RADIO Retailing TODAY

1942

OCTOBER

DON'T LET RADIOS DIE

Don't Be Without the NEW MYE TECHNICAL MANUAL

This practical book is designed for the radio serviceman, engineer, amateur or experimenter. It gives both radio theory and practice—presenting the latest technical information in simple terms that you can easily apply to everyday problems. Note the table of contents below—

TABLE OF CONTENTS

1. LOUD SPEAKERS AND THEIR USE

Written by outstanding experts in the design and application of loud speakers. Covers the acoustical properties of various designs. Tells in detail how loud speakers may be selected and installed for greatest economy and best performance. New information . . . never before published.

2. SUPERHETERODYNE FIRST DETECTORS AND OSCILLATORS

The heart of a superheterodyne is its first detector. Many receiver problems involve more than just voltmeter readings. This chapter makes servicing easier by presenting the basic principles governing first detectors and oscillators. It covers *all* modern conversion systems.

3. HALF-WAVE AND VOLTAGE DOUBLER POWER SUPPLIES

Explaining the power supply design in AC-DC and series heater type receivers and amplifiers. Contains facts with which every serviceman should be familiar. Explains the "mystery" breakdowns encountered in actual practice.

4. VIBRATORS AND VIBRATOR POWER SUPPLIES

Complete, up-to-date information on the operating conditions and application of both vibrators and vibrator power supplies. Important facts about their design, and the requirements for satisfactory performance of vibrator-operated equipment.

5. PHONO-RADIO SERVICE DATA

Understanding of the mechanical and electrical principles involved makes servicing easier, quicker and more profitable. This chapter "tells all" . . . and has been called priceless by servicemen who have previewed it.

6. AUTOMATIC TUNING

In this section is a full description of the various systems of automatic tuning . . . how they work and how to adjust them. Every serviceman will profit from the information given here, since he'll use it constantly.

7. FREQUENCY MODULATION

Clear, concise, easy to read, this chapter provides a simple explanation of the design principles and operating conditions involved in FM circuits. It provides a solid foundation of knowledge for servicemen, radio engineers, amateurs and experimenters . . . anyone concerned with the practical applications of FM.

8. TELEVISION

This section provides the basic information needed to prepare for successful work in the television boom that is sure to follow the war. Understanding television now will pay dividends later.

9. CAPACITORS

Wartime servicing depends on making the best use of available components. This article shows how to install condensers for specific applications, without being dependent on duplicate replacements. Reading this article will help you make repairs promptly and assure your customers of satisfactory service.

10. PRACTICAL RADIO NOISE SUPPRESSION

You can easily become an expert on radio noise by applying the information provided in this chapter. New, down-to-earth, field-proven methods of solving practically any noise problem . . . How and where to use noise filters and much other data. Interestingly written, easy to understand.

11. VACUUM TUBE VOLTMETERS

This measuring device is proving increasingly useful in both radio work and industrial electronics. Here's a full explanation of how commercial vacuum tube voltmeters operate.

12. USEFUL SERVICING INFORMATION

All the general references a serviceman needs . . . tables, coding data, standards, design charts, etc. *Everyone* interested *in* radio will have frequent occasion to use this section.

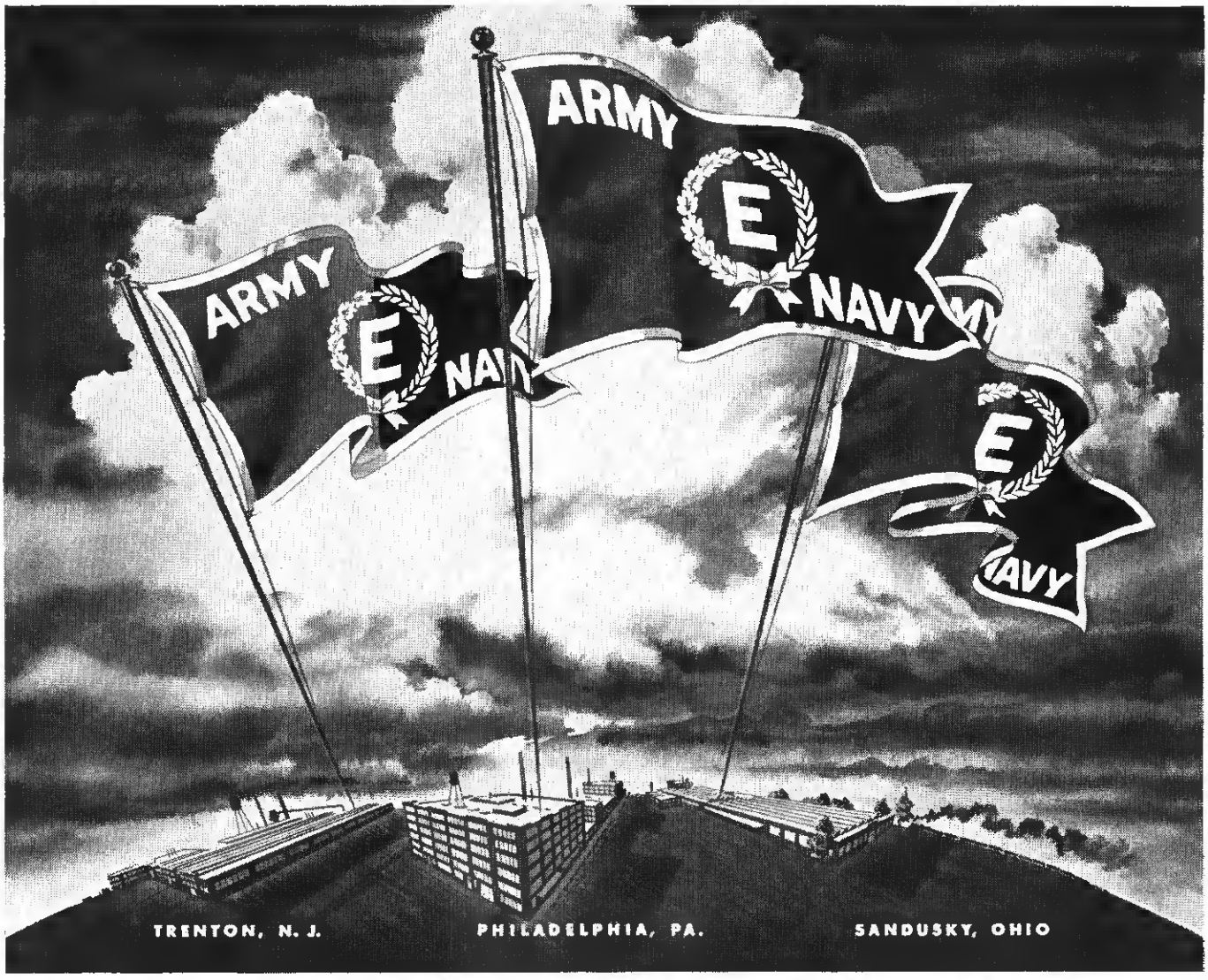
13. RECEIVING TUBE CHARACTERISTICS

Complete tables covering all American tube types. Arranged in convenient form to save you time.

392 pages, 8½ x 11 inches, with valuable information much of which has never before been available. Profusely and accurately illustrated. The New MYE TECHNICAL MANUAL is durably bound in hard cloth covers with permanent sewed binding. Go to your nearest Mallory Distributor and buy this de luxe edition at the net price to radio servicemen—$2.00.

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

P. R. MALLORY & CO., INC. · INDIANAPOLIS, INDIANA · *Cable Address,* PELMALLO



Battle Flags

for Philco Soldiers of Production

Three Army-Navy "E" Flags . . . *three* citations of honor from our fighting forces . . . that is the proud record of Philco's soldiers of production.

On separate occasions in Philadelphia, Pa., Trenton, N. J., and Sandusky, Ohio, distinguished officers of the Army and the Navy have presented the men and women of Philco with these Awards "for high achievement in the production of war equipment."

To you of the Philco family belongs a share of these honors. For, as we devote ourselves to the service of our armed forces, it is the support which you have given to Philco and its products through more than twelve years of leadership that has given us the knowledge, the skill and the capacity to render this service to the nation.

PHILCO CORPORATION

PHILADELPHIA, PA. • TRENTON, N. J. • SANDUSKY, OHIO

RADIO RETAILING TODAY, October, 1942, Vol. 27, No. 10. 25c a copy. Published monthly by Caldwell-Clements, Inc., 480 Lexington Ave., New York, N. Y. M. Clements, President and Publisher; O. H. Caldwell, Treasurer and Editor. Darrell Bartee, Managing Editor; H. L. M. Capron, Merchandising Editor; William E. Moulic, Technical Editor. Staff: E. T. Bennett, J. E. Cochran, M. H. Newton, John A. Samborn, B. V. Spinetta. Chicago, 201 N. Wells St., R. Y. Fitzpatrick. Subscription price United States and Latin American countries, $1.00 for one year, $2.00 for three years. Canada $1.50 for one year, $3.00 for three years. All other countries $2.00 for one year, $4.00 for three years. Printed in U.S.A. Reentered as second class matter August 28, 1942, at the post office at New York, N. Y., under the act of March 3, 1879. Member of A.B.C.


Find Garcia!
Only 44 years ago, when President McKinley asked Rowan to take the famous "Message to Garcia," there was no better way of communicating . . . . but today with the U. S. Army Signal Corps equipment you can communicate with a modern Garcia in a matter of SECONDS!
Jensen
SPEECH REPRODUCERS
6601 SOUTH LARAMIE, CHICAGO
SPECIALISTS IN ACOUSTIC RESEARCH AND PRODUCTION FOR MILITARY ADAPTATIONS
Join the U.S. Army Signal Corps!

SOUND THAT SEES

AGAINST fog and murk and the black of night, even the keen vision of the air-pilot is not enough to bring a bomber safely home or spot a midnight enemy raider. To the aid of the human eye in such cases must be brought the miracles of science, not in the form of lighting devices but of sound that quite literally *sees*. The modest little vacuum tube holds the magic power to guide a transport plane down an invisible beam to safe landing. With sensitive listening devices now in use, man locates enemy aircraft while still miles away, and guides aloft interceptors to stop them short of their goal. When such trust is imposed upon the goods we make, there is room for only one standard of quality. That standard, very simply, is the highest anywhere known.

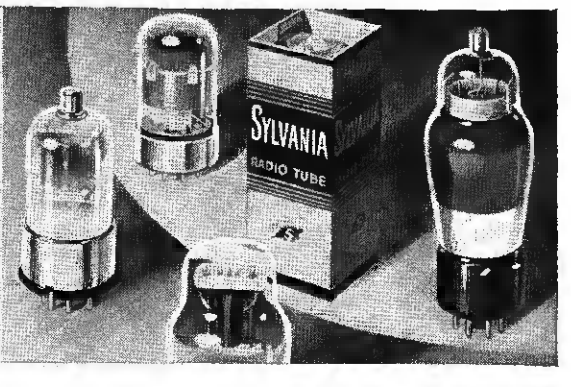
SYLVANIA ELECTRIC PRODUCTS INC.

