collapse of the broadcasters' programming plans. But apparently the ma-

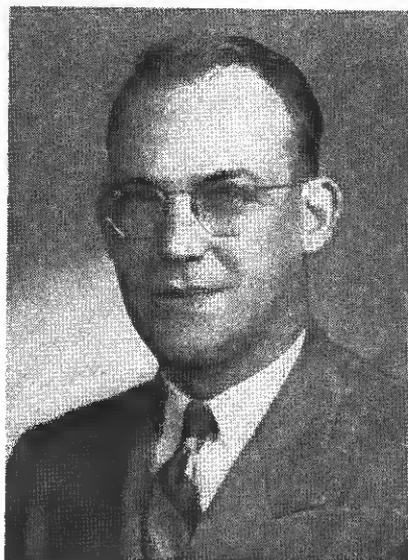
majority realize that the fault lies beyond the radio industry's sphere.

As most radio men know there were two basic factors which made it almost mandatory for NBC to reduce the number of hours of television operation. The most important of all factors, including the lesser ones, was the loss of trained manpower. These men, whom NBC had trained in the specialty branch, were prime bait for the Signal Corps and most of them are there now as officers. They couldn't borrow from WEAFA and the network because, after all, it was far more important for the country's safety to maintain aural broadcasting facilities in A1 condition, than to cater to a few thousand interested television fans. They couldn't train new men because all prospects were subject to draft call. Hence the FCC's relaxation of transmission time was the only way out of the impasse. At least, with only four hours weekly to fill, the tele station could insure that much programming in order to keep the channels alive. The only other alternative would have been a complete cessation of transmission.

## No Mobile Units for Fights

Television men are well aware that the remote pick-ups (prize fights, wrestling bouts, etc.), seemed to be the audience's first choice, but the opera-

## SEES PACKAGE "MIKE" DEAL



Cecil L. Sly, vice pres. and sales mgr., Universal Microphone Co., Inglewood, Cal., predicts new deal in distribution of Microphones in Postwar Period. Sees Specialized Styles.

tion of each of the mobile pick-up units required a crew of at least eight trained engineers besides additional set-up men. These were just not available after the nation commenced its call, and the mobile units were therefore swathed in grease and garaged for the duration.

The second principal factor was the scarcity of replacement parts, a condition that still exists. Cathode-ray tubes were out of production and there had never been a reserve stock of any size. The same condition existed for other spare components. NBC did not want to lower transmission standards further than necessary, through haywire equipment, nor would the audience have put up with it. So this, too, made shorter transmission periods mandatory if we were to conserve what we had.

## No Waiting List

As for the complainant's suggestion that the channels should "be taken away from present occupants" would scarcely remedy the situation. As far as we know, there is no waiting list of broadcasters who are equipped to conduct television programming on the scale that we all enjoyed prior to 1941.

It is undoubtedly true that dealers were acting in good faith when they sold television sets. NBC and other entrepreneurs in the field were equally well-intentioned when they induced people to buy sets through ballyhooing special programs. But surely neither the FCC nor NBC foresaw the effects of war on the progress of the new industry.

From NBC we learn that its television program department has been working on plans that will go into effect almost immediately following victory—possibly a bit earlier—but for the present at least, NBC is stymied by a complete lack of man-power and a haunting scarcity of materials and replacement parts. If Connecticut Dealer's complainant has the key to this apparently unsolvable problem, the television people would like to know about it.

## Offers Suggestions to Manufacturers

*Editor, Radio Retailing Today:*

Have been in the auto electric business since 1918, at the same location and in radio since the beginning.

I have always enjoyed good business because I treat the public fair and insist on the same kind of treatment from them. I have learned plenty in

(Continued on page 62)

RCA  
PRESENTS

# What's New?

*Rain-Darkness-No Lights!*

—yet thousands will see this plunge through center thanks to new improved television eye

IT was RCA'S development of the Iconoscope that gave electronic eyes to Television. Now RCA has made those eyes stronger than ever before. Describing the new improved RCA Iconoscope, *Business Week* says, "it will permit televising the last quarter of a football game on a rainy afternoon in late November. Increased sensitivity of the new camera tube, exhibited by Dr. Vladimir Zworykin, RCA research head, results from the use of a retina or plate with 400,000 pieces of light-sensitized silver."

This advance is typical of the many that keep RCA Laboratories out in front in Television progress. RCA awaits only the end of the war to make even greater strides—to help in creating a vast new industry for you to share in.



Dr. Vladimir Zworykin  
Associate Research Director,  
RCA Laboratories



*Dinah Shore*

... and whole cast  
of "WHAT'S NEW?"  
get raves from "Variety"

"Variety," the magazine of show business, went overboard in reviewing RCA's opening hour show "What's New?" (Blue Network, Saturday, 7 to 8 P.M. E.W.T.). Pop melodies by Dinah Shore, Victor artist, "took her to the top of the pleasure meter," said "Variety." It's "an hour of upper-crust popular entertainment." Yes, it's a great show—and great for you. It's on the job for you TODAY building the business you'll want TOMORROW in the fine radio, phonograph and Television instruments RCA will build when the war is won.

*6 out of 10 families plan big purchases 6 months after the war!*

**RADIOS HIGH ON THE LIST**

★ That's the report just released by the Chamber of Commerce of the United States. Here is a flood of buying power that RCA will help direct to *your* place of business as soon as this war is won. RCA will provide you with the most advanced radio, phono-

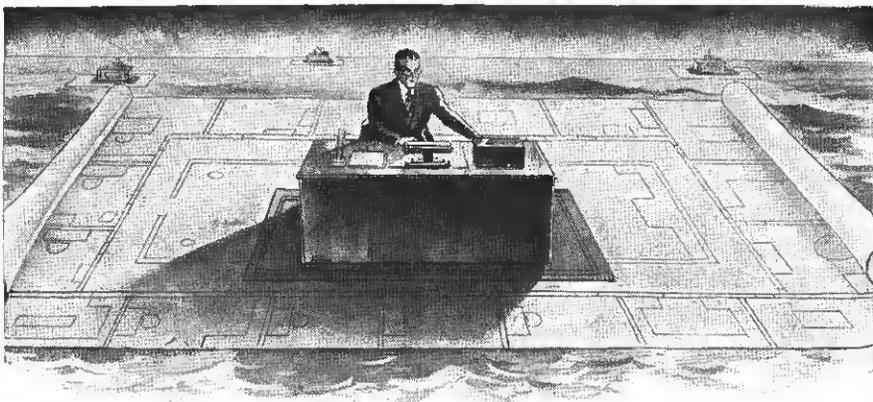
graph and television instruments. And backing you all the way there will be new and powerful sales and advertising ammunition.



**RADIO CORPORATION OF AMERICA**

RCA Victor Division · Camden, New Jersey





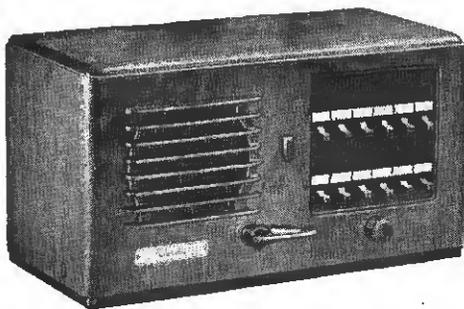
## Marooned ON A FLOOR PLAN?

Floor plans of busy offices and plants don't always take quick, convenient intercommunication into account. So often an arrangement that otherwise expedites a business leaves key executives as high and dry as on a desert island when it comes to getting in touch with each other.

In these busy war days, you will find many plants and factories in your community just waiting to have you bring them the message of Teletalk Amplified Intercommunication . . . tell them how Teletalk breaks down the barriers of walls and square feet and puts their voice wherever they want to be in a matter of seconds.

Teletalk Systems are the most modern, fastest selling intercommunication systems on the market today. They are available in from 5 to 24 stations and can be laid out to fit the exact needs of either the large or small office. Teletalk is easy to install . . . operates from the light circuit.

Write us today. Make Teletalk a valuable addition to your business NOW.



### BUY MORE WAR BONDS

Licensed under U. S. Patents of Western Electric Company, Incorporated, and American Telephone and Telegraph Company



WEBSTER ELECTRIC COMPANY, Racine, Wis., U.S.A. • Established 1909 • Export Dept: 13 E. 40th St., New York (16), N. Y. • Cable Address: "ARLAB" New York City

# WEBSTER ELECTRIC

"Where Quality is a Responsibility and Fair Dealing an Obligation"

## LETTERS TO THE EDITOR

(Continued from page 60)

the years I have been here. For instance, it is better to let the chain stores and mail order firms sell the AC-DC junk with which the country is flooded than for me to sell it. I make more repairing them than they make selling them. I hope after the war is over the manufacturers will stop trying to see how cheap they can make sets and put some quality in them, and put a price on the sets accordingly.

Some of the changes I would recommend are—better tuning drives, better volume controls, speakers in which they use no cement in assembling the cones to the frames so they can be centered when needed. Leave off all push buttons and automatic tuning devices, no short wave bands on sets under \$100.00. Sell at a uniform discount to all dealers, with no dumping and long discounts to specials. When they find they have an outstanding model keep it in the line, dress it up different, if necessary, but don't cut it out. Let each manufacturer put his name and model number on all sets he makes, whether for his own brand or some other brand.

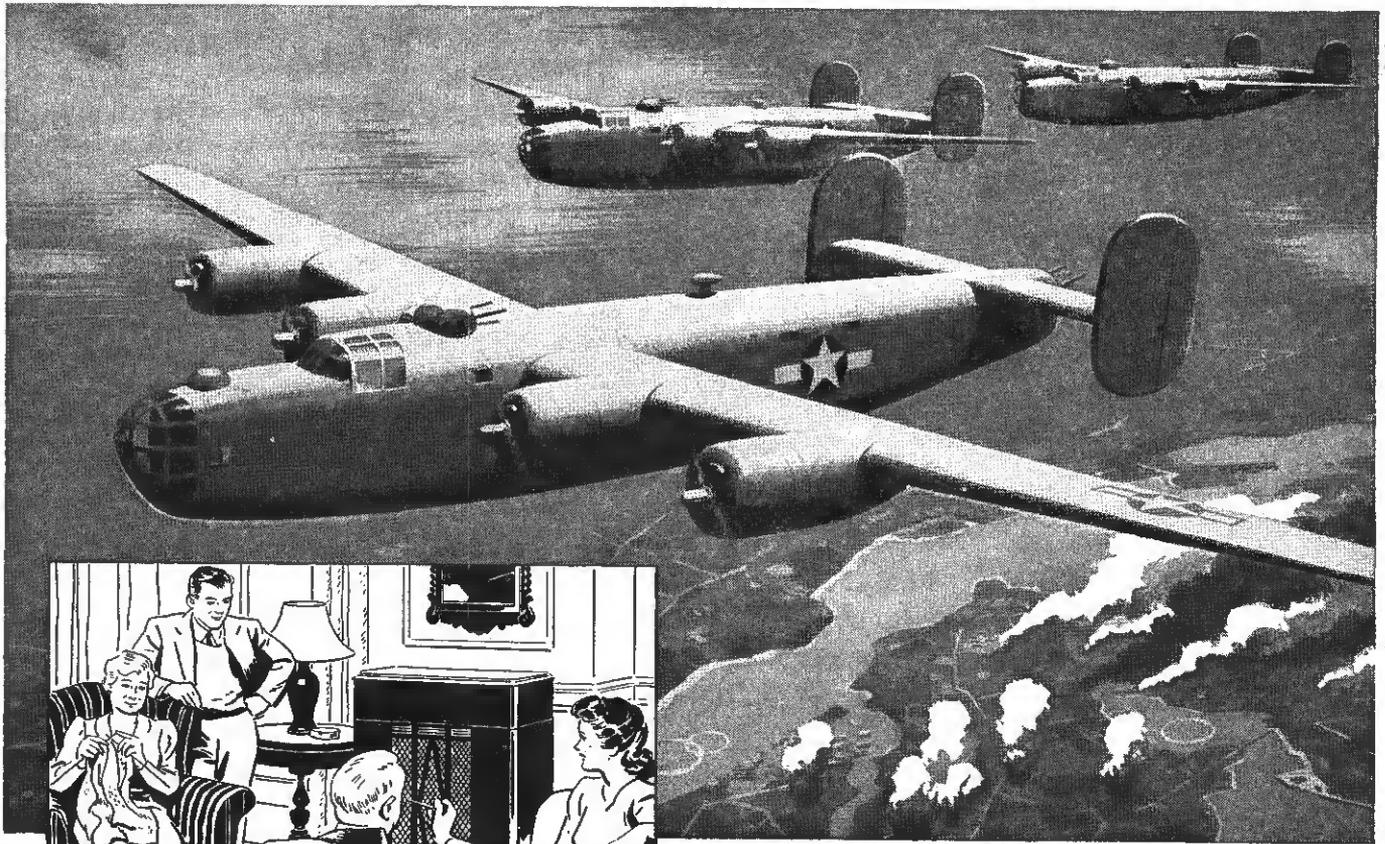
### Tube Situation Is Bad

I read in your last issue where the tube situation was easing up some but I have about three hundred tubes on certified back orders now and have received only five tubes in the last three months. I carry a fairly large stock of tubes, but as I have been running on them, I am low now and out of certain types which are as usual the most popular. The same thing applies to A & B Packs. I have sent in certified Farmers' orders but receive very few. However some "Jobber-Dealer-Wholesalers" as mentioned above usually have batteries at one to three dollars above ceiling, yet their packs cost them \$3.22; cost me \$4.16 and the customer \$5.95 so you see what a profit they make and lots of small dealers like me go without any most of the time. On a recent Saturday, I had 27 calls for packs and how many do you think I had to sell? You guessed it—not one!

I could go on like this for hours but I guess you are tired of trying to read this, so will close in saying that I enjoy *Radio Retailing Today* very much, and read it from cover to cover, and then read between the lines in regards to some of the sayings of some of the big shots in radio.

From the tone of this letter you may get the impression that I am not a very good patriot but let me assure you that I am. My only two sons are in the service, one a Senior Lieutenant Navy Air Corps, and the youngest only eighteen, a "buck" at present, having left college to enter the service.

SOUTHERN DEALER



## No Place Like Home

Compared with the typical home radio set—protectively nestled in a quiet living room—the electronic devices on a bomber lead a dog's life. Their delicate parts are subjected to the jarring concussion of exploding flak—the “kick-back” of bursting block-busters—the vibration of roaring motors and firing guns . . . a mauling severe for even the most rugged parts.

How these sensitive instruments are able to hold up under such bruising punishment is a story that dates back to the early days of automotive radio. Technicians of Delco Radio faced parallel problems—vibration, electrical interference, temperature and humidity extremes, bumping and jarring. They faced a set of conditions totally new and different in the radio field—the special conditions attending “radio in transit.”

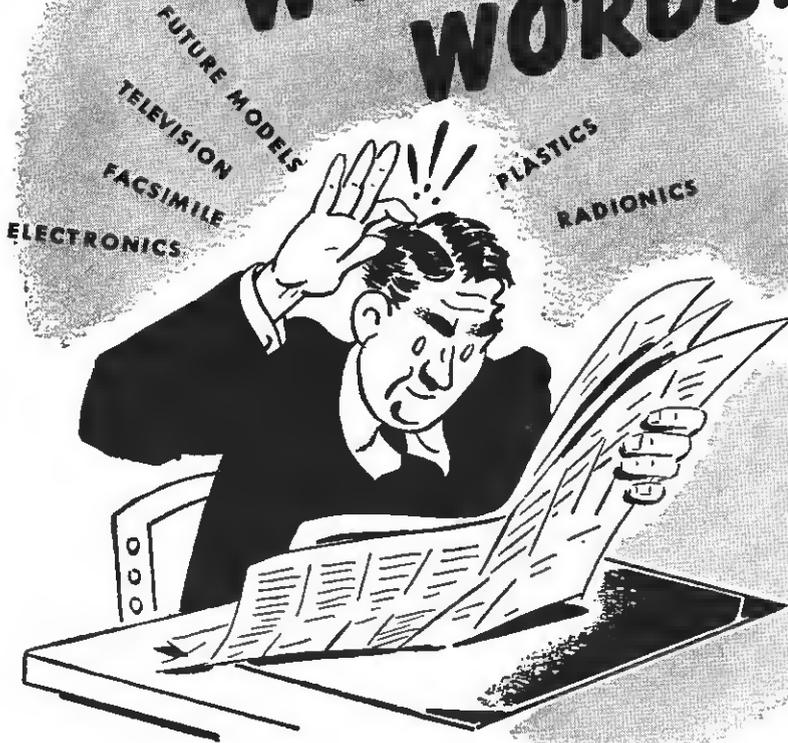
One by one, these problems fell before the forces of research, experiment, ceaseless testing and trying. Automotive radio became

a practical, workable reality. And with success in this endeavor came a fund of special experience, off-the-trail knowledge, that has come in mighty handy in World War II. For Delco Radio engineers have applied their experience in automotive radio to the task of giving the forces of freedom—on land, at sea, in the air—a strong, clear voice. Delco Radio Division, General Motors Corporation, Kokomo, Indiana.

**Back Our Boys  
By Buying Bonds!**

**Delco Radio**  
DIVISION OF  
**GENERAL MOTORS**

# WORDS... WORDS... WORDS...



## ...What's it all about?

It's confusing, isn't it? All this exciting publicity about miraculous postwar products probably has your head in a whirl. But don't build up exaggerated expectations that these revolutionary new developments will be available the minute the war is over. The adaptation to civilian use of these wartime creations will follow an orderly pattern that takes time. These new things are coming, but at some time in the future when engineering production and merchandising problems connected with them have been successfully solved.