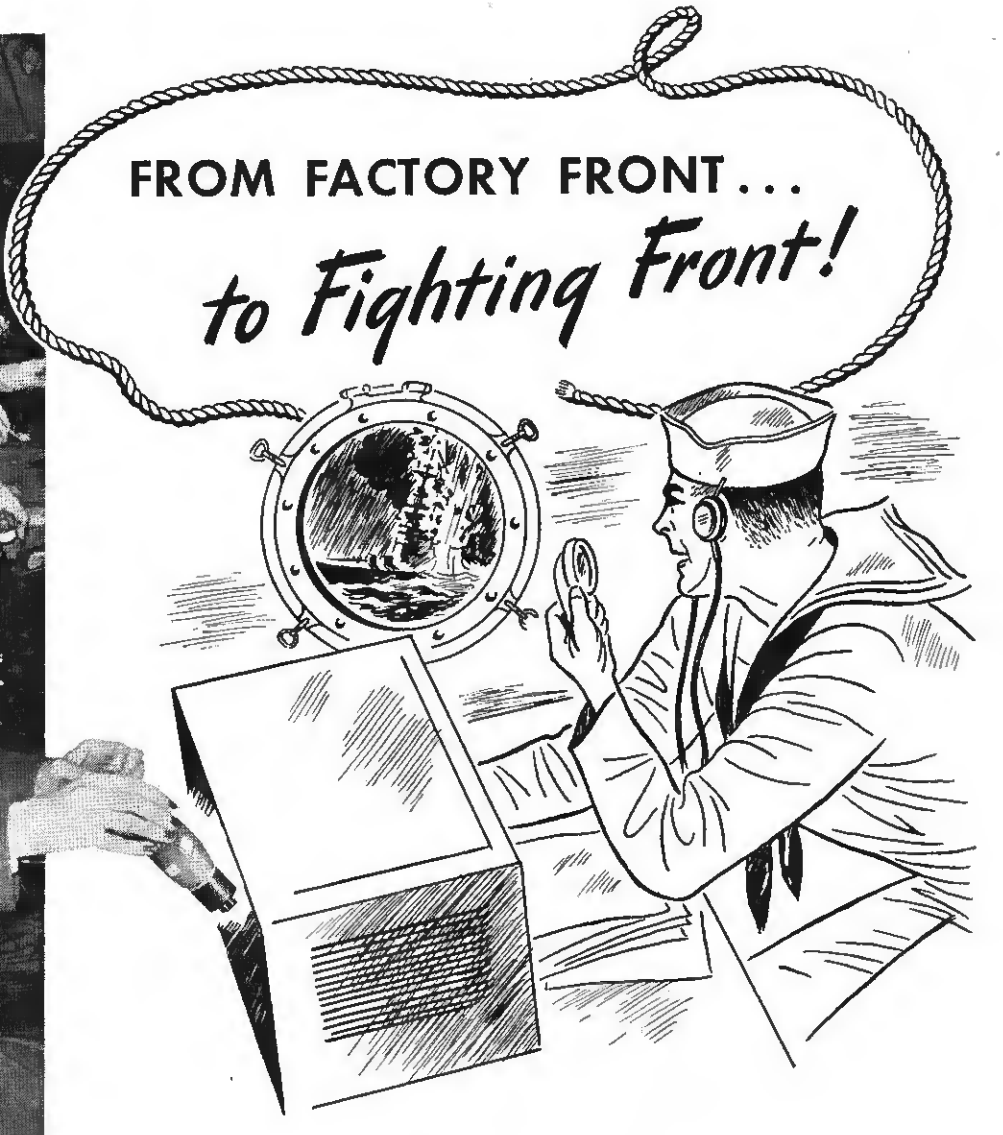
Emporium, Pa.

Formerly Hygrade Sylvania Corporation

Established 1901 . . . Makers of Incandescent Lamps, Fluorescent Lamps, Fixtures and Accessories, Radio Tubes and Electronic Devices

RADIO ON TWO FRONTS—Ever a source of home entertainment, radio is now—in wartime—a vital necessity at home and in battle. Thus a heavy responsibility rests upon radio tube manufacturers. Not only must present home equipment be kept serviceable for the duration, but the insatiable demands of the battle lines must be met and met promptly. Tube-making is a job upon which Sylvania has lavished its extensive resources and full energies since radio came out of the "crystal" stage. America can count on Sylvania's superlative line of radio tubes—paced by the incomparably rugged "Lock-In"—to measure up to their important assignment.





Tung-Sol radio tubes and lamps are vital parts of the equipment so essential to split-second transmission and reception of battle commands. On this basic responsibility is founded the Tung-Sol campaign for Victory, which has inspired all employes to give their best to their part of the job. The spirited cooperation of the Tung-Sol organization makes it possible to produce, on the factory front, in QUANTITY, QUALITY and QUICKLY, what is needed on the fighting fronts.

TUNG-SOL LAMP WORKS, INC.

Factories: Newark, N. J. • Sales Offices: Atlanta • Chicago • Dallas • Denver • Detroit • Los Angeles • New York

A symbolic interpretation of the television science. The television transmitter apparatus converts optical images into electronic signals. The human eye is the image to be televised. In the center of the illustration, the pattern of the signal representing the eye (with the actual eye symbolically superimposed), appears on the oscilloscope.

What is America's NEXT great industry?

THERE is just one task before the American people today and that is to win the war, quickly and decisively.

When peace comes a new and brighter world will open up. Many marvelous things await the day of Victory; among them, the fulfilment of a great dream — *television in the homes of the nation.*

Farnsworth was a pioneer in television research and development. Today our laboratories and plants are engaged to the limit of capacity in producing fine electronic equipment for our armed forces all over the world.

But progress in television has not halted. Out of Farnsworth's work for the nation is rising a surer knowledge of this miraculous science; and Farnsworth is bringing to its work the knowledge gained through 15 long years of research and discovery, and 14 years' experience in the precision manufacture of the Capehart Phonograph-Radio.

Consider the part television will play in the conversion of our national economy from a wartime to a peacetime basis. After the war television may duplicate the spectacular growth of the automobile industry, which did so much to pull America out of the depression that followed the first World War.

Until that day comes, few can enjoy the pleasures of television. But you can prepare for an earlier tomorrow by buying War Bonds *now!* The Government needs your investment, and you, too, will be building soundly for the future, when you may want to purchase a home, a car, an airplane, a television set.

Meanwhile, watch Farnsworth. It is our purpose that the name of Farnsworth shall loom bright and clear upon the future's magic screen — television.

President

Farnsworth Television & Radio Corporation, Fort Wayne, Indiana

• Manufacturers of Radio and Television Transmitters and Receivers; Aircraft Radio Equipment; the Farnsworth Dissector Tube; the Capehart, the Capehart-Panamuse, and the Farnsworth Phonograph-Radios

FARNSWORTH TELEVISION

● Here is another of Farnsworth's distinguished new series of television advertising now running in *Life, Fortune, Business Week, Time, The New Yorker, Newsweek* and *U. S. News.* When the war is finally won and television becomes a living reality in the homes of the nation, you may be sure that Farnsworth will be outstanding in musical reproduction and television fields.

We are making more tubes than ever before in our history, but the armed forces are using almost our entire output. Under existing conditions, you may have to search for Ken-Rad Tubes, but there are some and possibly will be more for replacements. Please bear with us in the knowledge that the better job we do now, the sooner we will be able to meet civilian requirements.

Ken-Rad Radio Tubes Make Satisfied Customers

KEN-RAD

Metal Radio Tubes

KEN-RAD TUBE & LAMP CORPORATION, Owensboro, Kentucky

Concentration!

TO KEEP THE ZENITH NAME ALIVE —AND HELP YOU

For Instance . . .

. . . fuel limits were overstayed during the fight by a torpedo bomber and two fighters . . . first announcing their intention by radio . . . they crashed on Guadalcanal . . . fighter pilots were rescued that night . . . bomber pilot several days later . . . (news item)

. . . a pursuit pilot who fought as a soldier on Bataan reports on a Jap landing party: "They had the best equipment I ever saw. Everybody had special field radios" . . . etc. (news item)

Interesting!

Watch for radio use in the war news — you'll find it in the air — on the ground — and at home!

WITHOUT radio, the movement of war would still be anchored by telephone lines—the physical hazards of the courier and visual signals.

Now war moves swiftly over the whole face of the earth—instantaneous radio communication thru the ether instead of over copper wires has blasted the barriers of space and time.

So today all our radio production centers on war use.

But what of tomorrow—what effect will this have upon the future—after victory?

One thing is certain—it will revolutionize and speed the great new future form of transportation.

Radio has never been universally necessary in transportation before. In automobiles—on trains—it has been entertainment—in boats it has been a great aid but not an essential.

But today for the future, in that great, new universal transportation that is forming itself—the airplane—radio is essential as the engine itself.

And—mark this well—airplanes and radio are two of the four *great* industries destined to lead this country back to business normalcy after the peace is won.

Zenith's leadership in the radio industry has been established by a constant achievement of "firsts"—Repeatedly, ideas "brand new" when Zenith "first" introduced them, later became essentials on all radios. And that same "forward thinking" of engineers and factory and organization now concentrates on war production of the thing we know—radio—exclusively. We are progressing—we learn every day—and this new experience will inevitably reflect itself when Zenith again produces for peace.

—a Zenith Radio Dealer near you is giving reliable service on all radios—regardless of make.

ZENITH RADIO CORPORATION—CHICAGO

ZENITH RADIO "LONG DISTANCE" RADIO PRODUCTS EXCLUSIVELY WORLD'S LEADING MANUFACTURER

Running Frequently in a Long List of National Magazines

In War—as in Peace ZENITH Concentrates on Producing Radio . . . and Radio Only

CONCENTRATION on radio manufacture exclusively has indeed characterized Zenith's long and progressive history in the industry.

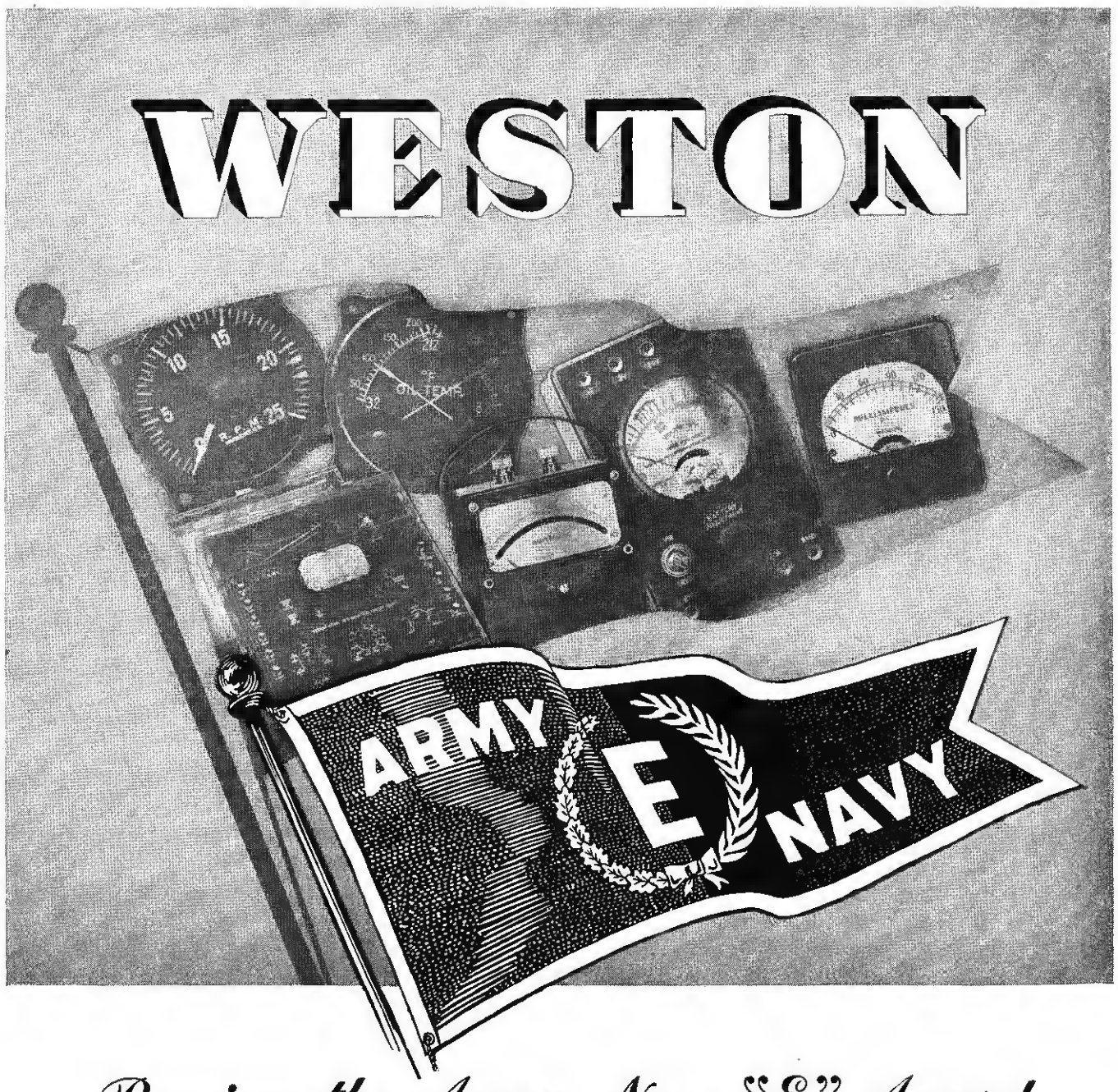
Today, every resource of Zenith's tremendous radio manufacturing facilities is being devoted to the building of fine precision radio for our fighting forces on land, on the sea and in the air.