In the meantime, Sentinel is rolling out war material in quantity and accumulating the "know how" that will mean better Sentinel civilian products of the future... up-to-the-minute radio and electronic products for greater sales for Sentinel dealers.

**SENTINEL RADIO CORPORATION**  
2020 Ridge Avenue, Evanston, Illinois

# Sentinel

*Quality Since 1920*

## RADIO

## They Never Fail

(Continued from page 21)

many sales where the prospect had been offered "a discount." As the "lost sale on account of price" angle is of such interest to retailers, Wagner's methods of combating this price situation are valuable for other dealers to study. He asks the prospective customer a qualifying question, something like the following:

"Mr. Jones, if I can show you how to save the ten dollars difference in price in a short period of time, and can show you how to make this same refrigerator last many more years, will you give me the order?"

Now, an argument like that is right up the customer's alley. It's affecting his pocketbook, and that's a vital point with us all. Having secured such a promise from a prospect, Wagner would then proceed to outline Electric Servant's operating instructions given free with each purchase. This often offsets the discount bait offered by the competitor. Wagner would also point out to the prospect that these instructions were originated and given exclusively by Electric Servant.

### Identified with Civic Affairs

Mr. Wagner has always been active in civic affairs, and has identified himself with many community activities. He has been a member of the Rotary Club, a director in the Yonkers Chamber of Commerce and was at one time vice president of the local merchants' association.

As an example of how square dealing often repays a dealer, it is interesting to cite an experience Electric Servant had recently. A man who possessed some radio technical training brought a set into the store for some service. This man was so impressed by the high ethics of this organization that he has now become a valued employee, and in these days of help shortages, that's getting a rich reward for being on the level.

### Ammunition for Its Salesmen

It is interesting to note the sort of sales ammunition Chester Wagner gave his selling force, and expects to give them after the war is over.

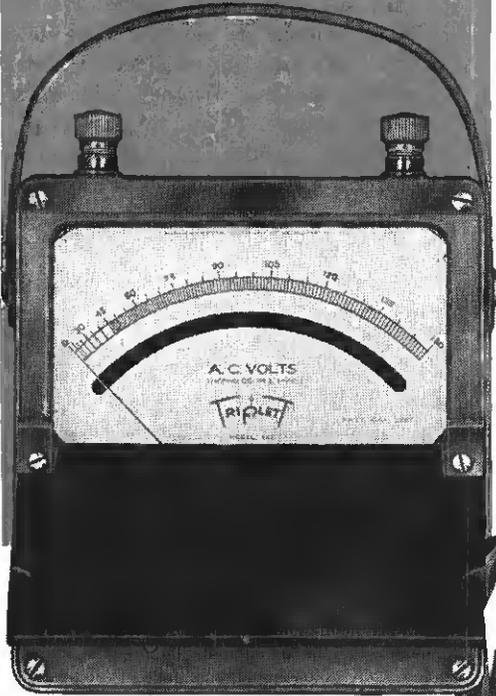
He always stressed to his employees that the local lighting company con-

(Continued on page 66)

# TRIPPLET

# Practi-Quality

A WORD TO BE RECKONED WITH IN FUTURE PLANNING



## TRIPPLET MODEL 645 PORTABLE

The hinged cover provides protection to instrument glass during carrying. Especially important when carried with other equipment. Opens flush and provides a smooth case open or closed.

The molded mechanical shield excludes dust, and allows replacement of plug-in thermocouples or rectifiers without exposing sensitive mechanism of instrument. Also, it protects the movement from possible damage when the case is open.

The Plug-in feature permits pre-calibration of thermocouples or rectifiers. Plug-in units are interchangeable. No recalibration of the instrument is required. In case of burn-out of a thermocouple or a rectifier a new one may be secured and replacement effected without returning instrument to factory.

For additional engineering information on Model 645 and other instruments of the same case style write for 645 data sheet.

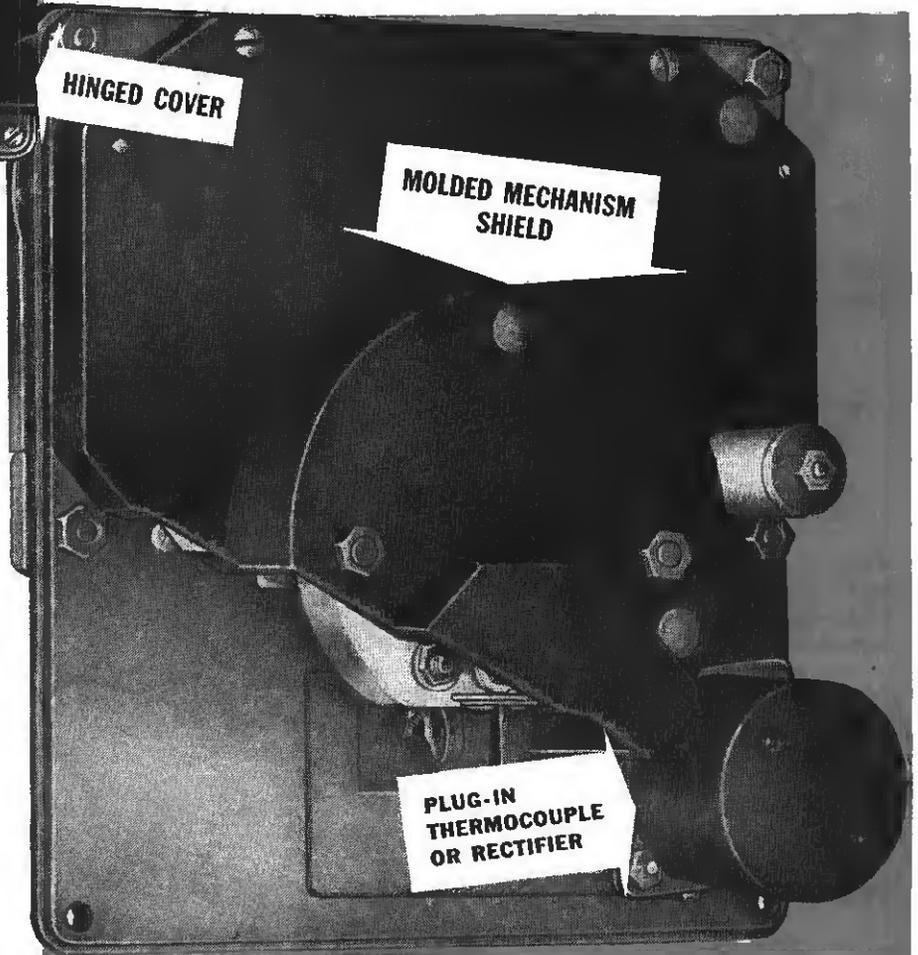


**BUY WAR BONDS AND STAMPS**

RADIO Retailing TODAY • November, 1943

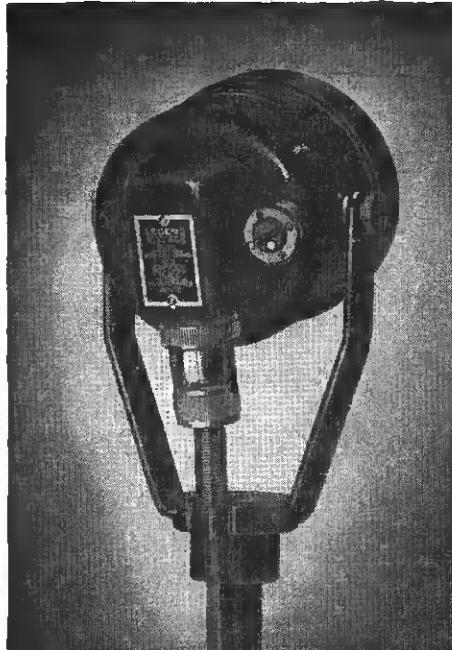
There will be many new uses for Triplet Instruments when industry turns again to peace. And new Triplet Instruments will meet the needs then developed by a more comprehensive application of Electronics. But one *old* Triplet principle will be even more valuable: Precision, durability, fair prices — qualities practical men respect.

**THE TRIPPLET ELECTRICAL INSTRUMENT CO.**  
BLUFFTON • OHIO



**TURNER U-9S FILLS 4  
IMPEDANCE REQUIRE-  
MENTS**

A twist of the switch on U-9S (left) gives you your choice of 50 ohm, 200 or 500 ohms or hi-impedance. Lets you fill practically every broadcast need with one Microphone. Adjustable to semi- or non-directional operation. Free from peaks and holes from 40 to 9,000 cycles. Level -52DB. Gunmetal type finish . . .



IT'S TIME TO TURN TO  
**TURNER**

When you want crisp, clear reproduction of any sound, without distortions, turn to a Turner Microphone. Scientifically engineered to reproduce faithfully all gradations of volume, amplifying only the vibrations received by the diaphragm, without adding any of the harmonics. Turner offers intelligibility under any and all climatic or acoustic conditions. Turn to Turner!

**Buy War  
Bonds Now!**

**TURNER HAN-D DOES THE  
JOB OF SEVERAL MIKES**

9X Crystal or 9D Dynamic  
Gunmetal or Chrome  
Finish.

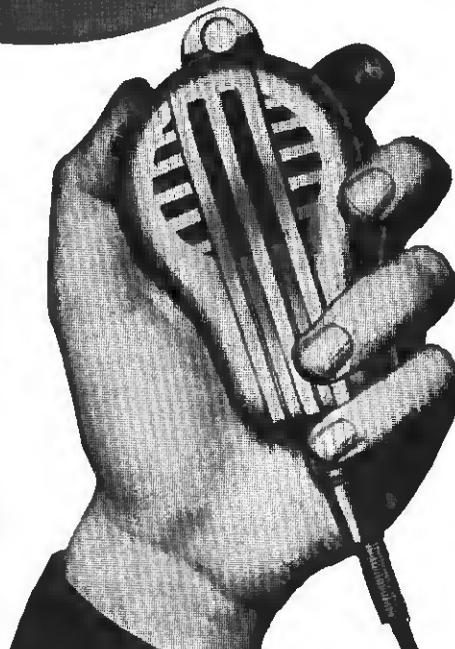
Hang it, hold it, mount it on desk or floor stand. Especially engineered for maximum voice response and smooth, natural response to music pick ups. Off-on switch permits intermittent operation.

*Free*

New Turner Microphone Catalog, illustrated in color. Gives you complete information on all Turner Microphones, and how to care for those you have. Send for your free copy today!

**THE TURNER COMPANY**  
CEDAR RAPIDS, IOWA

Crystals Licensed Under Patents of  
the Brush Development Co.



(Continued from page 64)

sidered The Electric Servant Company to be its most important cooperating dealer.

He pointed out that prospective customers could find the biggest selection at Electric Servant. A few years ago salesmen were armed with the knowledge that the firm had on display practically every wanted radio model; seventy-seven refrigerators and forty-nine washers and ironers of different models.

Electric Servant salesmen were told that an important reason for the firm's success is *service*. The sales force was asked to consider just what service means. Wagner told them: "Suppose you were to purchase a washing machine and the machine ceased to operate. Certainly the washer could not be used as a piece of furniture, since its service to you is washing clothes. Thousands of customers are using washing machines purchased from us; some twenty-one years ago, and we are still servicing these machines."

Wagner told his salesmen to emphasize twenty-four hour service; to emphasize the point that Electric Servant renders the service, and does not shunt the responsibility to the manufacturer.

**Salient Selling Points**

He points out that many "orphan" appliances are in the hands of local customers. In many cases, dealers who sold them are out of business, and in many cases the manufacturers have folded up. He tells his salesmen that any time they run into a customer with "orphan" equipment, offer the customer the repair facilities of Electric Servant.

Electric Servant salesmen were told that the organization exercised such great care in the selection of merchandise and manufacture that it never sold an appliance that became "orphaned."

So The Electric Servant Company keeps up with the times. A sign in the office of this firm reads: "Men do not fail because of changed conditions, but they fail only when they are not big enough to meet those changed conditions!"

This Westchester County organization has certainly been able to meet the changed conditions in a big way, and continues to practice its motto: "We Never Fail!"

# THE EXECUTIVE WHO STOPS TO THINK . . .



*Knows that "10% for War Bonds isn't enough these days"*

Workers' Living Costs going up . . . and Income and Victory Tax now deducted at source for thousands of workers . . .

Check! You're perfectly right . . . but all these burdens are more than balanced by *much higher FAMILY INCOMES* for most of your workers!

Millions of new workers have entered the picture. Millions of women who never worked before. Millions of others who never began to earn what they are getting today!

A 10% Pay-Roll Allotment for War Bonds from the wages of the family bread-winner is one thing—a 10% Pay-Roll Allotment from each of several workers in the same family is quite another matter! Why, in many such cases, it could well be jacked up to 30%—50% or even more of the family's *new* money!

That's why the Treasury Department now urges you to revise your War Bond *thinking*—and your War Bond *selling*—on the basis of *family* incomes. The current

War Bond campaign is built around the family unit—and labor-management sales programs should be revised accordingly.

For details get in touch with your local War Savings Staff which will supply you with all necessary material for the proper presentation of the new plan.

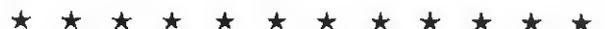
Last year's bonds got us started—*this year's bonds are to win!* So let's all raise our sights, and get going. If we all pull together, we'll put it over with a bang!

This space is a contribution to America's all-out war effort by

**RADIO RETAILING TODAY**



you've done your bit  
... now do your best!



# BOOKLETS

Universal Microphone Co., Inglewood, Cal., has issued a new 9x11 loose leaf four-page edition of catalog No. 830. The catalog is titled "Universal Army and Navy Specification Plugs and Jacks," and is illustrated. It also contains descriptions of prongs, cord clamps, jack inserts and shells for both jacks and plugs.

The Home Economics Institute of Westinghouse Electric & Mfg. Co. has issued a revised wartime edition of "The Care and Use of Electric Appliances in the Home." The booklet suggests simple repairing only, and stresses the necessity for householders getting professional service whenever anything serious goes wrong with a household appliance. The booklet is profusely illustrated.

Various electronic applications in industry, in the war, in medicine and the home are illustrated and described in a new 44-page booklet announced by Westinghouse Electric and Manufacturing Company.

A few typical applications shown in this booklet "Electronics at Work" are: resistance welding control for sewing plane parts together at 1800 stitches per minute; cathode ray oscillograph for electrical circuit and lightning phenomena analysis at speeds of 1/100 of a millionth of a second; high-frequency induction heating units for plastic molding; tin reflowing and surface hardening; ignition rectifiers for converting alternating to direct current in aluminum and magnesium production; industrial X-ray units for "inside" inspection of vital metal parts; Precipitron for removing air-borne dust particles as small as 1/250,000 of an inch.

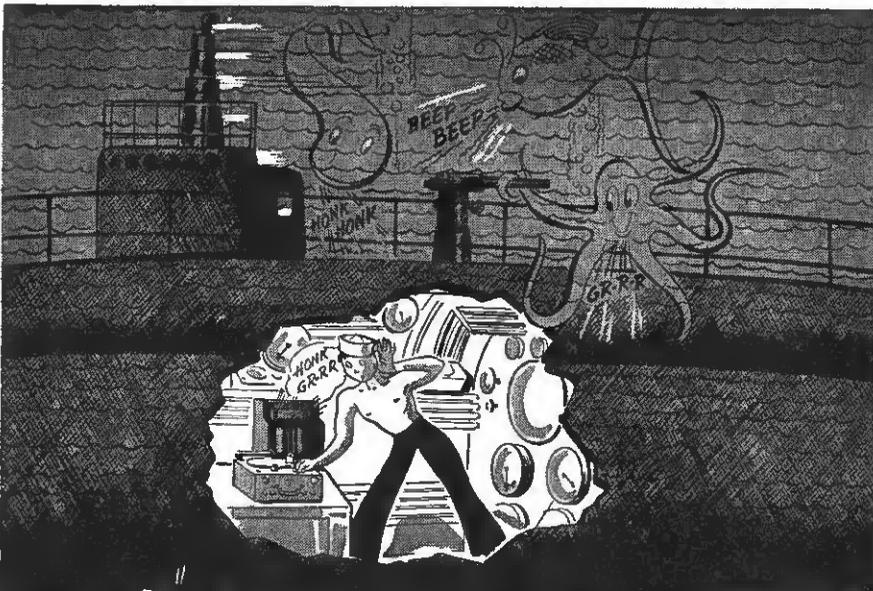
Various types of electronic tubes, key units of every electronic device, for such applications as industrial control, diathermy, power conversion, X-ray and radio are illustrated and the primary use of each identified.

A copy of booklet B-3264 may be secured from Department 7-N-20, Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.

## Honored for Long Service

Thirteen employees of the Stromberg-Carlson Co., Rochester, N. Y., met recently to celebrate their forty years of continuous service with their firm. Wesley M. Angle, president of the company, who also marked his fortieth year with the firm, presided. Dr. Ray H. Manson, vice president and general manager, and Edwin C. Roworth, vice president, both of whom have been with the company 39 years, made the presentation of pins honoring the veterans.

RADIO Retailing TODAY • November, 1943



## To a Submarine, a Fish's Grunt Sounds Like Enemy Propellers

WASHINGTON, Aug. 19 — United States submarines turning corners at ten fathoms or so have pulled up in surprise and wonderment at hearing such raucous sounds as "Honk, honk!—beep, beep!—G-r-rrr!"

The men with the earphones who listen to what goes on while their craft is slithering through the briny deep often confuse these noises with the hum of enemy propellers, and signal for a quick stop. But the eerie underwater traffic noises often are caused by fish.

The Fish and Wildlife Service of the Interior Department has reported to its chief, Harold L. Ickes, that fish are noisy.

"Fish," said the Fish and Wildlife Service in a formal report, "actually grunt, purr, drum, grind their teeth and make a medley of other sounds that create strong underwater vibrations even when inaudible on the surface."