In this period of producing for war, we are contributing much and learning much that will keep Zenith in the forefront when peacetime comes again . . . will produce *more* Zenith "firsts" to be added to the long record of pioneering, which has proved so profitable for Zenith dealers.

Zenith's proven advertising strategy, used so successfully in establishing deserved supremacy for the Trans-Ocean Clipper and Wavemagnet Portables, calls for hard-hitting, moderate sized space, run with rapid frequency in a diversified list of periodicals.

Advertisements similar to the one reproduced at the left will keep the Zenith name alive before the American public.

ZENITH RADIO CORPORATION
CHICAGO



Receives the Army-Navy "E" Award

"On LEADERSHIP rests the responsibility for getting things done."

Only short months ago, the instrument goal in this mechanized war seemed unattainable. In almost unbelievable quantities instruments were needed for our huge plane program—for a two-ocean navy—for tanks, guns and walkie-talkies — for our arsenals and factories — and for countless new devices of war.

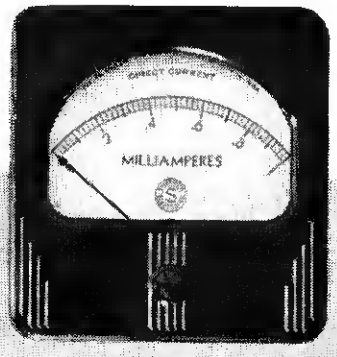
To approach this goal meant far more at WESTON than the mere addition of factory and laboratory equipment, and the usual worker-training program. It meant imparting to untrained hands the skill and instrument sense which ordinarily takes years to acquire. For it's this rare instrument sense, backing up sound engineering, which has been responsible for WESTON's continued leadership.

This "E" award to the workers at WESTON—the first to any group in this specialized field—means recognition of their efforts in striving to attain the goal in numbers, while never relinquishing the WESTON quality ideal.

And to our courageous fighting men everywhere, it conveys the assurance that they can depend on the men and women at WESTON to continue furnishing the essential instruments in ever increasing quantities . . . *until victory is won.*

WESTON ELECTRICAL INSTRUMENT CORPORATION, NEWARK, N. J.


Raytheon Tubes
CAN TAKE IT!
The same Raytheon radio tubes that gave you top quality performance are now giving unfailing performance with the Signal Corps despite field conditions and the rigors of every climate.
Raytheons are now on 24-hour-day watches in the jungles and in the Arctic—duty that means freedom to the world! They must not fail and they do not fail. Thanks to thousands of Americans working to make it so—RAYTHEONS CAN TAKE IT!
RAYTHEON PRODUCTION CORPORATION
Newton, Mass. • New York • Chicago • Los Angeles • Atlanta
RAYTHEON
RADIO TUBES
DEVOTED TO RESEARCH AND THE MANUFACTURE OF TUBES FOR THE NEW ERA OF ELECTRONICS



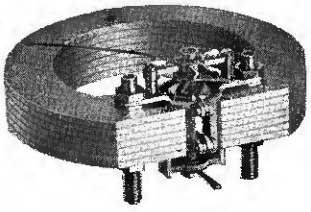
Soft Iron Pole Pieces
+ Full Bridge Construction
= LASTING ACCURACY★

HERE, in a few words, is one big reason why Simpson Instruments have written such an outstanding service record—why, in just a few years, they have skyrocketed to the top at a pace unparalleled in the electrical industry.

Designers of electrical instruments, and users, alike, have long recognized that a full bridge type movement with soft iron pole pieces makes an instrument basically more accurate and rugged. It remained for Simpson skill and ingenuity—based on practical experience that reaches way back into the history of electrical instruments—to put this finer design into superlative practice, and to obtain for it the economies of standardization and straight-line production.

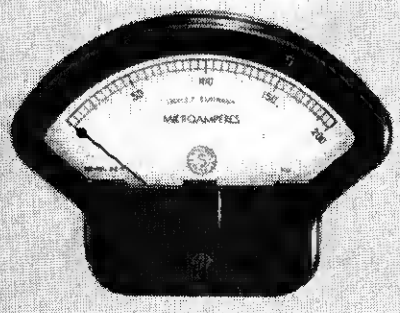
If your need for instruments is vital enough to give you the right to buy, it is vital enough to rate the best. Measured in terms of ability to *DO* the job, and stay *ON* the job, best means . . . Simpson.

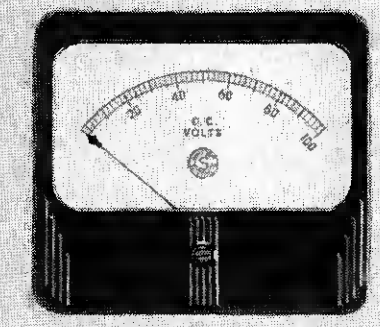
SIMPSON ELECTRIC COMPANY, 5208-18 Kinzie St., Chicago, Ill.



★The Movement of Lasting Accuracy

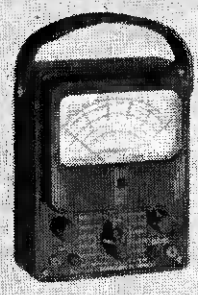
No single feature can be entirely responsible for instrument accuracy. Some of the many refinements of Simpson design—perfectly coordinated and balanced to insure lasting accuracy—are these. Soft iron pole pieces distribute magnetic flux more evenly. Full bridges at top and bottom hold the moving assembly always in perfect alignment. Magnets are heat treated, then aged for permeability. Springs are carefully tempered and tested for permanent resiliency. Pivots are completely Simpson-made—specially processed for strength and hardness. Selected jewels are the finest obtainable.





Model 260 High Sensitivity Tester

Here is a typical example of Simpson leadership. Ranges to 5,000 Volts, both AC and DC, at 20,000 ohms per volt DC and 1000 ohms per volt AC. Current readings from 1 microampere to 500 milliamperes. Resistance readings from ½ ohm to 10 megohms. Five decibel ranges, —10 to +52 DB.



Simpson

INSTRUMENTS THAT STAY ACCURATE

UTAH RADIO PRODUCTS COMPANY

TELEPHONE
SUPERIOR 8388

812-[illegible] ORLEANS STREET
C[illegible] · U·S·A·

For Utah Jobbers Only

A long time ago Utah Radio Products Company established a policy which has, through the years, proved to be both sound and beneficial to our jobbers.

This policy is and will be strictly maintained.

Distribution of Products — through recognized jobber channels only. Countless requests to alter this policy have been flatly and repeatedly turned down.

Selection of Jobbers — careful selection made to avoid unfair competition.

Geographical Location — territorial limits sufficiently extensive to provide ample return from economical sales coverage.

Product Development — Utah engineering and designing are keeping pace with all industry improvements and developments. Utah retains outstanding engineers and manufacturing experts.

Advertising — factual presentation of products in leading publications to support the trade's merchandising activities.

Utah believes that jobber distribution is economically sound for all concerned — that jobber distribution has been a stabilizing influence in the industry — that it should be maintained in any and every way which will not hamper the war effort now — and be strengthened for the post-war period ahead. It is Utah's resolution to continue this policy which has proved so mutually satisfactory.

Cordially yours,
UTAH RADIO PRODUCTS COMPANY

O. K. Jester

General Sales Manager

A NEW KIND OF WAR ADVERTISING!

● The advertisement shown here recently appeared before the nearly 30 million readers of LIFE and THE SATURDAY EVENING POST. Here is war advertising giving credit where credit is due—to the men battling with their brains and blood to preserve our liberties.

For we of Stromberg-Carlson sincerely feel that our efforts are but small in comparison to the sacrifices and hardships of the men in our fighting forces. And we believe that this attitude, shared by our distributors and our workers alike, cannot help but make us do a better job of backing up the men "out there."

STROMBERG-CARLSON, ROCHESTER, NEW YORK

RADIO Retailing TODAY

Including Radio and Television Retailing

O. H. CALDWELL, EDITOR. M. CLEMENTS, PUBLISHER
480 LEXINGTON AVE., NEW YORK, N. Y.

Don't Let Radios Die!

In its effort to get radio parts for servicing and replacement, the radio trade is now obtaining the help of the powerful broadcasting groups. For the broadcasters are at last thoroughly awake to the peril in which their radio audience stands if tubes and parts are not made available to keep radios working.

Sixty million radio sets are now in use in the United States. But radios in years past have been going *out of service* at the rate of *four to six million sets a year!* This tremendous shrinkage was evident during all the years that radio-set manufacture ran eight to thirteen million sets a year, although the net gain in radios in use was only four to seven million sets a year.

Such shrinkage will continue to go on, and a rapid drop in the radio audience is sure to follow, unless radio servicemen get the tubes and parts to bolster up the drooping audience curve.

Five Out of Six Need Sets

Only one-sixth of our soldier boys have radio sets.

This is the lesson of a survey just conducted by the War Department, which also finds that the favorite listening hours are 6:15 to 7 in the morning, 12:15 to 12:45 at mid-day and 7 to 8:30 at night. Nearly half the men reported that they were unable to tune in on their favorite programs because the time was inconvenient or the local stations did not carry them.

The survey also reveals that the boys in the military service like their radio music "soft and sweet," while classical music and soap opera they put far down the list.

The War Department's survey has a lesson for anyone seeking a gift to send to a boy in uniform. Unmistakably a portable radio is the prize present the donor can select.

Axis vs. United Nations, in Radio

In all the world, there are 2,481 radio stations—and more than 108 million radio sets, reports Frank E. Mullen, general manager of NBC.

In the Axis Nations, there are 271 radio stations and 33 million radio sets. In the United and Neutral Nations, there are 2,210 radio stations and 75 million radio sets—eight times as many stations as in the Axis Nations.

Thus we see that the United States alone has nearly four times as many radio stations as in all Axis Nations combined—and nearly twice as many radio sets. The United States total: 924 stations, 60 million radio sets.

In radio sets per thousand population, the United and Neutral Nations have 47 per thousand; the Axis Nations 62 per thousand; in the United States itself there are 425 sets for every thousand people. In other words, there are nearly seven times as many sets per thousand people in the United States as in the Axis Nations. The United States has 37 per cent of the world's radio stations, 924 out of 2,481. In short, a total of 30,600,000 United States radio families depend upon the 924 stations of our country for entertainment, information and education.

War Production at Full Speed

Radio-set manufacturers have now been pretty completely absorbed in the war effort. With the exception of two or three smaller producers, who are liquidating their businesses, all the other makers of home and auto-radios have converted their plants wholly, and taken contracts for war material under the huge radio program of the armed forces, running into the billions.

And it now seems likely that for the time being, or the duration, present manufacturers will be kept going at their existing rates of production providing raw materials and components are available. Final assembly capacity is now operating under the direction of Radio Chief Ray C. Ellis of the War Production Board, to carry on military-radio production at the rate desired. Providing critical materials and components are secured, the assembly factories will be kept going at maximum rate.

Here is the radio serviceman's biggest job in history—to keep the radio listening audience intact in wartime. The repair job on 60,000,000 sets requires prompt allocation of necessary replacement parts.

PROLONGING

• Radio dealers have declared that one of their biggest problems today is to get into contact with all possible sources of receivers. They are anxious to do what they can to replenish their dwindling stocks. And they realize that there are a lot of new things to think of, in trying to get hold of the few sets that are available.

Certainly a buying effort of this kind should not be regarded as any life-saver. The spirit of "business as usual" should be discarded once and for all.

Think It Over

Actually the retailing of radio, just as the retailing of automobiles, is doomed by the war necessity eventually to shrink away to little or nothing.

The big job of the radio dealer is to service and to maintain those sets which are in use and are wearing out. This is a big job and it is getting bigger everyday.

As for the retailing or bartering in *used* radios, this may well be a profitable business—as a sideline or by-product of your regular service business.

And in getting new radios and selling them as long as they are available—the dealer must not become blind to the fact that someday there will be no more new radios available.

Currently new sets can be bought from a number of sources, if a dealer will go scout for them. Other radio dealers, "called to the colors," are closing out their stocks as they close their business for the duration, and in some cases offer small stocks for sale.

Wholesalers and distributors are glad to close out their remaining stocks of radio as they take on other types of lines of merchandise. Exporters will gladly dispose of their stocks caught by the freezing of ocean transportation.