The service, aided by the Navy, has made a series of recordings of fish noises which are being drummed into the ears of submarine "listeners" so that they will know the difference between an ichthyological burp and a Japanese propeller.

"The Navy experts," said the report to Mr. Ickes, "obtained their most surprising results from the toadfish, a common species of the Atlantic Coast known for its ugliness and its bad temper. Although advised by Fish and Wildlife Service biologists that the toadfish is an important sound producer, the investigators were unprepared for the volume of its voice, which they said compared in intensity with a steamboat whistle.

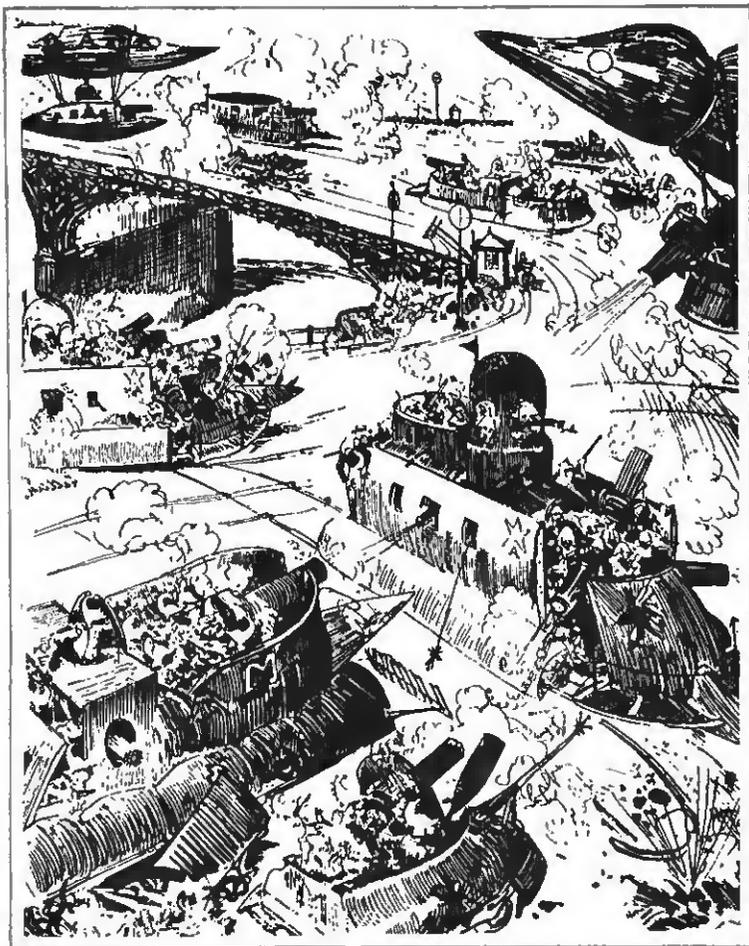
"Fishes capable," the report went on, "of making drumming, grating or grunting noises are found both in fresh and salt water in all parts of the world. Whether fish use their voices to attract the opposite sex, as a feeding call, or to express general contentment like a cat's purr is not known."

Over land and under sea, Presto Recorders have their ears glued to Sounds . . . pick them up and play them back so Sailors, Soldiers and Aviators may know who's there—friend or foe! • As in peace, so in war . . . if it's a noise Presto will get it—faithfully and realistically.

## Presto Recording Corporation

NEW YORK 19, N. Y., U. S. A.

World's Largest Manufacturers of Instantaneous Sound Recording Equipment and Discs



*In 1882*, Albert Robida, a French artist, designed and published a series of fanciful conceptions of future warfare. People laughed at this prophetic picture of tanks and aircraft which he claimed would be in war use by 1952. Inventive genius beat his timetable by 38 years *but took 32 years to do it.*



**N**ow is the time for all good men  
to keep both feet on the ground

When Industry returns to production of peacetime needs certainly there will be advances, new concepts, new efficiencies but let's not lead our prospective post-war patrons to expect *too much too soon*. First productions will be only slightly different, slightly better than the last peacetime models. Inevitably—and no doubt rapidly—the lessons of war will fit into civilian production but we believe, rather than a *moment* of change, we will find ourselves in an *era* of growth and improvement. In that era John Meck Industries hopes—and expects—to be among the leaders in constructive planning and, in the fields of voice and music recreating, will produce new and better instruments and equipment as rapidly as is consistent with thorough engineering proficiency.

CRYSTAL DIVISION	AUDIOGRAPH DIVISION
MIRROR-TONE DIVISION	WEBER DIVISION



# JOHN MECK INDUSTRIES

• CRYSTAL SERVICE DIVISION • MIRROR-TONE DIVISION • AUDIOGRAPH DIVISION • WEBER DIVISION

PLYMOUTH, INDIANA...TELEPHONE PLYMOUTH 33



Just making sure  
**YOU'LL GET YOUR SHARE!**

"LOOKS LIKE A LOT OF BATTERIES WHEN THEY'RE ALL IN A PILE," says Homer G. Snoopshaw, Burgess specialist. "But when we consider all the customers we have . . . and all the customers *you* have . . . we have to do a mighty careful job of parceling out the shipments. Yes, we start right in our shipping room to divide 'em up even—and we hope you do the same."

Uni-Cels and farm radio packs are scheduled as regularly as military production allows. Manpower shortages hamper us, too. It adds up to this: You don't get as many batteries as you'd like. But we are doing our best to spread our production as far and as fairly as possible.

**BURGESS BATTERY COMPANY, FREEPORT, ILLINOIS**



★ **14** NEW  
**STANCOR**  
Victory Model  
TRANSFORMERS and CHOKES  
are NOW AVAILABLE!  
★



**SEE YOUR STANCOR JOBBER OR SEND FOR THIS ILLUSTRATIVE FOLDER NOW!**

No priorities are necessary to buy Stancor Victory Model Transformers—the L-265 Certification, is the only requisite. Send for full information today.

Write for Stancor Victory Model Folder No. 302-A  
**STANDARD TRANSFORMER CORPORATION**  
1500 N. HALSTED STREET • CHICAGO, ILLINOIS

## Bond and Speed-up Drives Meet With Success

To help step up production, boost worker morale and increase bond sales, manufacturers all over the country have been staging various drives with outstanding success.

For example, a brand new bomber—"Ken-Rad"—will soon be added to America's mighty air armada as a result of the record-shattering bond buying campaign of the employees of Ken-Rad Tube & Lamp Corp., Owensboro, Ky., which topped the goal of \$500,000 by \$84,450. The spirited drive was conducted by Larry O'Brien, director of sales for the company.

In Chicago, Hallicrafters recently staged a "production drive rally," climaxing a successful bond selling campaign. The production rally included a tour of the plant; music by a 15-piece band, and the presence of many noted Army and Navy officers, including Col. Geo. P. Bush, of the Signal Corps; Capt. H. T. Chin, member of the Chinese Army Tank Corps; Commander E. N. Dingley, Jr., radio division, bureau of ships, U. S. Navy, and Lieut. Chas. J. Bates, U. S. Navy, senior surviving officer of the U.S.S. Meredith.

## Battle Absenteeism

At the final showing of Stromberg-Carlson Company employees morale-boosting show, "Communication Capers," held in Rochester, Wesley M. Angle, president, urged more than 3,000 workers and guests to help reduce absenteeism, maintain a full working force, and to put forth much more working effort. Mr. Angle warned his hearers against over-optimism and complacency because of constant Allied victories. "Make no mistake about it, neither of our principal foes has yet begun to bring to bear on our forces anything like the power that is still theirs . . ." he stated.

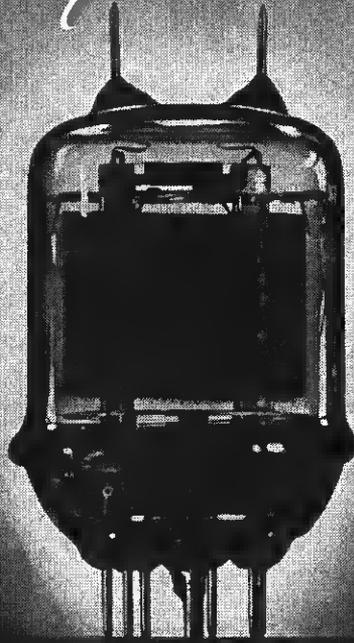
Zenith Radio Corp., Chicago, continues urging employees to suggest ways and means of improving the production of radio in war; offering cash prizes to its workers. Two employees, Mike Kraftor and Max E. Dose are among the latest idea contributors to receive cash awards.

## See Export Trade Boom

Predicting that a much larger percentage of American production will be required for the export trade than prevailed before the war, Roy W. Gifford, vice president and assistant general manager of the Norge Division of Borg-Warner Corp. says that this increased production will be necessary to meet "a tremendous upsurge in the demand for household appliances all over the world" immediately after the war. Mr. Gifford has just completed a survey of distributor reports from various countries.

# ANSWER

*To an Engineer's Prayer*



**W**HEN WAR began, among products high on the "critically needed" list were N. U. power tubes. To operate thousands of field and ship transmitters, these tubes were needed in quantities which called for vastly increased facilities *plus some entirely new thinking along mass production lines.*

With a thoroughness that could not miss, National Union engineers went to work on this assignment. Soon they not only had the increased volume required—but in addition we had found the answer which many a tube engineer and production man had long sought, even prayed for...

the Tube Industry's first automatic exhaust and sealing machines to operate successfully with this type of tube.

Such resourcefulness and engineering capacity have played no small part in making National Union one of the Tube Industry's largest producers of war goods. You will want to remember this achievement when shaping up your post-war plans, and when counsel in electronic applications is needed. *Count on National Union.*

**National Union Radio Corporation, Newark, N. J.**

*Factories at Newark, N. J.; Maplewood, N. J.  
Lansdale, Penna.; Robeson, Penna.*



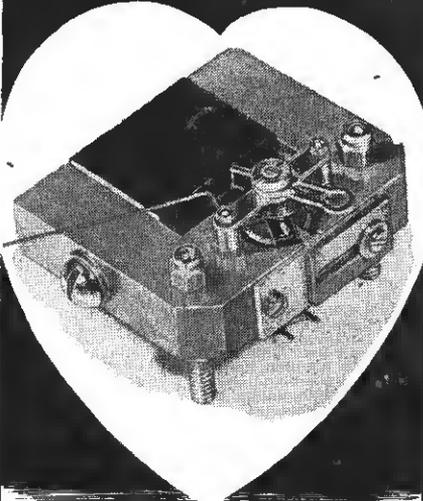
# NATIONAL UNION

## RADIO AND ELECTRONIC TUBES

*Transmitting, Cathode Ray, Receiving, Special Purpose Tubes • Condensers • Volume Controls • Photo Electric Cells • Panel Lamps • Flashlight Bulbs*

# SUPREME METERS

DURABLE *Hairline* ACCURACY



*No testing device can be better than its meter. The meter is the heart*

## RUGGED — DEPENDABLE

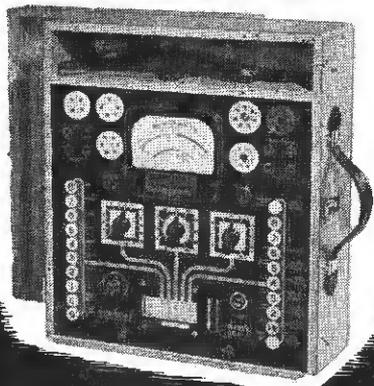
BUILT for durable, hair-line accuracy that meets U. S. Army requirements, new Supreme Meters more than live up to the Supreme pledge, "Supreme By Comparison."

THAT'S WHY Supreme Meters and Supreme Testing Instruments incorporating Supreme Meters will be, more than ever, your logical choice when victory is won.\*

**SUPREME INSTRUMENTS CORP.**  
GREENWOOD, MISS., U. S. A.

\* All Supreme production, Test Instruments and meters, is now going to our fighting forces around the world.

● **SUPREME 504-A**  
Tube & Set Tester



# SUPREME

## TESTING INSTRUMENTS

## RAY W. TURNBULL



Mr. Turnbull, formerly executive vice president of the Edison General Electric Appliance Co., Inc., makers of Hotpoint electric appliances, was recently elected president of the company. Mr. Turnbull has been with the Hotpoint organization for thirty-three years.

## Zenith Financial Report Is Made Public

Zenith Radio Corp. reports an estimated consolidated operating profit for the first quarter ended July 31, 1943, of its current fiscal year, amounting to \$1,592,199, after depreciation, excise taxes and reserves, including those for voluntary price reductions on war contracts, but before provision for federal income and excess profits taxes. These latter taxes are estimated at \$769,146 net.

## Acquires Recording License

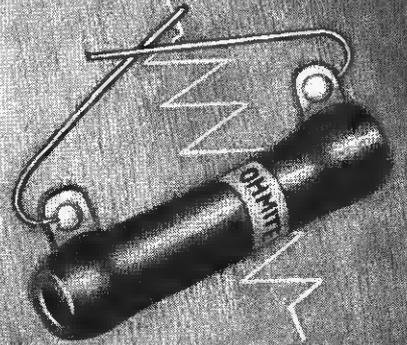
Decca Records, Inc., announces that it has been licensed for itself, World Broadcasting System, Inc., and all other Decca subsidiaries under patents of American Tel. & Tel. Co., and Western Electric Co., to make sound records. According to Decca officials, this means that a vast number of sound recording patents of these companies are made available to Decca for immediate use.

## "Sandwich Man" Plugs Radio Battery Sales

"Fresh Batteries for Every Make Radio"—believe it or not, that's the sign a "sandwich man" carries on his back through the streets of New York these days! He's handing out cards of the Sico Electric Radio Co., 843 Seventh Ave., and 258 Lexington Ave. And *Radio Retailing Today's* representative saw lots of people taking these cards.

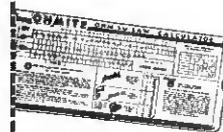
# OHMITE

10 AND 20 WATT  
**BROWN DEVIL RESISTORS**



*For Dependable Service in Electronic Applications*

Long known for their dependable performance—Ohmite Brown Devil Resistors serve today in critical war applications—in radio communications and other electronic equipment. Their extra sturdy, wire wound, vitreous enameled construction insures permanent resistance. These same units will be ready to serve your peacetime needs after Victory is won.



**Ohm's Law Calculator**  
Helps you figure ohms, watts, volts, amperes—quickly, easily. Solves any Ohm's Law problem with one setting of the slide. All values are direct reading. Send only 10c in coin. (Also available in quantities.)

## CATALOG 18

Gives helpful information on Ohmite stock resistors, rheostats, chokes and tap switches for all types of applications. Free—Write for it.



Authorized Distributors Everywhere



**Ohmite Manufacturing Co.**  
4872 Flournoy, Chicago 44, U.S.A.

RADIO Retailing TODAY • November, 1943

# Meissner REPLACEMENT PARTS *Available!*

Your Meissner distributor will advise you on the Meissner replacement parts now available . . . while keeping our facilities devoted to the manufacture of vital electronic parts for war needs we have been doing our utmost to keep a replacement parts stock in the hands of Meissner distributors . . . a service which we, here at Meissner, are doing to help keep 'em playing.

See your Meissner distributor today . . . he will tell you just what parts are available now.

  
MT. CARMEL, ILLINOIS

PRECISION-BUILT ELECTRONIC PRODUCTS

**YOU'LL WANT  
THIS BOOK for  
PRESENT and  
POSTWAR BUSI-  
NESS PLANNING**

**BELL'S Complete  
Line of SOUND  
EQUIPMENT!**

You'll want this book of latest information on the complete up-to-the-minute line of BELL SOUND SYSTEMS for every industrial and commercial use. They will enable you to help busy warplants streamline inter-departmental communications, improve production control and smooth out management problems with modern applications of the newest types of sound equipment. Your copy of this book also shows other items that will prove valuable in both your present and post-war business plans. Write for it today!

**BELL SOUND SYSTEMS, Inc.**  
1186 Essex Avenue Columbus 3, Ohio  
Export Office: 4900 Euclid Ave., Cleveland 3, Ohio



**Cosgrove Lists Postwar  
Problems to be Solved**

Speaking before a group of members of the Ohio Society of New York, held recently in New York, Raymond C. Cosgrove, vice president and general manager of the manufacturing division of the Crosley Corp., listed a number of problems which he declared "must be faced and solved" before postwar manufacturing operations can be started. Some of these problems now under government control were described as follows by Mr. Cosgrove:

"Who will get the first materials allotted for civilian use?"

"What provision will be made for reconversion of companies filling large war orders?"

"How much production will each company be allowed to make?"

"What models will be permitted, and how many?"

"Will there be Victory models?"

"What prices can be established?"

"What forms of distribution will be permitted?"

"What controls are to be maintained and for how long?"

"What preference ratings will there be for materials?"

"These and many more questions must be answered and none of us knows all the answers yet," concluded the Crosley executive.

**Sylvania Adds New Plant**

A new factory for the manufacture of radio tube parts has been acquired at Wakefield, Mass., by Sylvania Electric Products, Inc. The new plant, a four-story structure containing 35,000 square feet of floor space, will augment the company's existing facilities and help supply the increased demands of the armed forces.

**Big Response to  
Majestic's Contest**

Though Majestic Radio & Television Corporation's \$1,000 war bond contest has not yet ended, President E. A. Tracey reports that entries are pouring in, and that hundreds of these were written on the basis of interviews with housewives, giving Majestic an opportunity to analyze dealer views and consumer opinions.

According to President Tracey, Majestic feels that "basically, the public and retailers will be formulating its postwar program, specifically as to product and to a large extent as to distribution policies."

**New Staff Assistants**

Ralph C. Stuart, manager of the Westinghouse lamp division, with headquarters at Bloomfield, N. J., has announced the appointment of R. F. Tucker and Adolph Frankel as staff assistants. Mr. Tucker joined the company in 1909, and Mr. Frankel came with Westinghouse in 1917.

**LINES WANTED**

Well established Southern California Electrical Distributor wants to contact post-war available lines in radio, electrical appliance and sound industries. Organization has been kept intact by working on war production contracts. Unlimited financial responsibility. Personnel thoroughly familiar with all phases of wholesale and retail distribution. Nation-wide references available. All correspondence kept strictly confidential.

**BOX B11—RADIO RETAILING TODAY**  
480 Lexington Ave., New York 17, N. Y.



PARDON US--

We'll be back just as soon as we help finish off ~~three~~ <sup>two</sup> birds named Hitler, Hirohito and Mussolini.

It's just an interruption.

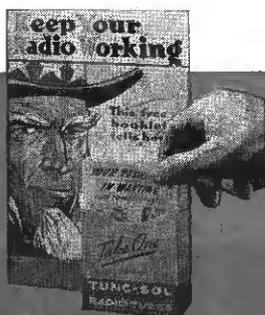
Our real job is building the finest tubes and lamps we can possibly build. Our real interest in life is YOU.

But this war is a nasty necessity on which the government has asked us to focus our attention for the moment. They're taking most of our product and many of our men--some of whom perhaps called on you.

We're learning many things in our war work--things which will help us make an even finer Tung-Sol line for you in the future.

Bear with us. We're anxious to get back into the swing of serving you. You helped us build this fine business. It'll be you who'll make our business again after the war.

We'll be seeing you.



With the few radio tubes that are available, you want to get your share of the service work they make possible. Ask for the display and booklets with your next order for TUNG-SOL Tubes.

**TUNG-SOL**  
*vibration-tested*  
**RADIO TUBES**

TUNG-SOL LAMP WORKS INC., NEWARK, N. J., Sales Offices: ATLANTA, CHICAGO, DALLAS, DENVER, DETROIT, LOS ANGELES, NEW YORK  
ALSO MANUFACTURERS OF MINIATURE INCANDESCENT LAMPS, ALL-GLASS SEALED BEAM HEADLIGHT LAMPS AND CURRENT INTERMITTERS

## "Dream" Goods Not in Immediate Postwar Era

Urging its readers not to count on "miracles" from American manufacturers too soon after the end of the war, Popular Science Monthly has been stressing this message in a series of advertisements, appearing in leading newspapers, and more recently in trade journals. In the latter publications a two-page spread is used, one page carrying that magazine's copy, the opposite page the copy of manufacturers in various fields.

"There will be plenty of fine products to invest in when we hit the postwar horizon," reads a portion of the

advertisement. "Many of these things may not be the dream merchandise you've dizzied your mind about, but this you can count on—they will be better stuff, of better materials and better design than you ever bought before."

## Pinkerton With Reeves

Fred H. Pinkerton, formerly manager of sales promotion and advertising of the industrial division of the U. S. Rubber Co., has been appointed director of public relations for Reeves Sound Laboratories, Inc., of New York. Announcement of the appointment has been made by L. D. Ely, president of the Reeves company.

## Majestic Favors Independent Distributor

Stating that his company is convinced that this is a good time to formulate the policies that will govern its postwar sales activities, E. A. Tracey, president of Majestic Radio & Television Corp., has committed Majestic to an independent distributor organization for the distribution of its postwar electronic products. "In spite of much discussion regarding possible changes in distribution methods after the war, I firmly believe that the independent distributor can perform the necessary functions of distribution most economically and most efficiently for the manufacturer and without increased cost for the consumer," said Mr. Tracey. "Our aim at this time is to strengthen our sales and distributor organization as we have built up our production and engineering departments over the past two years."

## Boost Bonds and Morale

In the first half of a six-month tour sponsored by the War Production Board in cooperation with RCA Victor Division of the Radio Corp. of America, more than a quarter of a million workers in eastern war plants have been entertained at "industrial sings," conducted by Lucy Monroe, noted "Star Spangled Soprano," who is RCA's director of patriotic music.

The object of the tour, according to WPB, is to promote morale and the "win-the-war" spirit.

The Treasury Department has recently sent Emerson Radio & Phonograph Corp. of New York, a citation commending the employees who participated in the recent bond drive for "having provided the following fighting equipment: five flying fortresses and one PT boat. . . ." The corporation, its executives and employees purchased \$2,400,000 worth of bonds in this drive.

## On Civilian Changeover

At Westinghouse Electric & Manufacturing Company's recent conclave of officers and managers it was disclosed that the company has complete plans in readiness for reconversion to civilian production as soon as war production demands slacken.

A statement released included these forecasts:

1. While a period of readjustment to peacetime conditions must take place, it should be no more difficult than our adjustment to wartime conditions.
2. The pent-up demands for the goods of peace will be unprecedented. These goods in many factories and homes are wearing out.
3. The means of purchasing will exist after the war as never before—in cash, bonds and credit.

## "THE HELP SITUATION" by Lariat



HERE'S HELP  
THAT'S ALWAYS  
ON THE JOB!

### RIDER MANUALS

Volumes XIII to VII .....\$11.00 each  
Volumes VI to III ..... 8.25 each  
Volumes I to V, Abridged .....\$12.50  
Automatic Record Changers and Recorders 6.00

### OTHER RIDER BOOKS YOU NEED

The Cathode Ray Tube at Work  
Accepted authoritatively on subject .....\$3.00  
Frequency Modulation  
Gives principles of FM radio ..... 1.50  
Servicing by Signal Tracing  
Basic Method of radio servicing ..... 3.00  
The Meter at Work  
An elementary text on meters ..... 1.50  
The Oscillator at Work  
How to use, test and repair ..... 2.00  
Vacuum Tube Voltmeters  
Both theory and practice ..... 2.00  
Automatic Frequency Control Systems  
—also automatic tuning systems ..... 1.25  
A-C Calculation Charts  
Two to five times as fast as slide rule.  
More fool-proof. 160 pp. 2 colors ..... 7.50  
Hour-A-Day-with-Rider Series—  
On "Alternating Currents in Radio Receivers"—  
On "Resonance & Alignment"—On "Automatic  
Volume Control"—On "D-C Voltage Distribution"  
90c each

### JOHN F. RIDER PUBLISHER, INC.

404 Fourth Avenue • New York City  
Export Division: Rocke-International Electric Corp.  
13 E. 40th Street, New York City Cable: ARLAB

Rider Manuals and Rider Books offer you help that works as long and as hard as you do. What's more this help does not need training—and will stick with you the rest of your life.

Rider Manuals reduce to a minimum the time required to trace the circuit in any domestic receiver and furnish you with the servicing information you need to operate with utmost efficiency.

Rider Books show you how to speed servicing work by explaining the latest in time-saving techniques.

That's why throughout the world these books are making it possible for fewer civilian servicemen to produce more radio repair work.

When you need more help, competent dependable help, remember Rider Manuals and Rider Books. They are ready to provide you with the extra help you need—"The Extra Hand" you must have if you are to "Keep 'em playing."

RIDER MANUALS  
GIVE YOU THE HELP YOU NEED!



**FOR  
SAFETY'S  
SAKE**



## IRC TYPE MP RESISTORS

Keeping America's newest broadcasting FM and television transmitters operating with a minimum of interruption or distortion is a challenging job. There's no room for chance with thousands of dollars of air-time and talent services at stake. To make certain that transmitters and control instruments will function perfectly under their full power loads—often running to 50 kilowatts—daily tune-up tests at off-time periods have become standard practice. But to throw this unbridled wattage out over the regular antenna could conceivably cause air-signal havoc . . . squeals . . . crashes . . . shot noises.

So, one of the early FM and television problems faced by broadcast engineers was the development of a dummy antenna simulating the high frequency characteristics of the regular antenna, in order to obtain informative and accurate check-readings.

### ANOTHER **IRC** APPLICATION

IRC's MP Resistors, when water-cooled, furnished the ideal solution. These sturdy units embody all the required features while readily dissipating the tremendous heat factors involved.

Tests indicate that water-cooling at tap pressure increases their rating by as much as 90 times.

*Alert Service Men know that the resistance units overwhelmingly preferred for performance by Uncle Sam today are the same components that will be preferred by industry tomorrow. Already engineering evidence clearly indicates that IRC resistors and controls will be specified as standard in many of the post-war electronic devices which will find a ready civilian market of vast proportions.*



Proudly we fly the Army-Navy E flag with two white stars . . . symbol of maintained excellence in production of war materiel.

## INTERNATIONAL RESISTANCE COMPANY

Dept. P • 401 N. Broad Street • Philadelphia 8, Pa.



## Stewart-Warner Dividend

The directors of Stewart-Warner Corp. recently voted a cash dividend of 25 cents per share on the \$5 par value common stock, payable Dec. 1, to stock of record at the close of business, November 10.

## Sylvania Chart Offered

A concise pamphlet containing charts and all necessary data on radio tube substitutions is offered free of charge, and is obtainable from Sylvania distributors or direct from Sylvania, Emporium, Pa.

## New Garod Needles

Garod Radio Corp., 70 Washington St., Brooklyn, N. Y., is introducing the new Garod Permatone phono needles, retailing at 50c, \$1 and \$1.50, playing 1,500, 4,000 and 7,000 recordings, respectively.

These needles are put in attractive, individual three-color cards . . . easy to handle and easy to display. Along with them, Garod has prepared striking, self-selling display cards, approximately 10 x 15 inches. In addition, consumer folders, printed in three colors, are on the list of promotional helps. A quantity of these folders are supplied, free of charge, with a kit of 4 display cards.

## Meck Tells How Discovery Aids Production

Walkie-talkie radio and electronic equipment, desperately needed for the armed forces is available in greater quantities through two new discoveries in the production of piezo electronic quartz crystals, according to John Meck, radio products manufacturer of Plymouth, Ind.

New cutting and salvage methods, employed in Meck's plant, are relieving the serious shortage of large, clear quartz crystals used to make oscillator plates for military transmitters and receivers, electronic devices, artillery range-finding and submarine-detecting gear.

Savings of the crystals, found only in Brazil, are now accomplished by employing thinner saws to slice the waferlike plates. Thus, much useless dust from sawing and grinding the virgin crystals is eliminated.

## Herold and Levy Join Emerson Organization

Jerome Lee Herold, who was formerly purchasing agent of the electronics department of General Electric Co. has joined the staff of Emerson Radio & Phonograph Co., New York, as chief purchasing agent.

Maurice L. Levy, formerly chief engineer of the radio division of Stromberg-Carlson Co., is now manager of Emerson's special equipment division.

## Presents Television Show

In connection with the Albany *Times-Union*. General Electric Company put on a television show Friday evening, Nov. 5th, portraying how "Television covers the news." The unique show consisted of reviewing a 9-page special edition of the newspaper, first showing the printed page and then demonstrating how television might cover the same event.

## A. G. Kober Deceased

Albert G. Kober, assistant advertising manager of the Stromberg-Carlson Co., Rochester, N. Y., died October 5. He was 67 years of age. Mr. Kober, who had been with the firm for 38 years, had held a number of positions, having been a factory assembler, inspector, foreman, returned apparatus head, export sales editor and asst. advertising manager.

## Centralab's New Catalog

Centralab, Division of Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee, Wis., has issued a new 12-page brochure listing wartime parts for jobbers. Free copy may be had upon request to the company.



Only the industry and the military know the war-story of "shorter wave-lengths or higher frequencies" and the precision thinking and disciplined imagination going into the use-development of the fundamental electric charge of the universe

For these purposes Ken-Rad makes radio and electron tubes Total production now goes to *shorten the war* The experience thus gained will be available for commercial utilization as soon as possible

# KEN-RAD

TRANSMITTING TUBES  
CATHODE RAY TUBES

INCANDESCENT LAMPS  
FLUORESCENT LAMPS

METAL AND VHF TUBES  
SPECIAL PURPOSE TUBES

OWENSBORO KENTUCKY U S A



## LOOKING FOR TROUBLE

*You wouldn't find it much fun, sitting on a hill looking for Japs. That's what this soldier is doing, on a battlefield somewhere in the South Pacific. Every tree, every bush, every slightest movement must be scrutinized carefully. Everything may look peaceful enough, but there's plenty of trouble out there. And the big idea is to track it down, before it finds you.*

**This young lady, too,** is on the lookout for trouble. With a microscope she is examining pivots to be used in Simpson electrical instruments and testing equipment.

From start to finish these pivots have been processed entirely right in the Simpson plant. Rounded on ends in true spherical form . . . specially heat-treated to make them hard for long wear, tough to withstand shocks and vibration . . . ground and lapped to a mirror finish to prevent rusting.

To the naked eye each one is a model of delicate precision. But Simpson doesn't stop there. It is this young lady's job to search out any microscopic flaw that might affect an instrument's accuracy.

The same meticulous care attends every step of manufacture. Why? Because Simpson instruments are going forth to posts of vital importance, on the home front and the fighting fronts alike. Because it is our job not only to make *all* we can, but to make them the *best* we can.



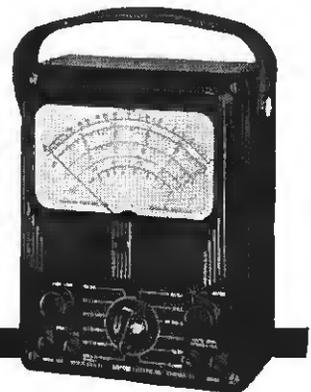
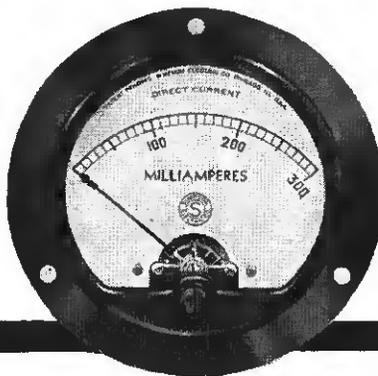
**SIMPSON ELECTRIC COMPANY**  
5200-5218 Kinzie St., Chicago 44, Illinois

# Simpson

INSTRUMENTS THAT STAY ACCURATE

Buy War Bonds and Stamps for Victory

RADIO Retailing TODAY • November, 1943



# LAMP REFLECTORS ARE AVAILABLE



Serving  
UNCLE SAM  
WITH THE NEW  
DUMONT  
VICTORY MODEL TE  
SUPERCAPS

Dumont Electrolytic tubulars for the duration have the following special features...and are guaranteed to give the same high quality performance for which all Dumont Electrolytic Tubulars have a reputation.



SELF HEALING  
LONG LIFE  
ECONOMICAL  
VARNISHED TUBES  
DOUBLE SEALED  
SMALL SIZE  
FULLY GUARANTEED

**DUMONT  
ELECTRICO.**

MFR'S OF  
CAPACITORS FOR EVERY REQUIREMENT

34 HUBERT STREET  
NEW YORK, N. Y.

• During the period of business inertia preceding the war, a large number of radio retailers found the selling of glass and composition I.E.S. type lamp reflector bowls profitable items.

As a matter of fact, some firms had more activity in these reflectors than in other lines, even where a considerable variety was carried. Many are still doing good business in them, and because of breakage, there is no saturation point, and will be none unless new types of lamps become as popular as the I.E.S. type did.

For the dealer who has never sold them, RADIO RETAILING TODAY has made a study of these staples, and feels that they are definitely an item that has been tried and proven over a considerable period of time. A canvass of distributors and retailers discloses that present sales are somewhat lower than they were a few years ago, but are still considerable.

Probably their most important phase of interest today is the fact that the dealer can get them. He will experience difficulty, possibly, in getting composition reflectors, but this is just as well because some of this type have given trouble. Some have discolored through heat of the lamp, and have even cracked while in stock, due to expansion and contraction.

### Who Buys Them?

There are two types of buyer for these items. First, the replacement customer, who buys them for his indirect floor, bridge or table lamp, and second, the person who is going to "convert" an older type of lamp to the new indirect kind.

There are many prospects for sales, with the home leading. Thousands of college students have indirect table or study lamps sent to them at their schools. Advertising on these lamps has been of immense volume. They have been recommended by eye specialists, physicians, engineers and educators.

Public acceptance has assumed prodigious proportions.

Replacement business also comes from banks, physicians and dentists, public and private schools, morticians, florists and business offices, to mention a few of the hundreds of users throughout the country.

### The Kinks Are—

Some dealers warn that the line presents certain difficulties, which, however, if understood, do not present a too serious aspect.

The three prospective annoyances to watch out for are:

1. "Exchanges." Many people buy these shades or reflectors without knowing the correct measurements. The two measurements necessary to know are (a) the neck measurement, where the bowl fits into the "well" of the lamp; (b) the width at the top of the bowl, where the shade rests upon it.

Depth of the "neck" of the bowl is important too in some lamp models. In most lamps the bowl is fastened in with hand screws, but in some, the reflector merely rests in place in the well. (This latter type generally calls for a longer necked reflector.) However, only about a half dozen types need to be stocked to supply practically all demands.

Customers should be urged to bring in the broken reflector, or to take accurate measurements. If the customer "guesses" at the size, you'll find he's wrong 9 times out of 10, and the item must then be exchanged.

2. Breakage Claims. Claims of defects or breakage, where the customer says he is not responsible, need careful handling. Some of these claims are unreasonable, but the consensus of opinion among most dealers is that they do not experience many unjustified demands.

3. Odd Glassware. Dealers advise that they lose some time discussing unusual shapes and colors of reflectors demanded by customers. A large percentage of unusual lamp glassware is no longer in stock, and even the stock available represents so many numbers, sizes, shapes and colors, it is not good business to stock any specials as a sideline.