And there are still a few manufacturers, particularly those small manufacturers who have specialized in the export market, who still have small stocks they will gladly dispose of.

But one day these will all be gone. If we wait until that day, before taking some of the other steps which are indicated as being necessary to preserve the retailer's business integrity, we will find then—it is too late.

Keep your radio sales going as well as you *readily* can. But don't delay too long in making the other arrangements which are really necessary to keep your business going.

Looking Ahead

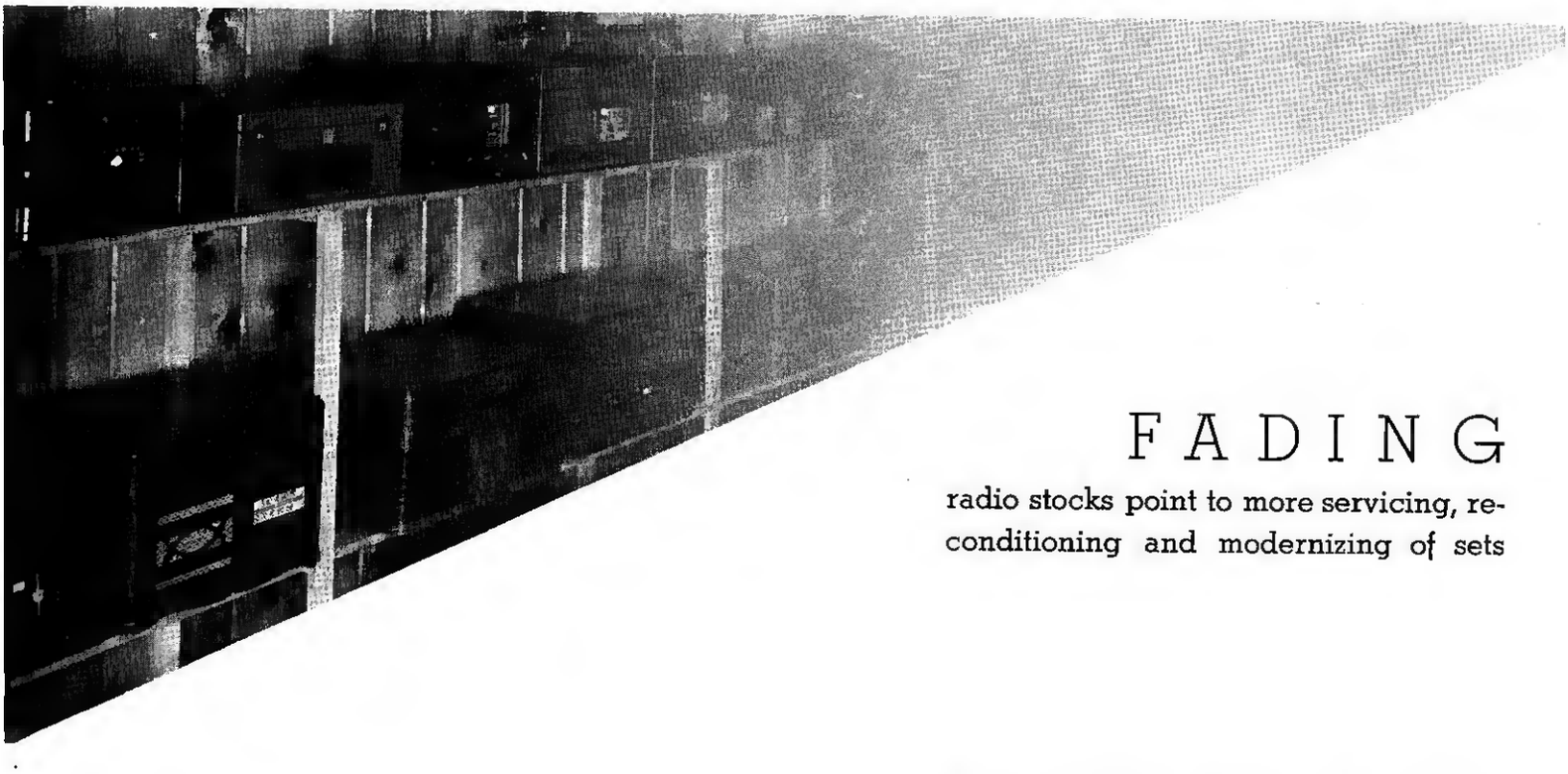
Someday, when this war has been won, radio sales are going to "bounce back" in a way which will make anything that has gone before look puny in comparison. Until then, it is your main job to keep your business intact—to be ready for the flood-tide of radio sales when it does occur.

Between now and then you must be reconciled to a new order for your business. Radio retailing—as you have known it—is almost out, whether you *think* so or whether you *like* it or not.

Every radioman must think about his business now—or wish later that he had.

Service Counts

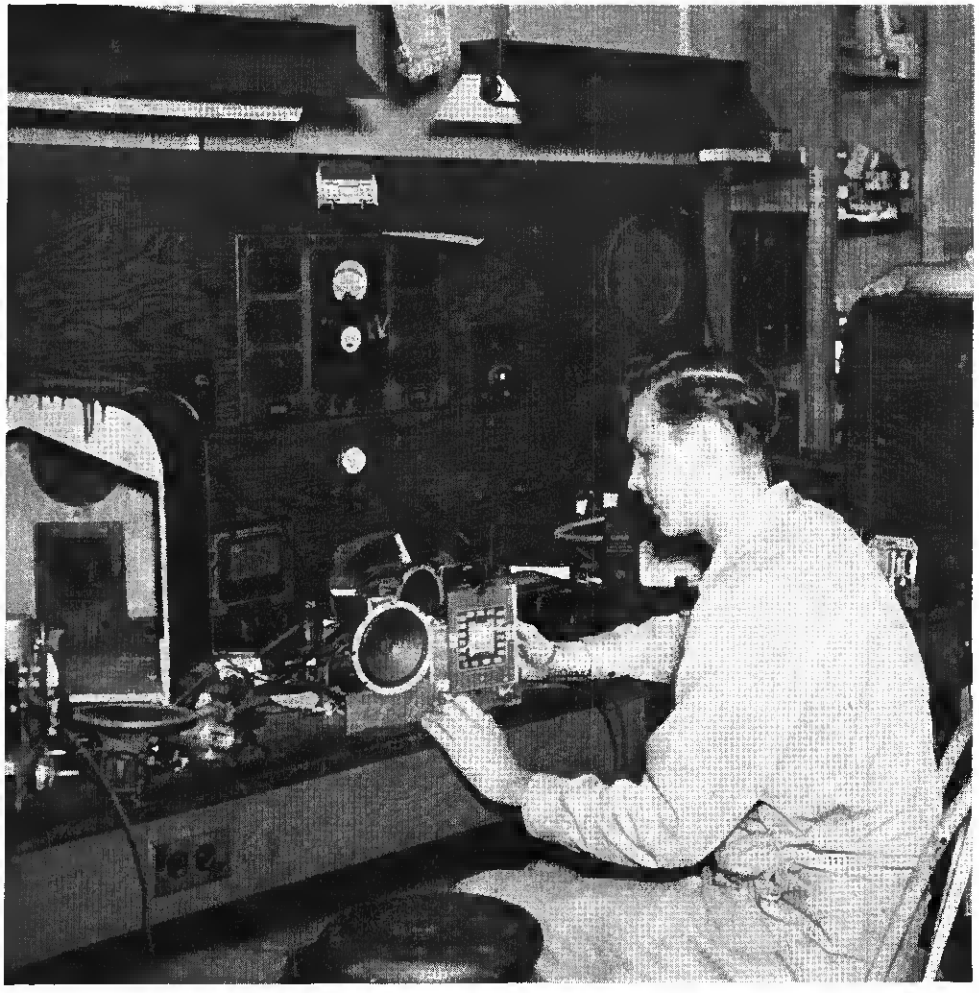
Keep your service department growing strong. Merchandise it, build it up. Hire and train women. Get



FADING

radio stocks point to more servicing, reconditioning and modernizing of sets

RADIO SALES



Above is a servicing scene at the Garing Radio Shop, described at right.

after other electronic applications for industry such as sound systems, safety devices production control equipment, material inspection equipment and a whole host of other electronic devices, which industry is fast installing.

In straight retailing too, don't forget that other lines of merchandise can keep you going, even as they do others. Records—of course! Music, too, should be considered. Adult games offer a real opportunity. Toys, books, gifts—all have their possibilities—as the country gets out of its cars and people go back to the social life of 30 years ago. Consider, too, that there are other lines and other retailers in almost the same boat as you. Give earnest consideration to joining up with one of these—thus *doubling* your experience.

Many alert dealers have done this and more are doing so as time goes on. But don't wait too long. And above all get over the idea of "business as usual." It isn't in the cards. Get the old ingenuity and enterprise on the job—they are now very precious assets. More than ever before, there is a premium now on alertness.

It is later than you think, but radio dealers throughout the country are showing real enterprise and having real success in keeping their business going, and ready for the good times which aren't too far away.

TO HELP WIN YOUR BATTLE

More service business
Electronic jobs
Outdoor games for adults
Summer furniture
Cooperative delivery
"Per cent of sales" rental
Sales to soldiers
Public-address jobs
More records and music

This Radio Shop "Carries On"

The younger men of the Garing family, who had done the radio service work at the G. M. Garing Radio Shop, Talladega, Ala., are now in the Army. All of them are doing a technical job for Uncle Sam, at various outposts throughout the world. That leaves James A. Garing, father of the two Garing boys, to carry on—and he is carrying on, hiring repairmen as he can find them.

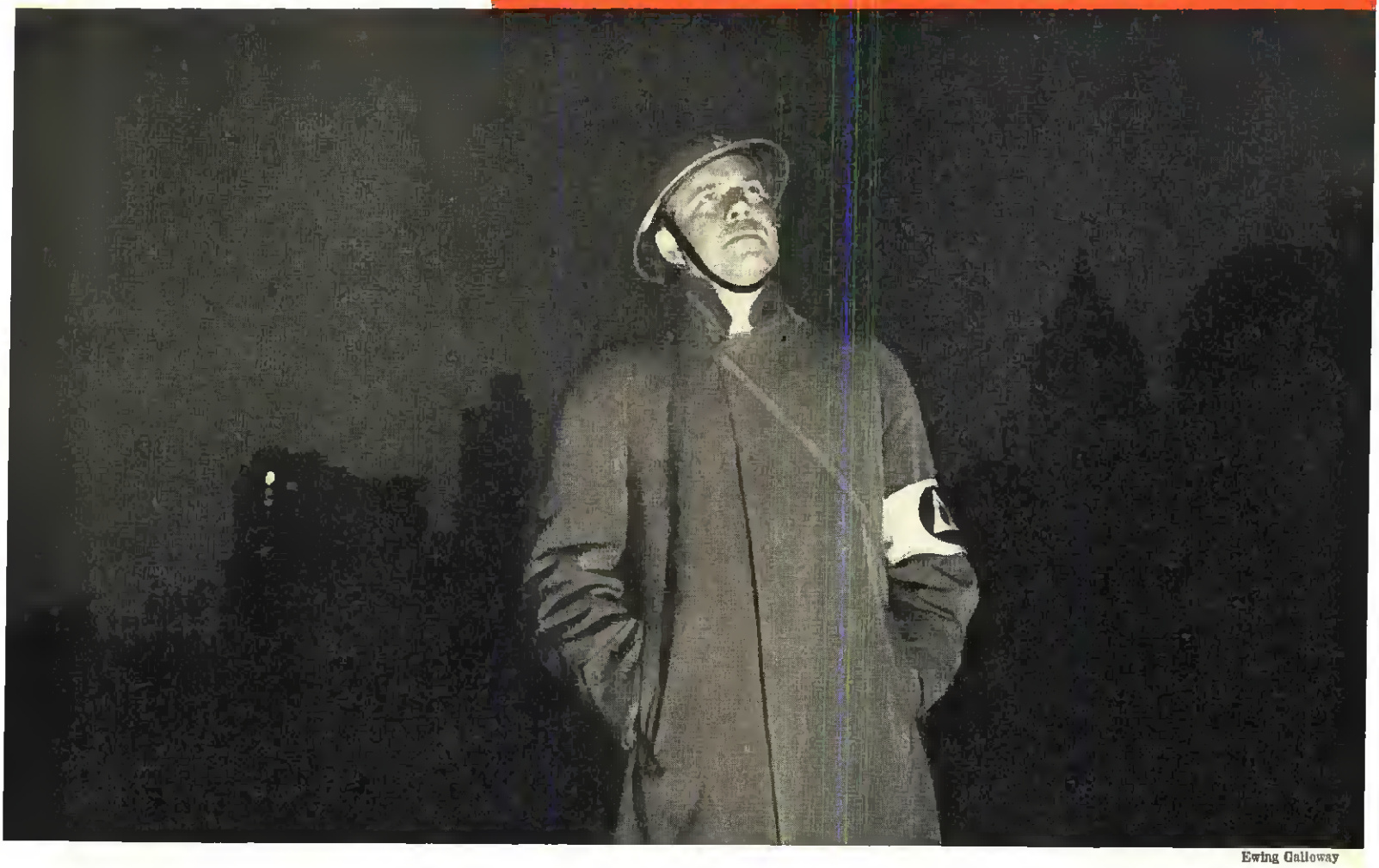
"Marching" Tube Display Gets Attention

He has conceived of an idea to link his business up with the war effort. He has a display of "blown" radio tubes in his show windows, one for each man who has gone to the service from Talladega. The tubes look like real men as they sit up in the window in military formation, and possibly this is an idea for other radio shops to copy.