(Continued on page 82)

# SPRAGUE TRADING POST



## A FREE Buy-Exchange-Sell Service for Radio Men

**FOR SALE**—Hickok tube tester, model AC49. Elmer M. Wahl, Box 23, Rusk, Wisc.

**WANTED AT ONCE**—0-1 millimeter, AC or DC. Will buy tester containing one of these in good condition, or pay good price for separate unit. Home Electric Service, 807 N. Market St., Lisbon, Ohio.

**EQUIPMENT WANTED**—Will buy complete radio shop equipment—everything from tube tester to signal generator, condenser tester and meters. Cain's Radio Service, 201 E. Houston St., Nacagdoches, Texas.

**COMPLETE SHOP EQPT. FOR SALE** because of illness: One Hickok 510X tube tester; one Hickok No. 155 signal tracer; one Solar condenser tester; one Clough-Brengle No. 110 signal generator; hundreds of new tubes such as 12SK7GT, 1N52T, 25Z6, OZY2T, etc.; also hundreds of new condensers, speakers, transformers, chokes, etc., and several new radios. Total value over \$600, will sell for \$400 cash. Jim's Radio Service, 621 Chambers St., South Haven, Mich.

**WANTED**—RCA voltohmmyst No. 165; RCA-Rider Chanalyst No. 162. Cash. Dean Speidel, 3304 S. 18th St., St. Louis, Mo.

**NEEDED**—40-100 watt amplifier or booster ampl., microphone, speakers, Presto or similar recording table, decibel meter, mike Xformers, generator or converter, and mike cable. Most any condition. E. H. Munn, Jr., 306 N. West St., Hillsdale, Mich.

**FOR SALE**—No. 155 Readrite 0-25 DC MA. Also 0-50 DC V. One model 95 square type 0-200 DC MA meters. \$2.50, for all three. David Glass, Langenburg, Sask., Canada.

**WANTED**—One magnetic recording head, Model 6 Speak-O-Phone, 15 ohm impedance or other make of same size, shape and rating. T. E. Pekonen, 1013 Carney Blvd., Marinette, Wisc.

**WANTED**—Will pay \$15 cash for a "Mac" chromium-plated, teardrop style automatic speed key. Must be in excellent condition. Reply immediately. Wayne C. McClung, 1149 Dawson Rd., Albany, Ga.

**WANTED**—Echophone Model EC1 receiver in any condition. S/Sgt. A. J. Ardizzoni, 12008933, 10th Bomb. Squadron, 25th Bomb. Gp., A.P.O. No. 695, c/o Postmaster, New York, N. Y.

**FOR SALE**—Amertran Type W, and de luxe plate, filament, reactor, modulation transformers for 250-watt transmitter. New condition, complete specifications. Ernest Schwartz, 306 W. 94th St., New York, N. Y.

**WANTED**—Set tester, tube tester, oscilloscope. Have for sale misc. variable condensers, chokes, etc. Doyle McCall, 328 Roosevelt St., Wenaschee, Wisc.

**WANTED**—Meissner analyst or similar instrument in good condition. L. H. Duggan, 1209 Ratone St., Manhattan, Kans.

**FOR SALE**—Zenith model 17 32-v DC to 110-v AC inverter, rated 100 watts; two auto radio filter packs, models B-L 160, rated 2.2 amps. and 8-10 amps., 6-v DC from 110-v AC; S-A power trans. with windings for 4-26; 1-27; 2-50; and 2-81's, nearly 1500-v. across hv. sec. pri. 115 AC. Also back files of Radio Craft and Radio News. Want late radio test eqpt. and text books. Blackford Radio Service, Brodhead, Wisc.

**WANTED**—A cheap code oscillator (new or used) and a "Sky Buddy" receiver in good condition. Arnold E. Collins, 23rd C.T.D. (Air Crew), Section 35, University of Buffalo, Buffalo 14, N. Y.

**FOR SALE**—Clough-Brengle 79 best audio oscillator, \$35; Clough-Brengle 88 peak and RMS vac. tube voltmeter, \$40; C-B No. 20 tube tester modernized, \$27.50. Want to buy 100-w booster amplifier, reflex speaker projectors and driver units; also thermocouple RF ammeters 0.1 amp. and 0.3 amp. 3" or 5" cathode ray scope. Must be reasonable and in good condition. Fox Sound Eqpt. Co., 435 S. 5th St., Richmond, Ind.

**WANTED** for new service business: AC & DC multimeter; late tube tester; and a good signal generator. Must be in A-1 shape. Cash. L. Ovale, 5605 Ave. K, 535-A, Galveston, Texas.

**FOR SALE**—Hickok universal sig. generator No. 117. Has most features of latest model No. 117 except is not wired for crystal or voltage reg. tube. Price \$65. Cook's Radio Lab., 1110 Prince St., Brunswick, Ga.

**URGENTLY NEEDED**—One multimeter and one tube tester, portable or counter model. Offer you an AA5 priority and cash. Describe fully. Reynold Nickols, 715 So. Herbert St., Los Angeles 23, Calif.

**WANTED**—Instructions for operating No. 550 Radio tester serial No. 550467 deluxe series. Will pay for this. Western Auto Asso. Store, Dexter, Mo.

**WANTED**—New or second-hand Bateman 12" recording unit with Brush RC-20 crystal cutter, Astatic FP-38 high-fidelity pickup, 110-v AC-DC recording motor with 12" turntable, preferably weighted. Must be good. John K. Major, Yale Station, New Haven, Conn.

**WANTED TO BUY** for cash; Jewell 199 set analyzer; Jewell No. 444 ditto; Jewell No. 57 D-C voltmeter; Test-o-phone radio test unit; RCA service tip file; Rider chanalyst; RCP tube checker No. 309S, 309SC, or 308P; Triumph No. 630 A & B power pack battery tester; GTC porta-power unit model U or G; Philco signal generator model 070; Superior tube tester No. 1240; also all vols. Rider's Service manuals. Quote price and send full details of any or all. Howell's Radio Electric Service, Anna, Texas.

**WANTED**—A good crystal mike or dynamic type. Will pay cash. Describe fully. W. F. Ragland, 205 Graves St., McKinney, Texas.

**WILL TRADE**—Will swap one MCD140M split-stator Hammarlund condenser, several 15 mmfd. star midget condensers, or one set Hammarlund plug-in coils, for two 140 mmfd. midget condensers. J. D. Pyle, South Pittsburg, Tenn.

**UX280 TUBE WANTED**—Must be in working condition. John L. Rhoton, 1740 McGee St., Kingsport, Tenn.

**WANTED**—32L7 tubes. Write price. Zanzi Radio, 2027 W. Division, Chicago, Ill.

**WILL PAY CASH** for Supreme No. 562 audolyzer and Triplett No. 1612 tube tester, also Precision E-200 signal generator. Adrian Chappellias, 17 Elder Pl., Potomac Hts., Indian Head, Md.

**WANTED**—Radio parts and test equipment of all types. Describe fully. Milford Thomas, Sr., P. O. Box No. 31, Canebrake, W. Va.

**WANTED**—Western Electric 253-A rectifier tube for school P. A. system. Jimmy Gray, 623 E. Woodlawn Ave., San Antonio, Texas.

**MIDGET RADIOS WANTED**—Will buy or trade for good units—also want an AC-DC multimeter of good make. Have tubes, filters, speakers, etc. Gerald Samkofsky, 110 Wilson St., Brooklyn, N. Y.

**TUBE TESTER WANTED**—Also a good voltmeter. Have portable AC-DC set to trade. John Haynes, Doe Run, Mo.

**FOR SALE**—Two 30-watt amplifiers and three 12" RO LA speakers (18-watt) complete, ready to use. Also have 2 dynamic mikes and one 700-D Shure crystal, 150 ft. mike cable with fittings. Write for details. Fred Richards, Payette, Idaho.

**FOR QUICK SALE**—Jackson tube checker No. 636; Supreme radio tester No. 444; Philco battery tester No. 015; Ward's battery charger 4-2 amp.; Walker multi-unit Epiphone Electar amplifier, blond case with dust cover; 2 Epiphone electric Spanish guitars; one National electric Hawaiian guitar, all with cases; 1 Shure crystal mike with floor stand and cable. All in good condition. What am I offered? Also have parts, tubes, phono motors, pickups, used radios, typewriter, etc. Write for details. Willard Durr, Box 254, Troy, Ohio.

**WANTED**—3" oscilloscope and Rider's Manuals, Vols. 8 to 13. Cash. State lowest price. Norman Jacobson, 1697 Andrews Ave., Bronx, New York, N. Y.



## CASH WAITING FOR YOUR UNUSED PARTS AND EQUIPMENT

Going into the Army or Navy? Giving up your service work for a war job? Or, even if you have remained in servicing work and have unused parts and equipment lying around, you can still render a patriotic service by advertising these for sale through the Sprague Trading Post. We'll gladly run your ad free. Radio equipment of all types is badly needed today—and the Trading Post will help you dispose of it quickly. It is a golden opportunity to do your bit in keeping radios working on the home front and, at the same time, turn unused materials into cash, and avoid the possibility of obsolescence when the war is won and new, up-to-the-minute equipment is again available.

### Your Ad Run Free!

Send in your ad today. "Equipment for Sale" and "Equipment Wanted" ads of an emergency nature will receive first attention. Sprague reserves the right to eliminate any ads which do not fit in with the spirit of this special wartime advertising service. Different

Trading Post ads appear regularly in Radio Retailing-Today, Radio Service-Dealer, Service, Radio News, and Radio Craft. Please do not specify any certain magazine for your ad. We'll run it in the first available issue that is going to press.

Dept. RRT-311

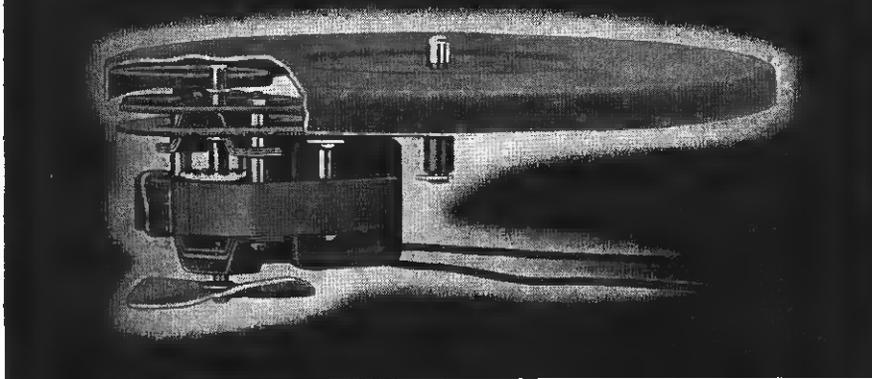
SPRAGUE PRODUCTS CO., North Adams, Mass.



# SPRAGUE CONDENSERS KOOLOHM RESISTORS

Obviously, Sprague cannot assume any responsibility, or guarantee goods, services, etc., which might be exchanged through the above advertisements

remember **ALLIANCE** Phono-motors?



*Let's Swing*

Hitler and his gang from a sour apple tree! . . . we're doing our part by putting Alliance dependability and skill into Dynamotors and other types of precision motors for our flying fighters. Alliance is serving on all fighting fronts. After we Win, and when joy again is unconfined, we'll tell you about some new and startling ideas in Phono-motors—Ideas that will help you in Peace as you are now helping in War. Why not put that in your notebook now? . . . under A. **REMEMBER ALLIANCE! . . . Your Ally in War as in Peace!**

**ALLIANCE MANUFACTURING COMPANY**  
ALLIANCE, OHIO



*Parts by*  
**Centralab**

Div. of Globe-Union Inc., Milwaukee, Wis.

- Steatite Insulators
- Ceramic Trimmers
- High Frequency Circuit Switches
- Volume Controls
- Ceramic Capacitors
- Wire Wound Controls
- Sound Projection Controls

## Lamp Reflectors

(Continued from page 80)

Stick to the standards the jobber recommends, say dealers.

A stock of these reflectors may help out a dealer who is hard put to find articles for window display these days.

One dealer, feeling that considerable interest existed in the sale of reflector bowls, dressed one of his windows with a complete line of the I.E.S. type reflector, and the response was overwhelming.

There is a consistent and continual demand for these shades, say dealers, and the item being part of an electric lamp, is not too entirely extraneous to the radio dealer's business to be feasible for him to stock and understand.

### Searle Is Promoted

According to an announcement made by John Ballantyne, president of Philco Corp., Lionel M. Searle, for the past year manager of the Monroe St.



Philco's Lionel Searle, now manager of the Simplex Radio Division.

plant of the Simplex radio division of Philco at Sandusky, Ohio, has been named manager of the entire division. Mr. Searle came with the company in 1933 as a mechanical inspector in the factory engineering department.

### New Factory Representative

M. F. Klicpera, Houston, Tex., has been appointed factory representative for the Universal Microphone Co., Inglewood, Cal., for territory embracing Texas, Louisiana, Arkansas and Oklahoma.

## Mitchell Talks on Postwar Problems

Speaking before a group of electrical industry executives in Chicago recently, Don G. Mitchell, vice president in charge of sales of Sylvania Electric Products, Inc., touched upon two important postwar angles. One was the employment situation, and the other the future electronics picture.

He stated that in order to avoid disastrous unemployment after the war, every man, woman and child must make purchases of goods and services totaling at least \$1,000. "This will call for an annual output of 135 billion dollars worth of goods and services, compared to the total of only 98 billion dollars in the boom year of 1929," said Mr. Mitchell.

Declaring that this problem will be complicated by the fact that some type of rationing will be continued for awhile after the war, in order to stem off inflation, Mr. Mitchell said that this means that the production man, who has been all-important for the past few years, will "step down as directing genius of American industry and hand over his baton to the salesman."

### Electronics Hold Promise

Of most promise, stated Mr. Mitchell, is the electronics industry which will find thousands of new jobs to do in manufacturing and transportation, but he scoffed at the exaggerated ideas that have grown up around this subject, entertaining his listeners with a sketch of what some dreamers believe future electronics will do for them—from being awakened by the "gentle electronic rocking of the bed," down on through the day until one is "rocked to sleep by an electronic lullaby machine."

Commenting upon this, Mr. Mitchell said, "my advice is: don't hold your breath until that day arrives."

### Schramm With Clarostat

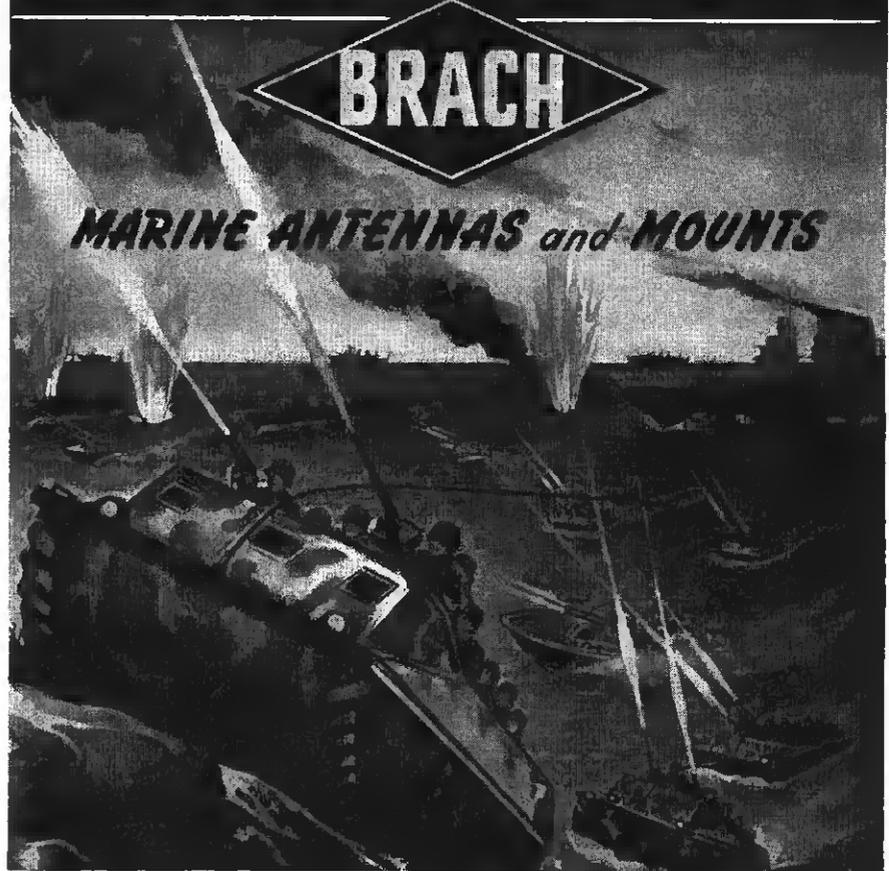
Eddie Schramm, well-known in the radio trade, has taken over the job of purchasing agent with Clarostat Mfg. Co., Inc., Brooklyn, N. Y. Mr. Schramm has been engaged in radio engineering, research and servicing since 1923, and immediately prior to joining Clarostat was with the War Department as a field expediter, and was stationed in the Clarostat office for the past year and a half.

### Nickerson Is Appointed

M. P. Nickerson, who has been with Westinghouse Electric Supply Co. in various capacities since 1925, has been appointed general apparatus and supplies manager at the company's headquarters, 150 Varick St., New York.

RADIO Retailing TODAY • November, 1943

TODAY in WAR... TOMORROW in PEACE



Brach Marine Antennas and Mounts are now manufactured 100% for the service of Uncle Sam's amphibian tanks, PT boats, etc. But with the dawn of Victory we shall be ready and able to utilize our enhanced experience and wartime "know how" in supplying the civilian requirements for antenna equipment for ship-to-shore communication.

## L. S. BRACH MFG. CORP.

World's Oldest and Largest Manufacturers of Radio Antennas and Accessories  
55-65 DICKERSON STREET • NEWARK N. J.