The shop has so much service business in military establishments in the vicinity that elder Garing has a standing pass. He feels that in a way, he is in the Army, too. In fact, he has painted his trucks a drab brown, near the color of military cars.

"At one time we sold a lot of new appliances, in fact I recall personally selling seven refrigerators in one day, but we are now concentrating 100 per cent on service," said Mr. Garing. "I expect to preserve the business for the boys when they return, and some day I expect we will again have a good merchandising as well as service business."

Servicemen



Ewing Galloway

● Radio servicemen have already been credited nationally for the part they play in civilian welfare. The job of keeping all the vital wartime broadcasts coming in through the 60,000,000 radios of the country is no small factor in helping America to win another war.

But servicemen are helping in many other ways. For one thing, they are beginning to take an expert hand in the War Emergency Radio Service, which has been set up by joint action of the Federal Communications Commission and the Office of Civilian Defense. These two agencies had announced last summer that radio amateurs, radio servicemen and others having sufficient experience would be asked to volunteer and serve in the operation of civil defense radio systems.

The first license to be granted by FCC for such a system in a coast area, was that issued to the City of Lawrence, Mass. The attention of the radio service industry turned instantly to that area to see what part would be played by repairmen.

A representative of this magazine was dispatched to the area, and found that a radio serviceman, James A. Mulligan, who operates Jim's Radio Laboratory at 310 Salem St., Lawrence, was right in the thick of the new work. Mr. Mulligan's service bench is jammed with repair jobs, and he's getting them out in good shape, but he's still giving a big share of his time to radio's local contribution to civilian defense.

Servicemen on Duty

This repairman has been appointed "Radio Aide" for the District Warning Area which centers at Lawrence, and working under the officials of the radio department of the Protection Division of the Massachusetts Committee on Public Safety, has been a key man in the local organization work of the new radio system. He's a ham of long standing, and in his new job he lines up the amateurs whose stations are being licensed in the network of CD radio communications which covers the district.

He is likewise enlisting other ser-

Your CD Job

Help to organize WERS in your district.

Offer technical advice and use of equipment.

Help to service units of CD system.

in Civilian Defense

vicemen of the territory, to help in building, installing and maintaining the equipment. It had been pointed out by FCC that "engineers are of the opinion that spare parts lying around radio repair shops are sufficient to construct the radios needed."

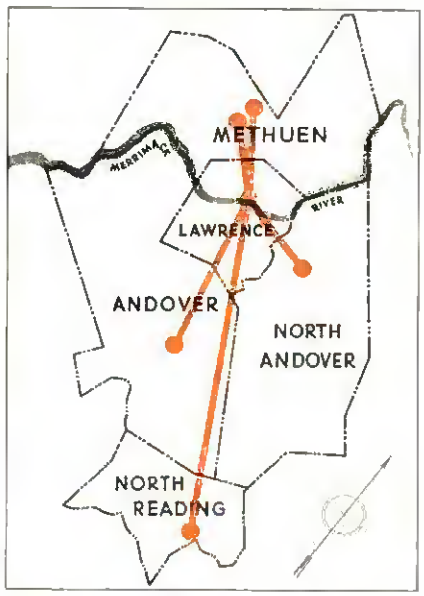
Alarm Links

Basically, the plan is to set up a network of two-way radios covering the Warning Area, to serve as an emergency communication method for the various report centers and air radio posts. These units are fixed-tuned to the network frequency and are of three types, the fixed units, the fixed-portable jobs, and the portable-mobile units. The latter are mounted in cars, and the fixed-portable jobs are the ones of the "walking" types.

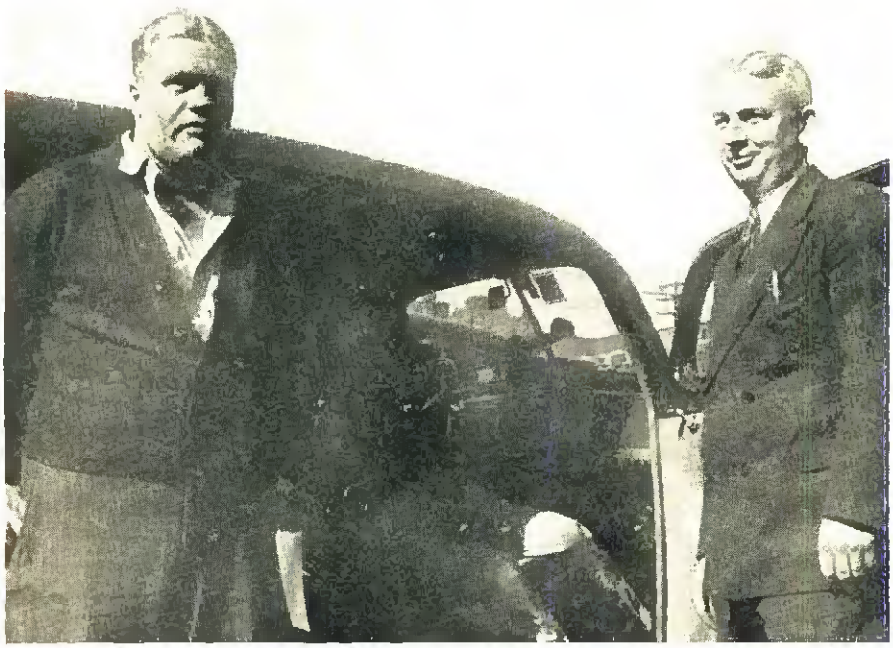
Increasing Importance

In the case of the Lawrence District Warning Area, which includes some 125 square miles and five neighboring towns, it is estimated that about 30 pieces of equipment will be needed. These are to be operated by WERS licensed hams, and 14 of them are already active in tests. Eventually it is expected that some 200 may be needed to man the stations full time.

In building up the system for maximum usefulness during air radio alarms, the first units are used at the control centers, and as others become available they are placed so as to extend the coverage of the network. In all branches the radio service operates as an adjunct to existing organization of civilian defense, and is arranged throughout so that it will supplement the wired facilities whenever and wherever needed.



Shown above are the five areas linked by the War Emergency Radio Service, with Lawrence as center of Warning District. Below, right, is James A. Mulligan, the serviceman who is Radio Aide for the district, and William Lynch, one of the ham operators. They're shown with one of the mobile units of the Emergency System, operated by Clifton I. Wilkinson.



Repair Responsibility

Recalling what vital services have been performed by closely-knit ham communications in previous cases of emergencies, such as floods and storms, it will be seen that WERS has a real job to do if the greatest of all emergencies finally arrives, and the enemy approaches our shores. Keeping all the equipment in 100 per cent operating shape will fall partly to the local repairmen, particularly in cases where most of the better-trained hams have left the area to join up with the Armed Forces. The prompt supplying of vital replacement parts will also be part of the job for the serviceman who thus becomes a key unit of civilian defense.

More Cities Move to Get Licenses

FCC reports that applications from many other cities are now pending for WERS licenses, so that servicemen the country over may have this vital new job to do. Licenses are granted to key cities themselves, and where the license covers an entire warning area, it is necessary for the radio officials to get other municipalities to agree to the set-up. Thus, a great deal of preliminary organization work is necessary, as in the case of Lawrence where the five outlying towns had to sign radio agreements for the main license from FCC.

Servicemen can be very helpful in this initial organization work, by offering their technical advice and helping to get the first equipment satisfactorily set up. FCC requirements include many details in the applications for licenses. For instance, FCC says that "some applications are being returned because the forms fail to indicate what arrangements exist for liaison with Defense Commanders for the purpose of receiving orders of radio silence when conditions dictate."

ELECTRONIC FUTURE

More industrial uses of photo-cell and tube units which will eventually afford jobs for servicemen

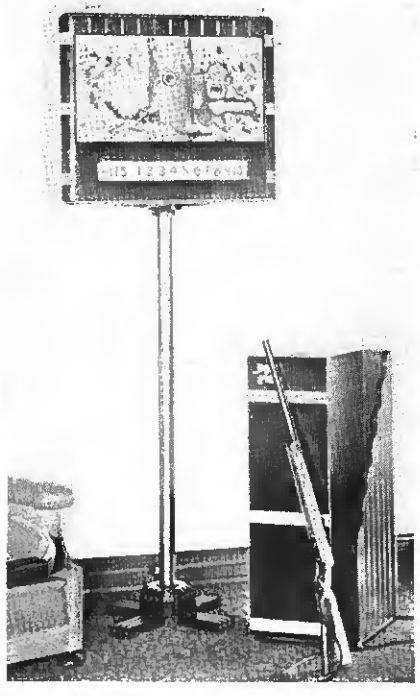
• Today America's radio factories are entirely devoted to war production.

These plants are building not only radio-communication equipment but also startling new electronic devices destined to play a tremendous part in the ultimate defeat of our enemies.

The nature of these devices is a military secret, but in them America's engineers foresee the foundation for a great new peacetime industry.

This future as it concerns the radio man is well described by Dr. W. R. G. Baker of General Electric, who says:

"Not only will radio and television be vastly improved but, using their war-won knowledge of electronics, engineers will create hundreds of entirely new products—many of which radio dealers will have the opportunity to sell and service.



This photo-electric target-practice rifle, originally developed by F. V. L. Smith, New York City, as an amusement device, is now finding military use among soldiers testing their marksmanship without wasting ammunition.

Dollars for Alert Servicers

"The radio dealer of today may well become the electronic product dealer of tomorrow. Already alert radio service men are becoming the electronic maintenance men in their communities.

"Don't think of electronics as something far away from you. Electronic tubes are at work right now in your city. They are opening doors, leveling elevators, controlling electric motors, controlling welding machines, counting traffic, assisting in medical treatment, controlling room temperatures, furnishing entertainment, and performing hundreds of other useful tasks in home and industry.

"There's no reason for any radio service man to think of electronic devices as something strange and complicated. All electronic tubes are fundamentally the same as the tubes in a radio set.

"The size and scope of the electronic industry is limited only by the vision of the men in it."

Electronic devices continue to find uses everywhere in everyday life. And these uses involve servicing and maintenance jobs for radio men.

Testing Oil and Blood

In these days when oil is precious, photo-cells find a timely use in testing the crankcase oil in automobiles. Here's the way it works. Your service-station man takes a sample of your oil, puts it in front of an electric-eye device, and by the amount of light which gets through the blackened lubricant, to fall on the electric eye, a pointer is made to indicate definitely whether the oil does or does not need changing.

Recently the same principle has been applied to test the blood of firemen and others overcome by smoke. The change in the color of the blood which results from absorbing a dangerous amount of smoke, is definitely measurable by the electric eye. Exposed to a sample of the blood of a person who has been subjected to smoke poisoning, the instrument is designed to show how serious is the degree of contamination of the blood, as measured on a numerical scale. The physician can then apply appropriate medical treatment based on a definite knowledge of the patient's condition.