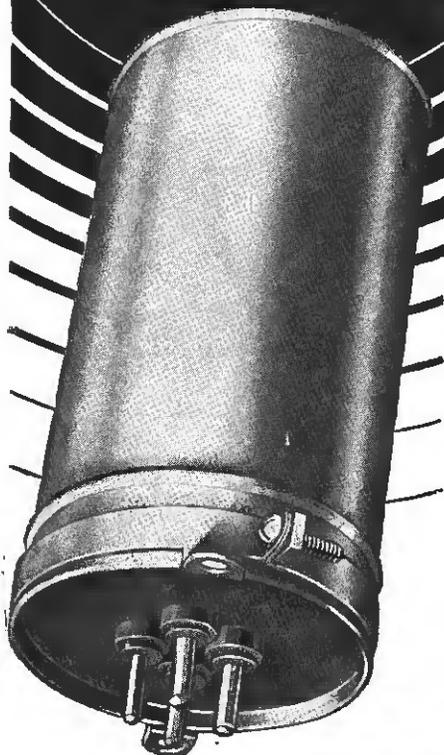
**For Radio and Electronic Work VACO Amberyl, Shock-proof, Break-proof SCREW DRIVERS Are Voted "Tops"**

For Signal Corps trainees . . . for a host of other activities in the war effort, Vaco is supplying screw drivers and small tools designed for efficiency, and to speed up work in the radio and electronic field. Over 173 sizes and types. Write for catalog.

Vaco's ability to create special drivers and small tools is aptly illustrated in the panel at left, showing some of our unusual developments.

**VACO Products Company**  
317 E. ONTARIO ST.  
CHICAGO 11, ILL.  
Canadian Branch Warehouse  
560 King St. W., Toronto

"The shape of things to come"



● It requires no gift of prophecy to sense that this capacitor stands for "The shape of things to come." The plug-in feature denotes ready replacement. That signifies a vital functional use. Also continuous, gruelling, telling service that wears out capacitors. Therefore, just as the demountable-rim wheel marked the transition of the automobile from Sunday diversion to everyday transportation, so this plug-in capacitor spells a still greater day for radio technique and radio men. Call it the Electronic Age, if you wish.

Our first job is winning the war. Tens of thousands of radio men are engaged in waging war. We at Aerovox are virtually 100% on war work. However, out of that experience, the wartime capacitor types and production growth, must come the foundation for the much-heralded Electronic Age. Thus "The shape of things to come."

#### ● Ask Our Jobber . . .

Ask for a free subscription to the monthly Aerovox Research Worker to keep you abreast of radio and electronic developments. Ask for the new "Victory Catalog." Or write direct.



AEROVOX CORP., NEW BEDFORD, MASS., U. S. A.  
In Canada: AEROVOX CANADA LTD., HAMILTON, ONT.  
Export: 100 VARICK ST., N. Y. C. • Cable: 'ARLAB'

### Firms Presented With Production Awards

For meritorious services on the production front a number of firms have been honored recently with Army-Navy "E" awards and with "white stars" to add to banners previously won.

The Sprague Specialties Co., North Adams, Mass., was recently awarded a white star, less than a year after winning the Army-Navy "E" award.

For continued high achievement in the production of war materiel, Philco Corp. has been awarded a second white star for its "E" banner flying at Philadelphia.

Honored by the presence of Gov. Walter S. Goodland of Wisconsin, and Rear Admiral Clark H. Woodward, the men and women of Webster Electric Co., Racine, Wis., were awarded an "E" flag at ceremonies recently held at the plant.

#### Awards Roll on

Major Robert S. French, of the Signal Corp., made the official presentation of an "E" award banner to the Rola Co., Inc., of Cleveland, in impressive ceremonies at which the award was accepted by B. A. Engholm, Rola president, and Alice Wise, representing the Rola employees.

Belmont Radio Corp., Chicago, has received another citation, the second renewal of the government production award that was presented to its employees a year ago.

With W. A. Nicely, sales manager, acting as master of ceremonies, Chicago Telephone Supply Co., Elkhart, Ind., was presented with an "E" award by Lt. Col. J. M. Niehaus of the Signal Corps. Floyd Best, president of the company, accepted the award.

Clarostat Mfg. Co., Brooklyn, N. Y., has a new white star on its Army-Navy "E" flag.

Stromberg-Carlson Co., Rochester, N. Y., was recently awarded a white star for continued excellence in war production.

There are now two stars on the award flag of Galvin Mfg. Co., Chicago, according to information just received from the War Department.

#### Griffith Warns Dealers

In a recent communication to music dealers, Harry D. Griffith, president of the National Association of Music Merchants, warned all to strictly observe the new OPA rule, and enclosed a copy of "Retailer's Bulletin, No. 38," from OPA describing the pricing method for used durable goods.

"If any music dealer has not already posted in his store a copy of the Ceiling Price Regulations, he is now in violation of the OPA ruling," was a portion of President Griffith's message.

PEERLESS ALBUM

WHEN A RECORD NEEDS A FRIEND

DESIGN For SELLING

THE scarcity of albums in general, and particularly those usually provided with sets of records by the manufacturers, would ordinarily create a large gap in the sales . . . and profits . . . of record dealers. Peerless comes to their rescue with 3, 4 and 5 pocket albums in both 10" and 12" sizes. Covered in rich maroon with an attractive blank embossed border on the cover, they are ideal for featuring as gift sets.

Peerless Album Co., Inc.  
38-44 W. 21st St., New York, N. Y.

Superior ANTENNAE AND ASSOCIATED PRODUCTS

IN WAR

IN PEACE

SNYDER MANUFACTURING CO. PHILADELPHIA, U. S. A.

**Westinghouse Names  
Price Vice President**

The election of Gwilyam A. Price as a vice president of Westinghouse Electric and Manufacturing Co., Pittsburgh, Pa., was announced recently by A. W. Robertson, chairman of Westinghouse.

Another Westinghouse appointment is that of Thomas I. Phillips, a vice president, as head of the company's Pittsburgh division, as announced recently by George H. Bucher, president of the company.

**Looks for Package Deal in Microphones**

According to Cecil L. Sly, vice president and sales manager of the Universal Microphone Co., Inglewood, Cal., postwar days will, in his opinion, herald a package deal in microphone distribution because, he says, the all-purpose microphone, although a pioneer in its day, has given way to specialized styles. Amateurs, he believes, will want several types for their ham shacks. Remote control broadcasters, too, will need various portable styles. While radio stations, as well, can make use of package deals with racks holding replacements and spares for the various types in current use.

**Farrar & Rinehart  
to Publish Ghirardi Books**

Alfred A. Ghirardi, author of widely-used texts on radio theory, maintenance and repair, announces the purchase of his Radio & Technical Publishing Company by Farrar & Rinehart, Inc., publishers, of 232 Madison Avenue, New York City, whose subsidiary, the new Radio & Technical Division of Murray Hill Books, Inc., will continue to publish the present "Ghirardi" radio books, as well as new ones. Mr. Ghirardi will also continue in close touch as editorial consultant in electronics for Farrar & Rinehart, who plan to expand their business in the radio-electronic book field.

**This Dealer Makes 'Em Believe in Signs!**

A dealer, operating in a very hard-boiled neighborhood, has a large sign with very large lettering, stating his charges. The sign's so prominently displayed that it's the first thing you see upon entering the store. If a customer kicks about the bill when he comes in to get his radio, the dealer hands him an optometrist's business card, with the advice that he get his eyes examined.

The pay-off is that several people have actually followed the radioman's suggestion and have gone to the optometrist for a check-up.



These busy days...so important to America's war effort...are seeing RAULAND distributors getting *AMPLICALL* Intercommunication, Industrial Paging and Sound equipment *on the jobs* where and when they are needed. They're getting the goods to deliver and *AMPLICALL* quality is helping them set new

sales records all along the line, supplying army, navy and war plant requirements in their territories. RAULAND's program of national advertising, too, is backing up their efforts by opening up new contracts for present business as well as opening the way for steady, future sales.

THE RAULAND CORPORATION . . . CHICAGO, ILLINOIS

• *Electroneering is our business* •



RADIO . . . SOUND . . . COMMUNICATIONS

**WOW WAR**

Manufacturers of  
RADIO, ELECTRICAL AND  
ELECTRONIC COMPONENTS

**ELECTRONIC PRODUCTS MFG. CORP.**  
DEXTER, MICHIGAN

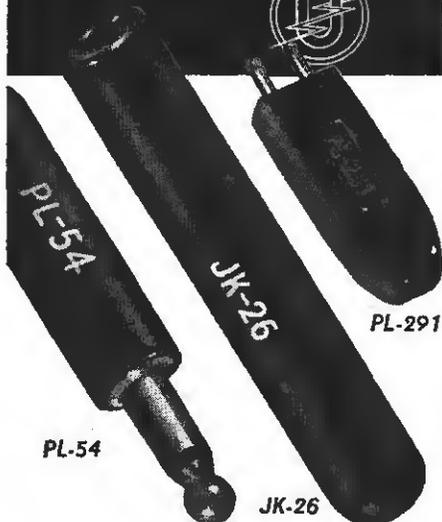


## Voice Communication Components

Universal Microphones, as well as Universal Plugs, Jacks, Cords, and Switches, are vital voice communication components today in the War Effort. When peace comes, they will continue to fulfill their role in a postwar world surmounting the barriers of distance with Radio and Aircraft.

**UNIVERSAL MICROPHONE CO., LTD.**  
INGLEWOOD, CALIFORNIA

CANADIAN DIV: 560 KING ST. WEST, TORONTO 2  
FOREIGN DIV: 301 CLAY, SAN FRANCISCO 11, CAL.



## Zenith Will Employ 800 to 1,000 Deaf Workers

To augment its force of war workers, Zenith Radio Corp., intends to employ immediately 800 to 1,000 persons with deficient hearing, is the statement of Commander E. F. McDonald, Jr., president. Each new deaf employee will be supplied with a Zenith hearing aid, which will become the property of the worker, free of charge, after such worker has been with the company for 60 days.

Production of Zenith's recently announced hearing aid is now under way. "It was originally the intention of the management to withhold the production and marketing of this product until after the war," stated Commander McDonald. "However, because of the existing manpower shortage and the possibility of placing large numbers of deaf persons in war plants by making a low cost quality hearing aid available now, the company has been able to secure the necessary material allocations for immediate production."

## Hotpoint Creates Two New Sales Positions

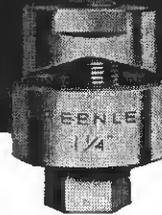
According to an announcement made by Geo. H. Smith, general sales manager of Edison General Electric Appliance Co., Chicago, two new field sales executive positions have been created, and two men have been appointed to fill them.



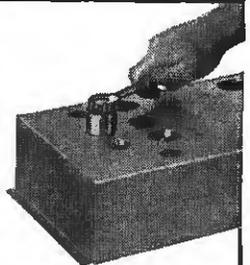
A. A. Borgemenke

A. A. Borgemenke, who has filled various sales positions with Hotpoint, has been appointed regional sales manager of the eastern district, with headquarters in New York, while Walter H. Bondurant has been named regional sales manager of the central region, with headquarters in Chicago. Mr. Bondurant has been associated with Hotpoint in sales capacities for some years.

## CUTTING HOLES IN RADIO CHASSIS?



Save Time  
with  
**GREENLEE  
PUNCHES**



- ① **No Drilling** — Making small holes larger without drilling is a simple task with Greenlee Punches. Holes as small as  $\frac{1}{8}$ " are enlarged in a jiffy with a few turns on the cap screw.
- ② **No Reaming** — Range of sizes from  $\frac{1}{8}$ " to  $2\frac{1}{4}$ " cut accurate holes—eliminate reaming. Knockout Punches up to  $3\frac{1}{2}$ " size are also available.
- ③ **No Filing** — Die supports the metal and tool cuts clean, smooth holes fast and easy — leaves no ragged edges.

WRITE FOR CATALOG 33E

Find out how these and other Greenlee Tools can save you time. They are available for essential users. Write for Catalog No. 33E.

**GREENLEE TOOL CO.**  
1911 Columbia Ave., Rockford, Ill.

100,000  
MUSIC LOVERS  
PAID \$5.00

for this

**Duotone**  
"Star Sapphire"  
PHONOGRAPH  
NEEDLE



**ARE YOU GETTING YOUR SHARE?**

Order from Your Jobber or Write Direct to

**Duotone**

799 BROADWAY, NEW YORK 3, N. Y.

**THE WORLD'S FINEST NEEDLES**

RADIO Retailing TODAY • November, 1943

## New Factor Seen in Postwar Production

Speaking recently in South Dakota, C. J. Burnside, manager of the Westinghouse Electric & Mfg. Co., radio division in Baltimore, stated that postwar engineering and production, their high cost no longer justified by the saving of human lives, must pay their own way.

Today's research and development will provide the postwar engineer with a wealth of new materials, processes and design techniques, according to Mr. Burnside. Many of these, he said, have been noted with interest as by-products of wartime developments, which could not be applied because of our lack of manpower and raw materials.

According to Mr. Burnside it would seem easy then for tomorrow's engineer to fulfill any and all needs of a product-hungry world. But he must recognize a new factor: development can no longer be justified on its saving of human lives—it must pay its own way. The radio executive called this "no mean problem," stressing that under war conditions cost has been a secondary production factor. Engineers of today work to specifications which place performance first; reliability only second to performance; manufacturability third, to insure rapid production; serviceability fourth to assure ease of maintenance in the field. Cost is a relatively unimportant fifth. Unlike the period of yesterday, today we have unlimited funds to press development, but no time to rationalize—no time to obtain normal balance between progress, utilization and economy. Today we are sparked by a desperate urge, where the stake is human life, not dollars, pointed out Mr. Burnside.

## Pacific Coast "Reps" Secure New Members

The California Chapter, Representatives of Radio Parts Manufacturers has recently added the following new members to its rolls:

L. H. Bushnell, 1355 Market St.; E. C. Nickerson, 383 Brannan St.; Edward C. Glomb, 1264 Folsom St.; D. J. Rudat, 383 Brannan St., all San Francisco. Also the following associate members: H. Kreugar, 530 Gough St.; J. H. Shaw, 1264 Folsom St., both San Francisco.

The Los Angeles Chapter reports the following two new members: P. P. Wiley, 942 Maple Ave., and M. D. Ealy, 4826 Tyrone Ave., Los Angeles. The same chapter also reports that two of its members, Norman B. Nealy and Gerald B. Miller, recently became members of the armed forces. L. Slupin of 1841 E. Washington Lane, Germantown, recently became a member of the Mid-Lantic Chapter. B. L. MacPherson, treasurer of the Hoosier Chapter, is now located at 1724 Alabama Ave., Fort Wayne, Ind.

## WANTED

One—No. 164 Chanalyst U H F Converter RCA

One—Model 563 Audio Oscillator (Supreme)

One—No. 165 RCA Junior Voltohmyst

One—No. 170 RCA Audio Chanalyst

One—Model 110 Vacuum tube voltmeter (Hickok)

One—Aerovox capacity and resistance bridge

One—No. 84-451 Cornell Dubilier Condenser BP-50 Checker

Please address

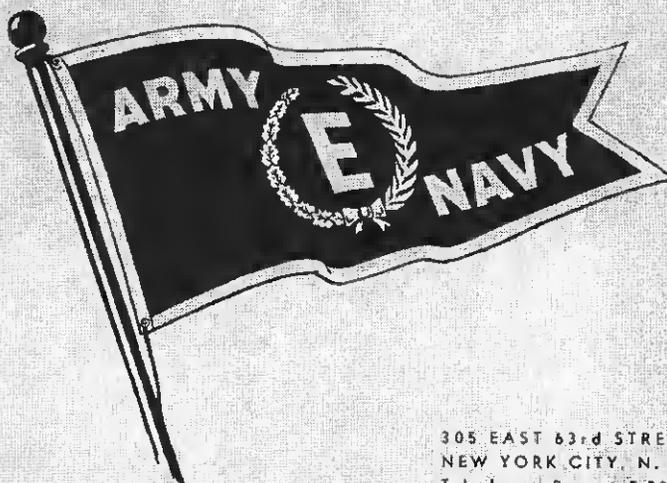
**ARTHUR CARPENTER,**

*Purchasing Agent,*

Box 668, Miami 30, Florida

## ESPEY MANUFACTURING COMPANY, INC.

SIGNAL GENERATORS • AUDIO OSCILLATORS • TEST EQUIPMENT  
RADIO RECEIVERS • TRANSMITTERS • ELECTRONIC DEVICES  
Licensed by • RCA • HAZELTINE • ARMSTRONG



305 EAST 63rd STREET  
NEW YORK CITY, N. Y.  
Telephone: Regent 7-3090

# WARTIME RADIO SERVICE

*Includes the following—*

**Nearly 300 Tested Substitutions for All the Hard to Get Types of Tubes**

**Gives Detailed Instructions for Building Simple, Inexpensive Apparatus for Repairing Open Heaters in 150 Mill Heater Type Tubes and Tells How to Use It. About 40% of These Tubes Can Be Made to Give Additional Service.**

**Tells How to Change the Late Model Farm Battery Radios for Electric Operation. Diagram and Text Eliminate the Bugs You Would Have to Fight Out.**

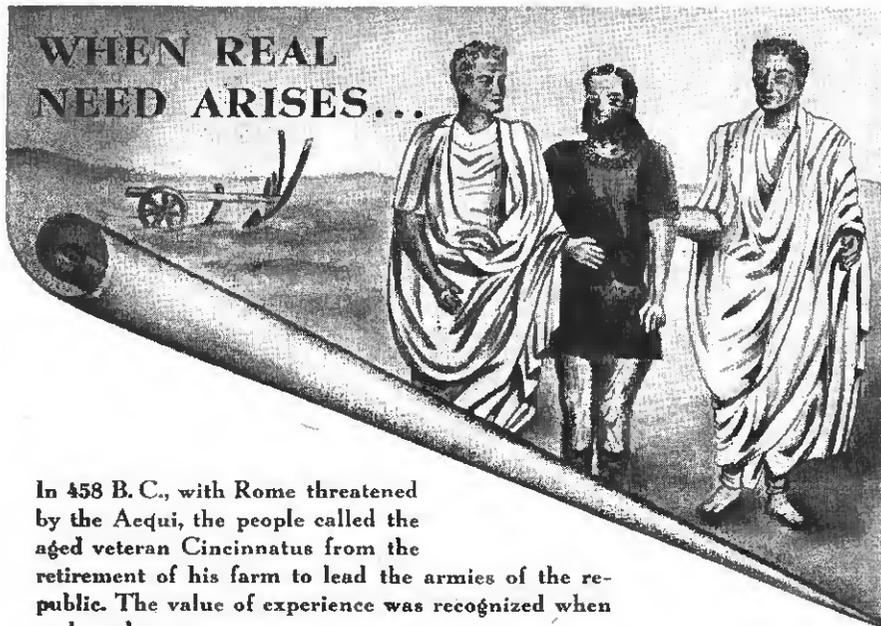
**The only book of its kind—it saves you valuable time, enables you to increase your sales and satisfy your customers. You can't afford to figure it out yourself.**

**\$3.00 per copy, postpaid**

**CITY RADIO COMPANY**

**The RADIO CITY of  
Phoenix, Arizona**

**504-6 E. Washington Street**



In 458 B. C., with Rome threatened by the Aequi, the people called the aged veteran Cincinnatus from the retirement of his farm to lead the armies of the republic. The value of experience was recognized when real need arose.