A Liquor Sniffer

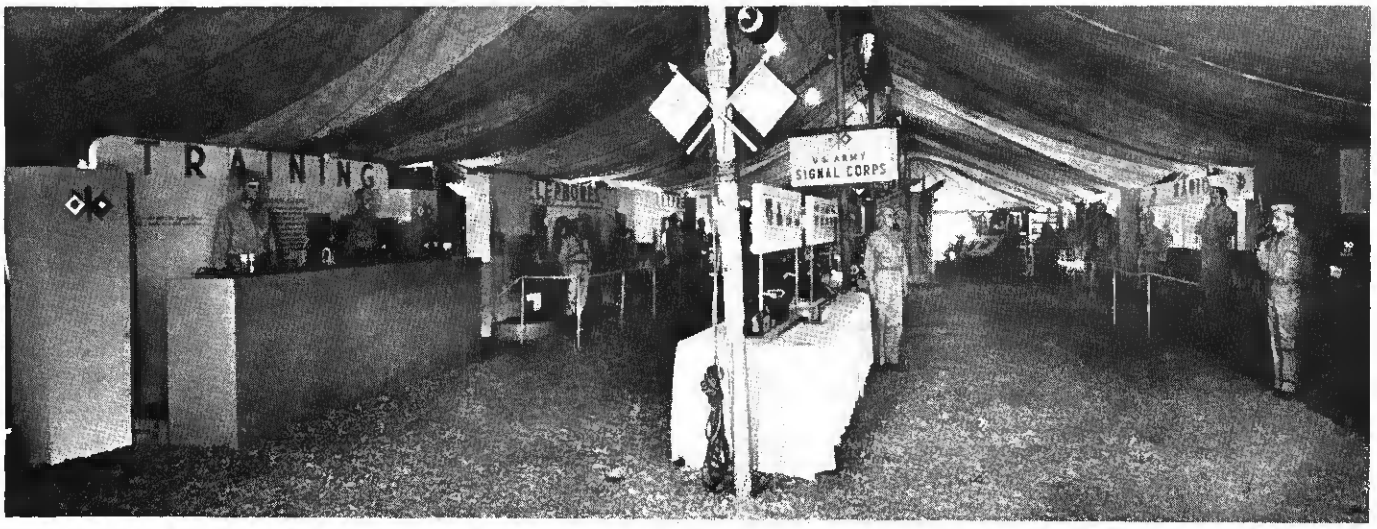
And now the Connecticut State Police have been experimenting with a similar electric eye gadget which detects the amount of alcohol an automobile driver has been drinking This "alcoholometer" looks like an old-fashioned radio set—two feet long, two feet high. The subject blows into a small, hard-rubber tube, set in the back of the device. The fumes go through a compliacted setup of tubes and valves in the interior, to a test tube. In this tube is a solution of starch and potassium iodide.

The colorless chemical in the front-compartment test tube turns various degrees of blue, the shades showing the strength of alcohol in the fumes. When the tint is fixed in the solution, a button is pushed in the front of the alcoholometer the photocell makes its "reading" and an indicator jots down a permanent record, based on the depth of tint the electric eye sees.

TUBES AT WORK

Testing motor oil
Analyzing blood
Umpiring ball games
Robot-piloting boats
Detecting thefts
Taking night photos

for Radio Men



The many uses of radio and electronics by the armed forces of the United States are demonstrated to the general public by this exhibit of the Signal Corps which accompanies the traveling War Show now touring the nation. Here laymen can see those uses of electronic tubes in national defense which can be revealed. Our many secret electronic weapons are of course not exhibited.

Detecting Crimes, Errors

The police use another electronic device—the ultra-violet-ray generator—to detect petty thieving. Such rays from an ultra-violet tube source, are credited with the recent arrest of an employee of the Philadelphia Mint, on charges of stealing twenty-two dimes.

The dimes, which were found in the pockets of the suspect, were subjected to ultra-violet rays. One by one, they became fluorescent.

"All right" admitted the man, "I stole them."

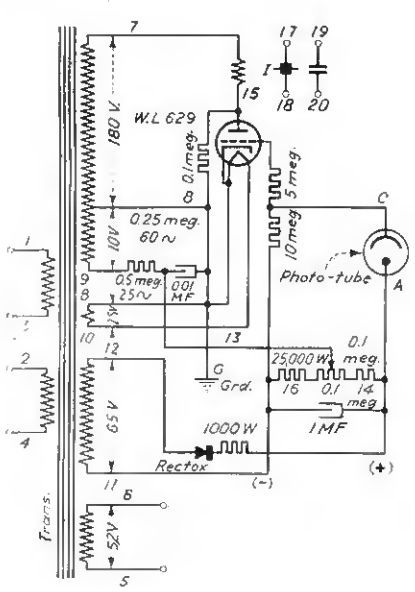
The dimes, slightly defective, had been dipped in a solution invisible to the naked eye, as a means of labeling them, detectible only under ultra-violet.

And next summer, baseball may take on some new airs if Raymond H. Dumont of Wichita, Kansas, completes his plans. Dumont has already devised an electrical plate-duster for baseball diamonds, as well as a retractible, disappearing microphone. This mike permits umpires to announce line-up changes directly to the fans.

The instrument also can be used to relay home-plate arguments. His automatic ball and strike indicator employs an electric eye with a light source at the proper level. A strike would be registered if a pitcher's offering broke the eye's rays by crossing the plate.

Similar photo-electric devices are used in many States as traffic tabulators. Automobiles are counted automatically as they flash through the field of rays.

Automatic steering for yachts by electric eyes is another 1942 reality, interrupted only by the War. Automatic steering is a means of keeping a boat on a course set by her navigator. In a small boat, where the navigator is usually "everything else," automatic steering permits the skipper to keep an alert lookout. At night, his eyes are not dazzled and tired by constantly watching the compass. Relieved of constant duty at the tiller, the skipper can plot the next course, check his position by cross bearings and carry on his routine day's work, while the automatic steering keeps the boat on her course, thereby making possible a safe and efficient one-man watch on a small boat.



A typical photo-electric circuit employed by the Westinghouse engineers. Here a thyratron tube actuates the relay contacts at I, the thyratron (top) being in turn controlled by the phototube at the right.

Steering Sail Boats

In a sailing craft, such automatic steering in effect "adds to the crew," as there will be one more person in each watch who can handle sails, stand lookout, or navigate.

Besides these increases in efficiency of the crew, there is little doubt that automatic steering saves distance on long runs. It is also a source of comfort to the navigator who sets the boat on the correct course and knows that the automatic steering device will hold her to that course without (1) falling asleep, (2) forgetting the course or (3) reading the compass card incorrectly.

On fishing trips, it has been found that automatic steering is useful in trolling and other cases where it is desirable to cover the likely spots in

(*Continued on page* 31)

RECORD ALBUMS

A striking window display by Lyon & Healy, Chicago, on Helen Hayes' album, "Mine Eyes Have Seen the Glory."

Columbia Sets

SONGS OF GEO. M. COHAN—Ray Bloch Orchestra. 4 records. $2.63. Set C-89.

FORWARD MARCH—The Goldman Band. 4 records. $2.62. C-86.

MARCHES—The Goldman Band. 4 records. $2.62. C-48.

HISTORY SPEAKS—Dramatizing great moments in American history. Nos. 36619-30-39-48-61.

BEETHOVEN'S FIFTH SYMPHONY—Bruno Walter, Philharmonic Symphony of N. Y. 4 records. $4.72. M-498.

• Handsomely packaged albums have always been good sales bets for the record dealer. The high unit price and the display possibilities of the sets are known to be real advantages to the retailer. The albums have been "paying the rent" in many stores.

Now comes the type of album which gives out with the story of America at war. These recordings offer the full orchestras playing the great marches; the voices of distinguished actresses in the midst of significant speech; the singing of popular artists in the Victory vogue of the day.

Quality Records

As a rule, the wartime selections to be found in albums are those of the "tested" or perennial favorite types. They are less experimental than the single records of the patriotic bracket, except in some cases where "speech" albums are made because of their historic or epic value. Record merchandisers know well enough that many of the early war records were unfortunate and short-lived, but not many of this type are to be found in albums. The album selections are more conservatively picked.

Another welcome aspect of the new books of records is the colorful and up-to-the-minute looks of them. They add a bright quality to the store window, the counter, the display rack, and the shelves.

Listed herewith are a number of the current albums in war style. These releases from the three major companies have already developed considerable variety and appeal.

As in the case of the "patriotic" style single discs, these albums are excellent bets for military displays in windows and on store counters. The

on the March

Decca Albums

YOU'RE IN THE ARMY NOW—Assorted stars on 5 records previously released. $2.25. A-253.

STARS AND STRIPES FOREVER—Fred Waring and his Pennsylvanians. 4 records. $2.50. A-345.

THIS IS THE ARMY—Original Cast and Orchestra. 4 records. $2.50. A-340.

YANKEE DOODLE DANDY—Fred Waring and His Pennsylvanians. 3 records. $2. A-330.

SOUSA MARCHES, Vol. 2—Decca Band. Joe Colling directing. 4 records. $2.50. A-320.

Lily Pons singing star of radio and opera, has recorded another album in a patriotic vein. It's the "Daughter of the Regiment" set on Columbia X-206.

red-white-and-blue can be splashed all over the place, and the retailer has a chance for color spreads deluxe. Themes which will stand repeating are those concerned with "Music Maintains Morale," Get in the Scrap, Buy War Savings Bonds and Stamps, etc.

These sets will likewise be rated as very timely indeed when it comes to Christmas gifts. Preliminary plans for the holiday season are practically at hand, for the record distributor and dealer who must think about advance ordering. Needless to say, the most important gift merchandise this year will be that which helps to win the war. These "All-American" albums are very much in the swim, along with the special Christmas releases which are now being issued by the manufacturers.

Newer albums of this "fighting" type will be forthcoming. That is, as long as manufacturing supplies hold up. Dealers will want to keep an eye peeled for them. They're good, sound, timely items for wartime business.

Victor Releases

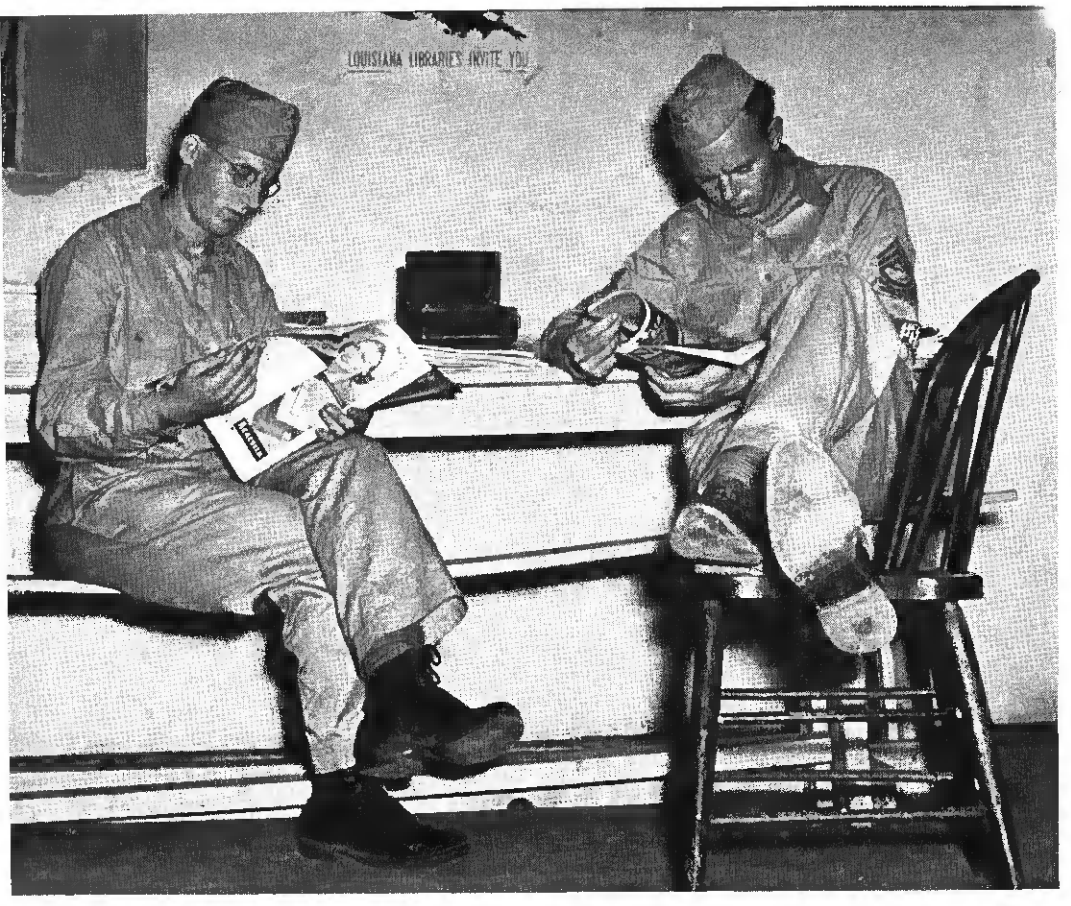
THIS IS THE ARMY—Victor "First Nighter" Orchestra. 4 records. $2.50. P-131.

YANKEE DOODLE DANDY—Victor "First Nighter" Orchestra. 3 records. $2. P-125.

SONGS OF THE SERVICE—Victor Military Band. 5 records. $3. P-117.

MINE EYES HAVE SEEN THE GLORY—Helen Hayes, with Victor Concert Orchestra, Roy Shields conducting. 2 records. $2.62. M-909.

CAVALCADE OF AMERICAN PRESIDENTS—Speeches of Theodore Roosevelt, Taft, Wilson, Harding, Coolidge, Hoover and President Roosevelt. 7 records. $10.50. PS-1.



Compact and convenient portable battery sets are a big factor in helping soldiers relax during rest periods. This is a scene in a USO center in the South.

Radios for Soldiers

Coast-to-Coast Survey of Army Camps shows radio listening needs of the men in training

● There are thousands of radio sets being used by the soldiers in the Army camps of the country today. But there are always the questions, how many more are needed, how much are the receivers used, and what types of sets are in widest use?

Some indication as to what the answers to the questions might be, is seen in a big survey made by the Research Branch of the Army's Special Service Division. The investigation was made among 3,286 soldiers in the ground forces of 15 different camps scattered throughout the U. S. Actually the emphasis of the survey was on the matter of program type preferences, but the results of it do contain some tips for radio business men.

Survey Tells Story

For instance, it was found that today, only one out of six soldiers owns a radio, and that one-third of the privately owned receivers are battery-operated jobs.

Among the radio owners, the tabulations reveal that 80 per cent listen on a typical day, while about half of the non-radio-owners tune in. Most of the listening is done in the barracks. In the morning, 96 per cent of the listening hours are in the barracks, at midday 88 per cent, and in the evening 79 per cent.

Not Enough Sets

One of the points of most interest to radio men is that 40 per cent of the men reported that there were certain programs they would like to hear, but could not hear conveniently. The most popular reason given for this was, "no radios convenient for me."

In the complete tabulation made on this score, some of the men gave more than one reason for not being able to get the programs they wanted. Forty-three per cent said that no radio was convenient; 41 per cent said that programs came at the wrong hour; 29 per cent reported trouble in getting the stations which carry the programs; and 4 per cent gave miscellaneous reasons.

Dance Music Leads

The preferred types of programs among the soldiers are, in order: dance music, news, comedy, sports programs, variety, swing music, radio plays, old familiar music, and quiz programs. The shows which are liked least in the camps are serial dramas, classical music, hillbilly and western music.

(These preferences may also be taken as a guide as to what types of records the soldiers might prefer, and are therefore of special interest to dealers who are helping to get the right recordings to our fighting men.)

What Soldiers Want

Dance music
News reports
Comedy shows
Sports programs
Variety shows
Swing music

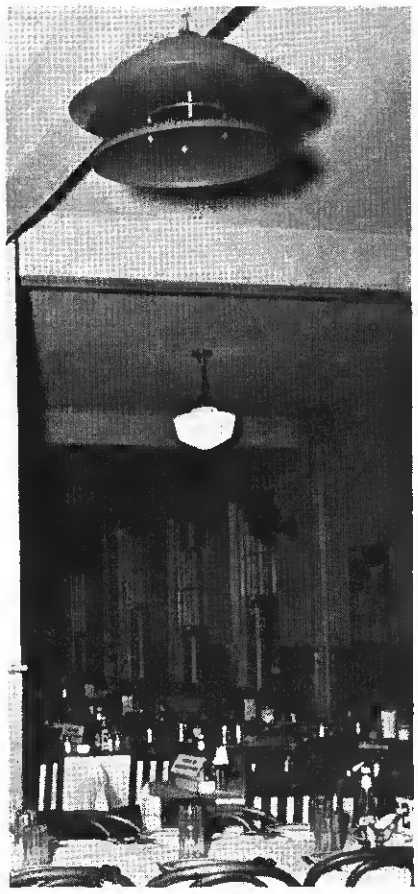
KEEP YOUR EYE ON THIS PAGE

In the next issue, the Wilcox-Gay Corporation will make an important announcement of special interest to all radio dealers.

★

WATCH FOR IT!

SOUND trains Naval Cadets



Above, the mess hall at the Florida station with a "Chandelier" speaker on guard. Below, another speaker is ready for an alert in the cadets' quarters, and at the right, a "Marine Midget" unit is shown in the recreation room.

● Sound equipment has been enlisted for many duties in this war, and one of the most practical applications is the use of public address apparatus in the various camps, reservations, and stations of the armed forces. Military instructors have "mechanized" the bugle call to save precious minutes in the training of our fighting men.

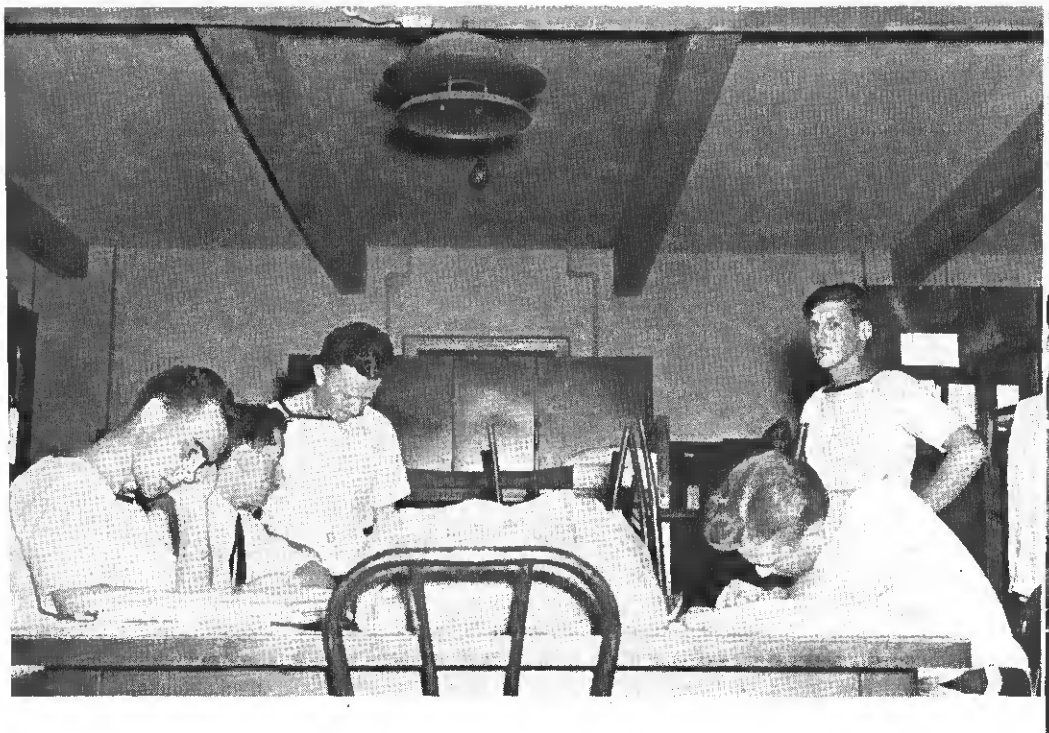
Public address systems have also been recognized as a valuable adjunct in the issuance of instructions, for the assembling of men, for parades and reviews, and for entertainment during rest periods. The experienced sound man should have no difficulty selling these jobs which carry high priority ratings.

A typical example of a well-planned installation is the one sold by the Universal Radio Supply Co. of Louisville, Ky., to the U. S. Naval Air Station at Pensacola, Fla. This sound system was purchased for the various buildings comprising the Aviation Cadet Regiment.

The various cadet barracks are grouped, for administrative purposes, into battalions. One barrack serves as the headquarters for its battalion. A microphone and pre-amplifier are located in each of these headquarters barracks. Each barrack has identical sound equipment with 25 watt booster amplifiers followed by 80 watt power amplifiers.

Forty Atlas Sound M-360IIL "Chandelier" Baffles equipped with 8", 12-watt speakers are located in the cadet's quarters, mess halls, recreation rooms, corridors, and other locations. The smaller rooms use WX-5SP "Marine Midget" 5-watt speakers.

The purpose of the system is for general passing the word as to the uniform of the day, and miscellaneous instructions. A master control position in the Cadet Regimental Office is under construction which will make it possible for the Cadet Regiment Officer-of-the-Day to talk simultaneously to all or any of the battalions.



Centralab
MIDGET RADIOHMS

Servicemen recognize the "plus-performance" that these sturdy controls give on every replacement job... Old Man Centralab's good advice to "ALWAYS SPECIFY CENTRALAB" was never more timely than now . . . when it is so important to keep the "radio ears" of the nation properly tuned to the events of these critical moments in our history . . . For smooth, silent, sure attenuation . . . specify CENTRALAB MIDGET RADIOHMS.

CENTRALAB: DIV. OF GLOBE-UNION INC.
MILWAUKEE, WISCONSIN, U. S. A.

Victory Sales Tips

Canadian Ideas for Wartime Business

The experiences of Canadian retailers in wartime, whose efforts to stay in business have been thoughtful and well organized, will give some valuable pointers to U. S. radio dealers. Here are a number of suggestions made to its members by the Ontario Retail Hardware Association, Toronto, Canada. The following list includes only those ideas which are most applicable to U. S. radio.

1. Conserve items that cannot be readily replaced. Build up sales of lines that can be replaced more easily.

2. Consider carefully any substitute lines that you can handle and sell at a profit.

Circulate Ideas

3. Give manufacturers any ideas you may have for substitute lines that you consider could be sold profitably through your trade.

4. Check into possibilities of handling "agency" lines that you can sell profitably to your customers without carrying "in" stock.

5. With new merchandise in many lines not now available, check carefully into the possibilities of opening up a re-sale goods department to include buying and selling of articles that have come into disuse or for other reasons are no longer required by your customers.

Cooperate with Others

6. Consider repair services in your customers' homes if you can do them profitably.

7. Watch for dormant stocks (white elephants) within your own store that someone else could sell or use to advantage. Handle dormant stocks that you may hear about and could sell to advantage.

8. Start a rental service for your customers of articles that they are not desirous of purchasing because their use is only needed occasionally.

9. Many stores in Canada are securing pleasing results from the collection and sale of salvage.

10. Cut down your overhead to the lowest possible minimum, without, of course, affecting your efficiency.

11. Reduce credit sales to absolute minimum, not only to avoid loss, but to save clerical time and paper.

12. Get together with the merchants of your district in an attempt to shorten store hours to save wear and tear, cut down lighting costs, reduce sales help, etc.

13. Learn all you can about wartime wrapping.

14. Sublet space within your store or any excess warehouse space if you find you are occupying too much room for your present requirements.

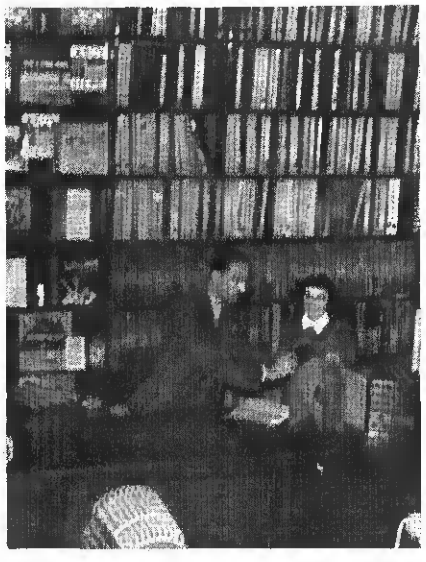
15. As the demand for labor increases it is patriotic to look out now for probable replacements in your staff, with (a) Older male help; (b) Female help.