The experience of the ERWOOD engineering organization will be available to you after this war is won. Place ERWOOD first on your list of postwar consultants.

**THE ERWOOD COMPANY**

**223 WEST ERIE STREET**

**CHICAGO, ILLINOIS**

## NEW VICE PRESIDENT



**Charles Robbins, recently elected vice president, Emerson Radio & Phonograph Corp., New York.**

### Atlas Doing Big Repair Job in Milwaukee

Atlas Good Housekeeping Shops, with main headquarters at 2601 N. Third St., Milwaukee, Wis., has three stores, but has a large second story repair shop at Third St., which handles radio and all appliance repairs, with Lyle A. Olson in charge. The firm has 8 men in all in the shop, and has fine equipment including spraying equipment for washers, refrigerators and other major appliances.

Mr. Olson says the firm's supply of parts and tubes has held up fairly well until now, but that the pinch is beginning. The firm asks customers to bring in all smaller radios for repair and call for them, but there is pickup service on the larger models. Because of priorities, the firm doesn't handle much commercial refrigeration repair work, sticking mostly to domestic jobs, and finds that this works out very well.

"We get a lot of smaller appliances for repairs these days, such as toasters, waffle irons, electric percolators, etc., in addition to radios, washers, vacuum cleaners and other items," declares Mr. Olson. "It seems that a lot of the smaller stuff is going to pieces after holding up for a couple of years. We get fine co-operation on parts from some manufacturers and hardly any co-operation from others. But we manage to keep going, and we have hope of getting the parts to keep our large force functioning for the duration."

Another reason why Fidelity De Luxe  
Phono Needles are **EASY TO SELL**\*



**FILTERS RECORD SCRATCH**

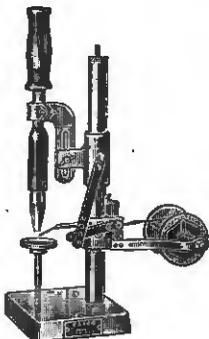
Dealers and clerks tell us that Floating Point Construction . . . an exclusive Fidelity feature . . . is in demand by customers because it Filters Record Scratch and gives quieter, more enjoyable reproduction. **\$1**



\* Information based on actual statistics from recent Fidelity National Quiz Contest.

**PERMO, Incorporated**  
6415 Ravenswood Avenue, Chicago 26, Ill.

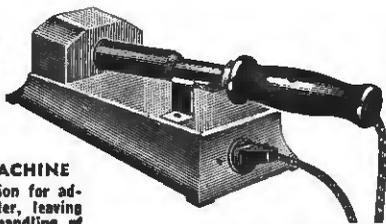
**ESICO**  
REG. U. S. PAT. OFF.



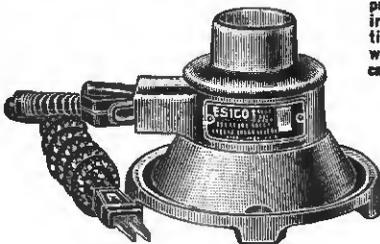
**SPOT SOLDERING MACHINE**  
designed for treadle operation for advancement of iron and solder, leaving operator's hands free for handling of product.



**SOLDERING IRONS**  
are widely used in industrial plants throughout the country. They are designed to withstand the strain of continuous service required of factory tools.



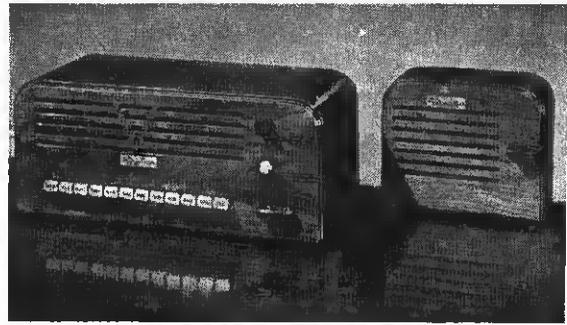
**SOLDERING IRON TEMPERATURE CONTROLS**  
prevent overheating of soldering irons between soldering operations. Irons do not deteriorate when being used. The idle period causes oxidation and shortens life.



**SOLDER POTS**  
ruggedly constructed pots of various sizes designed for continuous operation and so constructed that they are easily and quickly serviced, should elements have to be replaced.

Write for Catalog

**ELECTRIC SOLDERING IRON CO., INC.**  
2311 WEST ELM STREET, DEEP RIVER, CONN.

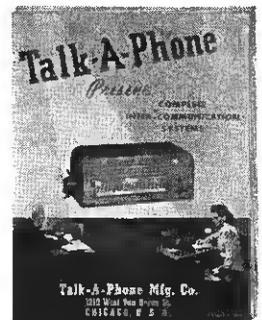


Illustrated above is the Chief—Push Button Controlled—a low price-fitting companion to the now famous Super Chief line.

**Talk-A-Phone**  
*The Ideal Inter-Comm  
Line for Jobbers*

**HERE'S WHY:**

1. Talk-A-Phone offers America's most complete line of intercommunication. . . . A unit to fill every need . . . to fit every condition . . . Super Chief, Chief, Deluxe and Standard models.
2. Scientifically designed, on fundamentally sound principles. Manufactured by craftsmen of unusual skill. Rigidly inspected.
3. Modern, inviting appearance. They please the most fastidious executives.
4. An extraordinary value for the price. Acknowledged to offer "most for the money." Sales resistance is low.
5. Talk-A-Phone follows a rigid policy of Jobber Protection.
6. You can get delivery now.



**Talk-A-Phone  
Manufacturing Company**  
1215 WEST VAN BUREN STREET  
CHICAGO, ILLINOIS

Write or wire for colorful new Catalog—just off the press. Presents complete specifications and reference data. Highly illustrated.

**Talk-A-Phone**

# Need parts?



Order today  
from the  
**WORLD'S LARGEST**  
Radio Supply  
House

**Immediately Available** are certain hard-to-get radio and electronic parts and equipment, urgently needed by war-working industrials, radio service men and others.

**Large inventory** maintained for your emergency requirements. As distributors of more than 10,000 different items we can handle complete orders, however large. No need to split. Our trained expeditors select, check and ship, the day your order is received. **Tubes and P. A. equipment.** Receiving and transmitting tubes, photo cells and special-purpose tubes. Some types now Government-restricted, but we can handle your orders with utmost efficiency. Sound systems, microphones, paging systems, inter-communicating systems—standard and specially-designed units for every application, on rated orders only. **Books:** All latest authoritative texts on radio and electronics. No priorities required.



**NEW! 1944 Edition**

## RWT REFERENCE

To Standard Radio and Electronic Equipment Latest Complete Buying Guide! Over 800 pages, completely indexed by item and maker. Value \$3. Now on Press: Will be sent without cost to the executive responsible for radio parts purchases in your organization. Meanwhile, glad to send supplements and bargain flyers which we publish from time to time. Are you on our list?

## Radio Wire Television Inc.

100 SIXTH AVE., DEPT. F-11, NEW YORK 13, N. Y.  
BOSTON, MASS. • NEWARK, N. J.

### WE ALSO MANUFACTURE

public address and sound equipment. Have done it for ten years—pioneering several new audio developments. We have made equipment for the U. S. Army Signal Corps and many large Industrials, this past year. We can make pre-amplifiers, power supplies, rectifier units, cord sets—anything involving chassis wiring, assembling, soldering. Known to all manufacturers—to many since 1921—we can request and get preferential treatment. Competent engineering staff. No labor shortage in this area. Let us quote.

## Distributors Approve WPB Tube Supply Plan

At the first meeting of the newly organized WPB industry advisory committee of radio distributors, held in Washington Nov. 4, recommendations were made for a replacement tube distribution plan based on distributors, 1941 sales. While no formal decisions were reached, the plan was approved by the distributors' committee.

Chief Frank H. McIntosh, of the domestic and foreign radio branch, is presiding officer. Following are members of the distributors' committee: Leslie C. Rucker, Rucker Radio Wholesalers, Washington, D. C.; Wm. O. Schoning, The Lukko Sales Corp., Chicago, Ill.; Alan Steinert, The Eastern Company, Cambridge, Mass.; Emmett N. Hughes, Radio Television Supply Co., Los Angeles, Cal.; Hoyt C. Crabtree, Crabtree's Wholesale Radio, Dallas, Texas; and Charles Ollstein, Sanford Electronics Corp., New York, N. Y.

## Bennett Head of G.E. Specialty Division

Howard W. Bennett has been made manager of the specialty division of the General Electric Company's electronic department, according to an announcement by Dr. W. R. G. Baker, department vice president.

Prior to his employment by General Electric in 1930, Mr. Bennett was manager of the radio department of the Shattuck Music House, Owosso, Mich., and a salesman for the G. E. Supply Corp., at Detroit.

## General Electric Quizzes Its Stockholders

An illustrated questionnaire asking the General Electric Company's 227,000 stockholders what type of a radio receiver they would like to buy after the war has been mailed with the company's third quarter dividend check. This survey asks what kind of a radio is now owned, if and when they plan to buy a new receiver, the style and type preferred, and whether or not they know about or are interested in FM.

To make it easy and convenient for stockholders to reply, a postage prepaid postcard accompanies the folder on which the answers may be indicated. Returns will be referred to the electronics department's commercial research receiver division for consideration determining the trend of tomorrow's radio in postwar planning.

## New Columbia Catalogue

Columbia Recording Corp. recently issued its 1944 catalogue. With the catalogue, dealers received "Design for Listening", listing Columbia popular albums; and "Command Performance", displaying the Masterwork sets.

# AEROPoint "111"

Long-Life  
PHONOGRAPH  
NEEDLE  
Up to 3000 Plays  
**\$1.00**

# AERO

NEEDLE COMPANY  
737 N. MICHIGAN  
CHICAGO 11, ILL.

# University



**REFLEX  
SPEAKERS**  
now the accepted  
**STANDARD**  
for all  
**WAR USE**

**EVERY  
UNIVERSITY REFLEX**  
the result of years of  
pioneering research and  
development.

**EVERY  
HIGH EFFICIENCY  
SPEAKER**

in University's extensive  
line of power speech re-  
producers has a vital  
part to play in the WAR  
program.

**REMEMBER**  
University is now pro-  
ducing many special  
speakers for the Army,  
Navy & Signal Corps.  
Submit your special  
problem direct to the  
engineering dept.

UNIVERSITY LABS., 225 VARICK ST., NYC

RADIO Retailing TODAY • November, 1943

## Permo Has "Pin-ups"

Permo, Inc., Chicago, has just inaugurated a series of "pin-ups" designed to combine a chuckle with a sales point. The cartoons are being sent to all music dealers, with the suggestion that they display them on counters, show cases, listening booths and show windows. Permo makes the Fidelitone phonograph needle.

## Siemens Chief Engineer

R. H. Siemens has been appointed chief engineer of RCA Victor Argentina, wholly-owned RCA subsidiary company in Buenos Aires, it was recently announced by J. D. Cook, managing director of the company's international division. Mr. Siemens succeeds Paul Bennett, who has returned to Camden headquarters.

### STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

OF RADIO RETAILING TODAY, published monthly at New York, N. Y., for Oct. 1, 1943. State of New York, N. Y., County of New York, N. Y.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Orestes H. Caldwell, who, having been duly sworn according to law, deposes and says that he is the Editor of RADIO RETAILING TODAY and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 8, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, M. Clements, Rumson, N. J. Editor, Orestes H. Caldwell, Catroek Road and Bible St., Cos Cob, Conn. Managing Editor, none. Business Manager, M. H. Newton, 593 W. 215th St., New York, N. Y.

2. That the owner is (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Caldwell-Clements, Inc., 480 Lexington Avenue, New York, N. Y. Orestes H. Caldwell, Catroek Road and Bible St., Cos Cob, Conn. M. Clements, Rumson, N. J. McGraw-Hill Publ. Co., 330 W. 42nd St., New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

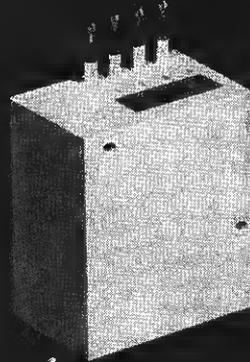
(Signed) Orestes H. Caldwell  
Sworn to and subscribed before me this 15th day of October, 1943.

B. M. Phillips  
Notary Public Westchester County.  
Notary Public N. Y. County Clerk's No. 442.  
Notary Public N. Y. County Register's No. 4P249.  
(My commission expires March 30, 1944.)  
New York County Commission expires March 30, 1944.

\*Represents minority stock interest which was purchase price for Radio & Television Retailing. Majority stock and control continue in hands of O. H. Caldwell and M. Clements.

RADIO Retailing TODAY • November, 1943

# FOR HIS EARS ALONE!



Literally "running interference" through the ether . . . insuring a clear path for the one signal which directs the safe landing of an airplane under the most adverse conditions . . . that is just one of the scientific miracles possible today because of

## FILTERS

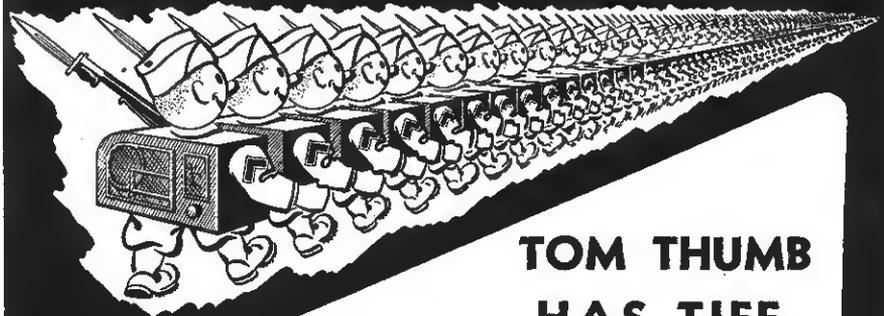
by

# THORDARSON

THORDARSON ELECTRIC MFG. CO.  
300 WEST HURON ST., CHICAGO, ILL.

*Transformer Specialists Since 1895*  
ORIGINATORS OF TRU-FIDELITY AMPLIFIERS

INTERESTING TECHNICAL PAPERS  
WILL BE SENT FREE UPON REQUEST



## TOM THUMB HAS TUFF WITH TOP SERGEANT!

"Hep! Two! Three!" . . . "Hep! Two! Three!" . . . "Company . . . HALT!" (Sergeant notices arm insignia) "Hey, you mugs, what's the idea? PFC . . . PFC . . . PFC . . . Are you ALL Privates First Class? Where's the rest of this outfit?"

(Tom Thumb speaks up) "Sergeant, Sir, all Tom Thumbs are always first class—in the war effort as well as in the dealers' showrooms And we're also PFDs—Privates for the Duration."

**Make your plans NOW to get on the TOM THUMB bandwagon**

# Automatic

RADIO MANUFACTURING CO., INC.  
122 Brookline Avenue, Boston, Mass.

# Your Christmas Show Windows



**Building for YOUR FUTURE, TOO!**

Yes, Vogue has plans for electrical home products that will offer you easier sales and greater profit opportunities when the war is over.

Meantime, in our busy, versatile, well-equipped plant we have made room so that we can take on even more production, if it is for the war effort . . . either parts or complete units. We will be glad to discuss this with interested manufacturers.

**SHERIDAN ELECTRO CORP.**  
2850 S. MICHIGAN AVENUE • CHICAGO 16, ILL.

• Forgetting all the problems concerning what to sell this Christmas, radio and appliance dealers and radio service organizations should still remember that they have to continue "selling" themselves to the public. They can do this through their show windows, and therefore the importance of Christmas windows should not be overlooked.

Three types of windows are suggested. First, there's the "selling" window display. This is indicated where the dealer has a large stock of merchandise to sell. This type of window features gift items and stresses prices, terms, and other inducements. The Christmas decorations are incidental to the articles offered, and the interest of the decoration scheme is secondary to the items themselves.

The "selling" window calls for mass display of merchandise, and all or most of the articles shown *must* be priced. Pyramid or other effects can be obtained through the use of wood or fibre packing cases. These may be covered with crepe paper, and decorated with fancy crepe paper borders. The show window floor should be neatly covered with crepe paper or cotton batting, over which artificial snow has been sprinkled.

To prevent bad light reflection effect, there should be a back of some sort in the window.

Remember, the "selling" window is just what the name implies. Variety intrigues the buyer; incidental decorations make the appliances look attractive, and the prices will bring the customer in if he thinks they are reasonable.

And here's another important tip on this kind of window. If you have any reason to believe that the customer won't know *what* the article displayed is, describe it in a few words on a display card. You may have, for example, a sandwich grill on display. Lots of people are not familiar with this device, whether it's shown open or closed. So letter a card something like this: "Electric Sandwich Grill. Toasts—grills hamburgers, hot dogs, etc. Can be used open or closed." Stress a few features and the price, and never take it for granted that the window viewer knows what the appliance is.

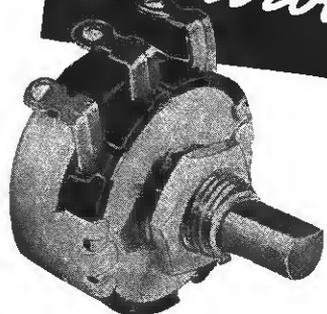
The "selling" window should go in a few days after Thanksgiving, and should be re-arranged or re-dressed at least three times before Christmas.

The second window to be considered is the "formal" one. This type of display is generally used to emphasize a single piece, such as a large radio or a radio-combination. Many unusual decorative effects can be created through the use of crepe paper. In this window, decoration all leads to the *one* article, stressed through the employment of streamers, etc. Price is seldom featured, and the overwhelming reaction to this type of window on the part of the public is that the item offered is *expensive*. This type of exposition is effectively used in the sale of costlier goods. This window should be put in and handled on the same time schedule as the "selling" window.

The third display is the "good will and interest window." This may be used, for example, by a radio service organization, having no merchandise

(Continued on page 94)

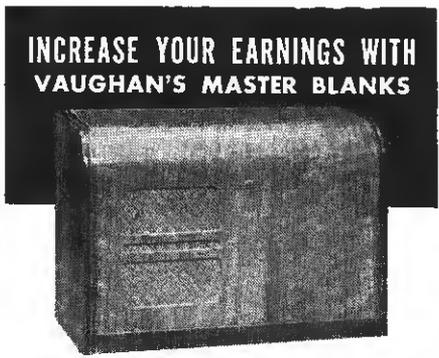
## STABILIZED Control



★ For years Clarostat engineers studied, tried, tested, no end of resistive coatings. Out of this enormous expenditure of money, time, effort, has come the present Clarostat stabilized-element control. Accurate to start with. And stays that way—in constant usage, under trying climatic conditions, despite severe humidity, for years of troubleproof service. ★ Try a Clarostat Type M control for that service job. Ask our local jobber for Clarostat replacements.



### INCREASE YOUR EARNINGS WITH VAUGHAN'S MASTER BLANKS



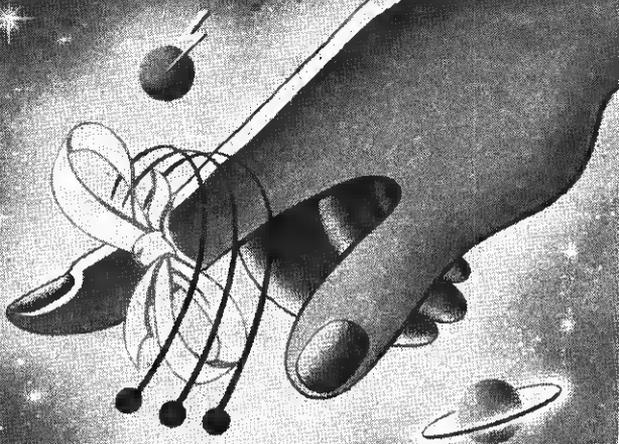
Cabinets as illustrated, speaker opening cut, opposite side blank.

These modernistic cabinets have been designed to fit every type chassis up to 10½" which covers practically all makes. Constructed from beautifully grained walnut, they are unusually attractive and striking in appearance. Easy to cut and fit they open up new opportunities to serve your customers as well as to reclaim many of the old unsaleable sets now in your store.

<b>MODEL A</b> . . . . .	Dealer's Price	<b>\$2.10</b>
Inside Measurements 7½L x 4½D x 4½H		
<b>MODEL B</b> . . . . .	Dealer's Price	<b>\$2.85</b>
Inside Measurements 8¼L x 5D x 5½H		
<b>MODEL C</b> . . . . .	Dealer's Price	<b>\$3.00</b>
Inside Measurements 10½L x 5½D x 6½H		

**SAVE MONEY**—10% discount in lots of six or more  
**SEND NO MONEY**—We ship C.O.D. if desired  
**WE RESERVE THE RIGHT TO LIMIT QUANTITIES**

**VAUGHAN CABINET CO.** 3810 N. CLARK ST. CHICAGO 13, ILL.

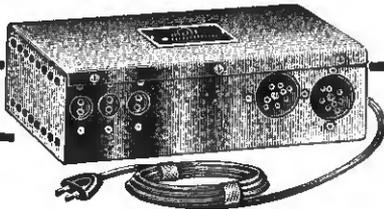


### Remember Monarch Testing and Calibrating Equipment

offers the solution to many a problem in the laboratory and on the production lines. Our special measuring and testing instruments, to accompany various units turned out for military purposes, have won unqualified praise for their complete accuracy and dependability. Consult us also, if you have any problem in securing almost any type of small machine parts.

**MONARCH MFG. CO.**  
2014 N. Major Ave. Chicago, Ill.

## Limited Supply



### BATTERY ELIMINATORS for Radio Sets Operated from High Line or Batteries

Wartime regulations have limited our supply of these items (war needs come first) but every effort is being made to apportion the output equally among distributors.

Electro Products Laboratories is the pioneer manufacturer of battery eliminators for farm radios and for portable dry battery radios. The complete line includes all types of battery eliminators for 1.4 volt and 2 volt filaments whether operated from high line or storage batteries.

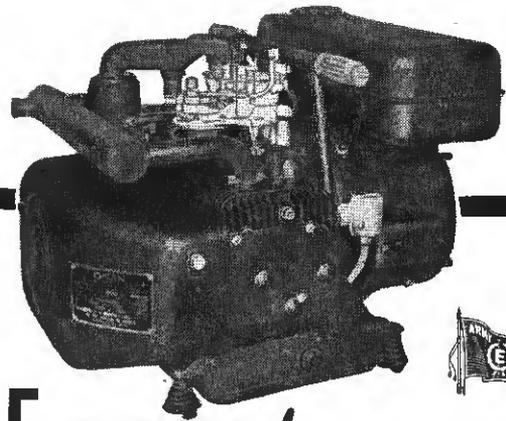
When the war is won, Electro Products Laboratories will be in full production on battery eliminators for all civilian uses.

**Electro**  
ELECTRICAL AND RADIO EQUIPMENT

**PRODUCTS LABORATORIES**

549 W. Randolph St. Chicago, Illinois

RADIO Retailing TODAY • November, 1943



## ELECTRICITY for ANY JOB ANYWHERE

★ ONAN GASOLINE DRIVEN ELECTRIC GENERATING PLANTS provide electricity where power lines are not available, and for emergency service.

They're doing a war winning job on all the fighting fronts generating electricity for vital communications work and other war tasks.

Sizes from 350 to 35,000 watts. 50 to 800 cycles, 110 to 660 volts, A.C.—6 to 4000 volts, D.C. Also dual A.C. and D.C. output models.

Your inquiry regarding present or post-war needs will receive prompt attention.

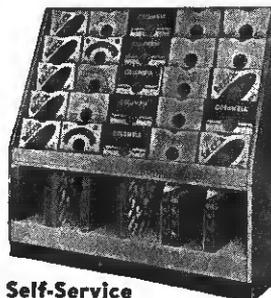
**D. W. ONAN & SONS**  
2013 Royalston Ave., Minneapolis, Minn.

**ONAN**  
ELECTRIC PLANTS

## THE PIONEER IN SELF-SERVICE EQUIPMENT

### Self-Service Album Rack →

For rapid turnover of popular priced albums. Slanting face holds about 39 open display albums. Room for 75 more in lower storage section. 58" high (easy to see over) 60" wide. The ideal wall unit. Pair placed back to back forms center aisle unit. Attractively finished hard wood facing. Optional removable rear panel holds 17 display albums, forms 2 sided unit.



### Self-Service Record Album Unit

Displays about 300 records on slanting face. 500 records or 75 albums in lower storage section. Same general specifications as Self-Service Album Rack. May be used together to form attractive unit. Optional removable rear panel holds 17 display albums, forms 2 sided unit.

### Bitter Record Rack No. 100

This attractive, compact unit holds 500 10", 500 12" records, 75 album sets. Same dimensions as famous Bitter Standard Album Rack (No. 110)—2' 10 1/2" long, 7' 2" high, 15" deep; same design; same standard finish—walnut finished birch. May be used interchangeably or together to form attractive unit.

**FREE BOOKLET WRITE TODAY**

New Wooden Sheet Music Rack Replaces Vital Steel!

**A. BITTER CONSTRUCTION CO.**  
721 E. 133 Street New York 54, N. Y.





The civilian replacement tube situation looks gloomy, in spite of the heroic efforts of NEDA's capable representative, George Barbey, who has been fighting a valiant battle in Washington. However, we can't believe that the powers that be will let too many radios go dead for too long.

\* \* \* \*

We heard of a really marvelous idea recently, for the settlement of labor-management disputes that hold up essential war production. The scheme was to dump the problem right in the lap of a committee composed of an equal number of members from the labor and executive branches of the particular company involved. Nothing new about that, you say? But, there is. This committee will be composed of men formerly employed by the company, but now in the armed forces of our country! It seems to me that they would have the true perspective on any such problem—and that they would settle it with the same dispatch they are settling certain other matters.

\* \* \* \*

Just when we are getting to know what photogenic means, up pops "telegenic." Now we're sure television is "just around the corner."

\* \* \* \*

A tube manufacturer is using spaghetti (the kind you wind on a fork) in the production of electronic tubes. Would you call this Italy's contribution to the American war effort?

\* \* \* \*

Ray C. Ellis says there's no plateau in sight on the electronic industry's production curve. The plateau doesn't bother us, Mr. Ellis, what we're thinking about is the toboggan on the other side of it.

\* \* \* \*

Latest wrinkle to defeat absenteeism: Ultra Violet Ray Lighthouses to maintain health of employees with sunbaths. Remember when the sunbath (Miami style) was one of the principal causes of absenteeism among executives?

*Kelley Stauilans*  
**QUAM-NICHOLS CO.**  
 Cottage Grove and 33rd Place  
 Chicago 16, Illinois



(Continued from page 92)

to sell, or a retailer may use it by displaying articles along the front of the window, close to the glass, or scattered throughout the scenic display.

The builder of the "good will and interest" window is called upon to use his ingenuity and imagination. One thing he can do is to build a mountain village, creating the mountains with old packing cases, etc., covered with cotton batting. Miniature composition houses, churches, stores, etc., can be arranged in the scene, together with small artificial evergreen trees. Other miniature trees may be readily made from twigs, painted with white or aluminum paint to simulate bare winter trees.

Toy automobiles, miniature people and animals should be included in the scene. Many unique effects such as tunnels, lakes (using mirrors), etc., can be achieved. In this window a toy electric train, winding in and out of the scene, disappearing through tunnels, etc., makes a great traffic stopper. If you install a push button on the outside of the window so the kids can operate the train by holding the button in, you'll find the grown-ups enjoying it also. People in your community will long remember the store employing this type of window.

**Tips on Lighting Effects**

In use of the above you can secure unusual, dim-out complying windows through low wattage colored lamps, particularly the blues. The small houses should have interior lighting.

Tips: In lighting the miniature houses, churches, etc., don't use series lamps. You'll run yourself ragged trying to find the "bad" one. If parallel sets are impossible to get, take an old series set and break the plastic or wood casings covering the socket shell. You will then be able to screw a miniature base flashlight lamp into the socket. Figure out the voltage, and operate this string from a toy train transformer, at about half brilliance. Lamps thus operated will stand up fairly well.

If possible use fireproof cotton batting in the window. At all events, fuse all the wires feeding the lights in this window. This can be done by feeding the wires through a pair of sockets into which fuses of as low amperage as is possible have been installed. Or, of course, by other methods if preferred.

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While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this index.

*The genius and flexibility of our engineering staff is exemplified in the highly technical and specialized materials of war which we are Producing for Victory . . .*

# Seeburg

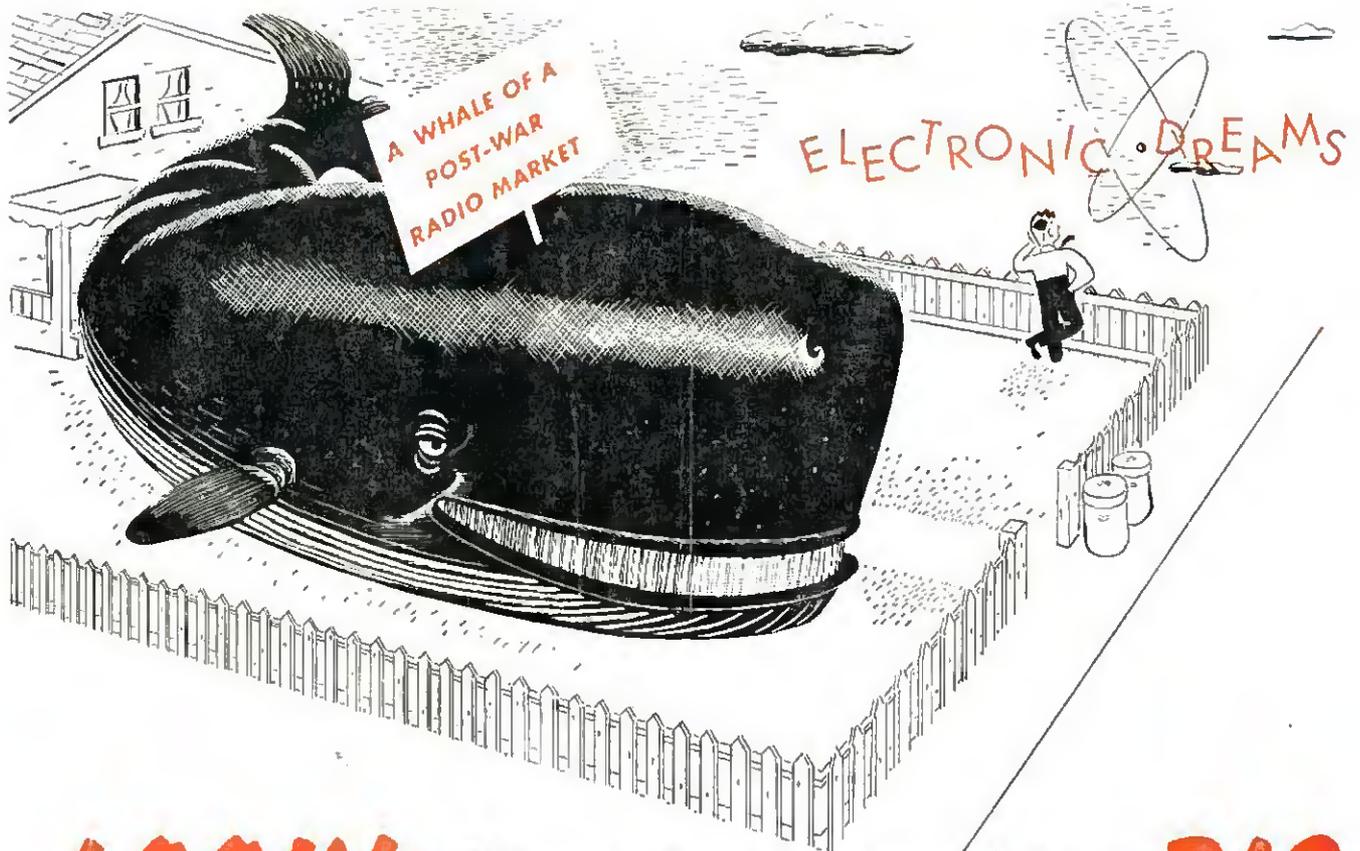
FINE MUSICAL INSTRUMENTS SINCE 1902

*This same engineering ability will produce for the expanded markets of the world . . . after Victory!*



*Awarded to the J. P. Seeburg Corporation for Outstanding Production of War Materials in each of its Four Plants*

J • P • SEEBURG CORPORATION • CHICAGO, ILLINOIS



# LOOK! There's something **BIG** right in your own back yard!

Yes sir! There's going to be a "whale of a market" for Radios and Phonographs after the war. Pent-up consumer demand will loose itself on the Radio Dealer with the fury of a Kansas cyclone. Post-War Planning at the famous Motorola Radio factory has kept its engineering and merchandising eyes on this gathering storm and we are confident what America will need and want from Radio Dealers is good Radio Receiving Sets and Phonograph Radio Combinations.

Electronics? Sure! Radio Set production *has been and will continue to be* the number one mass-production item in Electronics. Everything we have learned about Electronics during the war cannot possibly be incorporated into the first Post-War Radio Sets. The future is bright with promise . . . but let's not forget to LOOK . . . at that something Big in our own backyard. There'll be a whale of a Post-War market for Radio and you can bet that Motorola will be ready for it.



**Expect Big Things From Motorola — They're in the Making!**

*For the continued development and production of Radio Communications and other special Electronic equipment for our Armed Forces, the Motorola organization has been awarded two stars for their Army-Navy "E" Flag. Motorola is proud of the part it has been privileged to play in the speeding of Victory.*

Motorola

RADIO

FOR HOME & CAR

GALVIN

MFG. CORPORATION • CHICAGO, ILLINOIS