16. Discontinue giving away merchandise for prizes, donations, etc.

17. Do not run the risk of "markdowns" by faulty storage, cutting and handling.

18. Read your trade papers more intensively.

Dealer Likes Albums



Storage albums for records are one of those good selling lines which are still available. Here the salespeople at the store of Mortimer H. Fogel, prominent New York City dealer, inspect new album designs of Peerless Album Co., Inc. Note twin displays at ends of counter section.

Classified Ads Are Good Feeders

By means of a small classified advertisement, "For Sale, Used Radios," a radio dealer in central Kansas brings in a constant string of prospective owners. This radio man has noted a business increase of as much as 25 per cent, together with prospects found by the service department.

The dealer can readily recognize customers brought in by the ad, as their opener is usually, "Where are those radios I read about in the paper?"

Because their names on his alphabetical prospect list, filed on blank recipe cards, are highly important to this dealer, he makes it a point to get name and address at the first possible moment in the interview. Ninety per cent of prospects have trade-ins, and this gives opportunity for the name and address, for the appraisal trip. Meantime, on the back of this card, is placed in code the credit rating. Should the prospect have occasion to see the face of his card, there is nothing to conceal, and thus the plan avoids embarrassment.

Tightened Methods

In cases where the credit rating is unsatisfactory, his men either do not follow through on the call to see the trade-in, or they make such a small offer that the prospect decides to deal elsewhere or wait until later.

This dealer's rule of no radios on approval over three days protects him from the World Series chiselers. After the third day, they either buy, or listen at a neighbor's!

Fifty per cent of the prospects brought in by the little classified ad are traded up to a new, rather than a used model. Salesmen find that the world is full of people who, not wanting a cheap used radio at all, nevertheless are caught by that popular fallacy of "something for nothing." Once in, the new models, with their improved performance, and the salesmen's demonstrations, quite overshadow the fact that they *thought* they came in for a cheap used model.

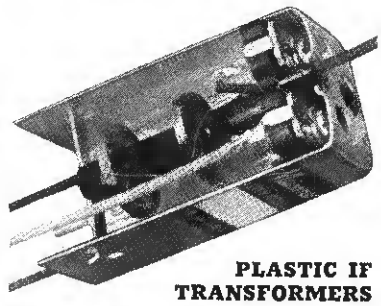
ARE *Coils* YOUR PROBLEM?

For *many years* Meissner Coils have been the accepted standard by engineers who insist upon high quality performance . . . Meissner precision coil construction never varies . . . they are the best that engineering research and modern production methods can make.

When you specify a Meissner Coil you have the assurance of long, trouble-free operating life backed by a name that is synonymous with precision-built products.

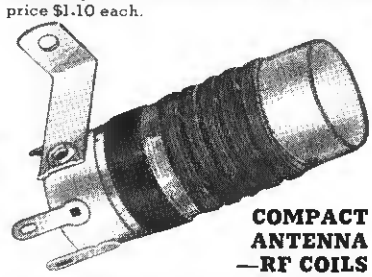
Coils illustrated and described represent only a few of the complete Meissner Coil line.

See your nearest Meissner distributor today.



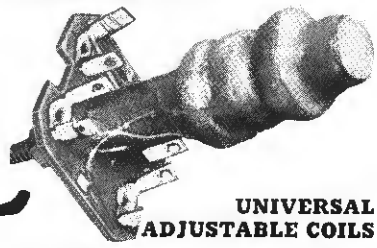
PLASTIC IF TRANSFORMERS

The most popular replacement types. Compact in size, 1¼" square, 2½" high. Available in all frequencies from 175 kc. to 456 kc. List price $1.10 each.



COMPACT ANTENNA —RF COILS

Ideal units for replacement in compact midget or auto Radio sets. Coils wound on form ⅝" in diameter, 1¾" long. List price, either type, Antenna or RF, 50c each.



UNIVERSAL ADJUSTABLE COILS

Adjustable—Inductance Ferrocart (Iron Core) coils will replace the broadcast band coils in practically any receiver. 3 types available, Antenna, RF, Oscillator. List price $1.38.

Meissner

MT. CARMEL, ILLINOIS

"PRECISION-BUILT PRODUCTS"

Wartime Parts Inventories

• Among the problems of wartime radio shortages, the matter of replacement tubes has recently loomed the biggest.

As reported by the National Electronic Distributors Association, the situation was that replacement tubes were not available, and no material being allocated for them. NEDA says that "The Civilian Radio Section of WPB understands the need of tubes to keep domestic receivers operating. But after the Radio Section lays out a production schedule they

In the Scrap!

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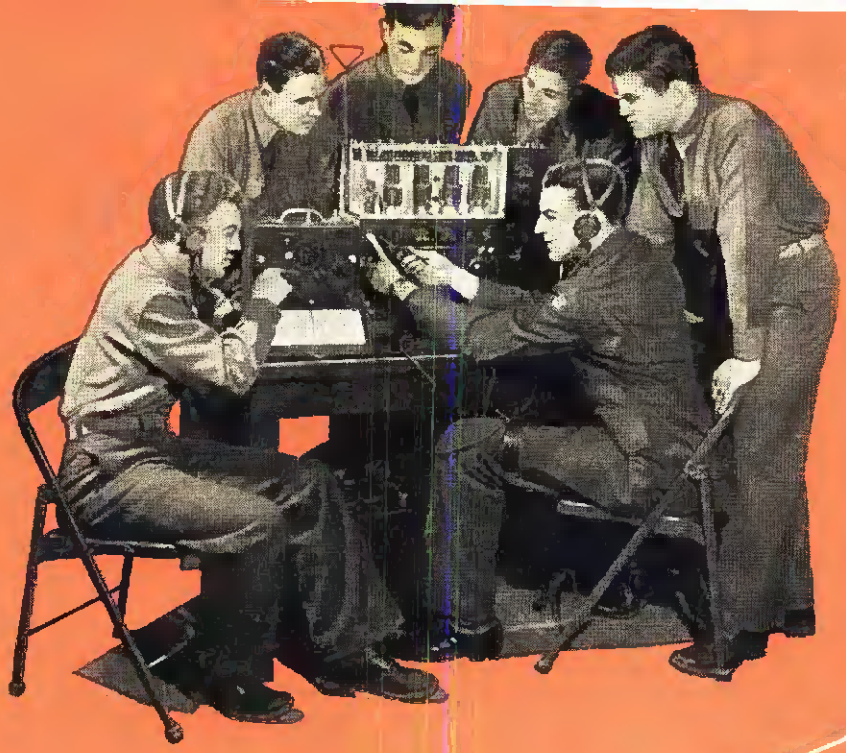
was outlined late last month by WPB, to help radio dealers and distributors secure civilian radio replacement components. It is said that applications made on these forms will be assigned ratings sufficiently high for the necessary maintenance of sets in public use. WPB issued this explanation of the procedure, given by Linford C. White, chief of the WPB Distributors' Branch:

"Priority assistance in the purchase of repair-shop material for the maintenance of home radios may be applied for on form PD-1X by distributors and dealers who buy directly from manufacturers.

"The procedure does not impose any requirements upon the consumer or the repair-shop operator, but by making it easier for the large distributor to obtain parts it maintains established links between producer and



Here is an outstanding opportunity for radio and communications men to do their part, and at the same time get the finest possible training in one of the brightest after-the-war industries.

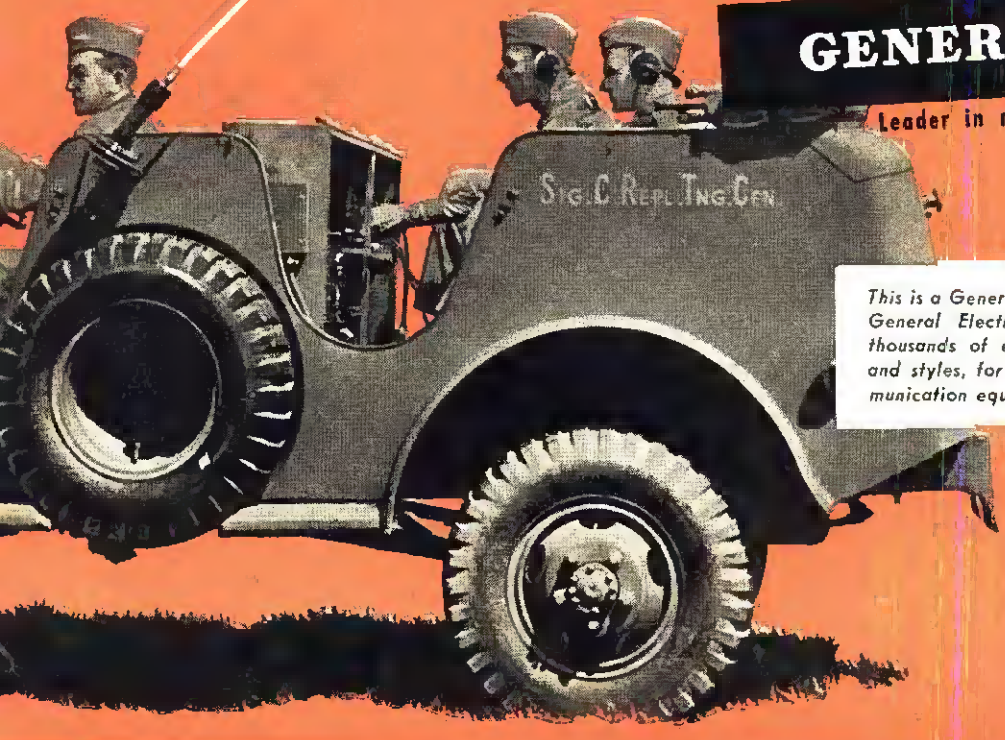
The electronics field is still in its infancy. Ten years ago there were comparatively few electronic devices. Today there are more than a thousand kinds of electronic devices at work in factory, hospital, office, cotton mill, steel mill, the home and on the fighting front!

General Electric is a leader in electronic research. We are definitely interested in having available, when victory comes, trained men for the sales and service of future electronic devices. This is a highly specialized field, and good men will be in demand.

If you are now an expert in radio, or are ambitious and willing to learn at good pay, General Electric urges you to consider the Signal Corps now. The Signal Corps is also sponsoring courses in the fundamental theories of radio and electronics in many colleges and universities.... Get in on the ground floor today!

* * *

For further information regarding enlistment, call at the nearest Army Recruiting and Induction Station. Or write to "The Commanding General" of the Service Command nearest you. For Civilian Training information, call at any office of the U. S. Civil Service or U. S. Employment Bureau.



GENERAL ELECTRIC

Leader in radio, television, and electronic research

This is a General Electric electronic radio tube. General Electric is building thousands and thousands of electronic tubes, of many sizes and styles, for use in Uncle Sam's radio communication equipment and electronic weapons.

Wartime Parts Inventories

• Among the problems of wartime radio shortages, the matter of replacement tubes has recently loomed the biggest.

As reported by the National Electronic Distributors Association, the situation was that replacement tubes were not available, and no material being allocated for them. NEDA says that "The Civilian Radio Section of WPB understands the need of tubes to keep domestic receivers operating. But after the Radio Section lays out a production schedule they still have to get the material from the Scarce Materials Sections—mica from the mica section, nickel from the nickel section, etc. If this material is not forthcoming, the plans of the Radio Section are worthless."

And as we went to press, NEDA was aggressively taking a "national tube inventory" so that the facts of the situation could be laid before WPB in concrete form. Distributors were being urged to cooperate with NEDA in this, one of the greatest emergencies to occur in the industry.

Fill Rated Orders

In regard to stocks of other parts, and the means for replacing them on jobbers' shelves by use of the form PD-1X, NEDA investigated the Signal Corps and Airport priorities situation at Washington, and issued the following bulletin: "The first important provision of Priority Regulation No. 1 is that all rated orders, civilian as well as war, must be accepted. This applies even if such acceptance will make it impossible to fill, or will postpone, deliveries under previously accepted orders having a lower rating or no rating at all.

"In other words, if you have merchandise on the shelf, you must accept the order at the priority offered. However, WPB Radio Section suggested that in such cases, if the distributor would make out a PD-1X to cover the merchandise taken, and explain the circumstances in detail, WPB would give the distributor a *priority high enough to get the merchandise back.* Incidently it was stated that orders had gone out that *only* an amount of *material needed immediately* could be taken on spot pick-ups.

The general usefulness of PD-1X was outlined late last month by WPB, to help radio dealers and distributors secure civilian radio replacement components. It is said that applications made on these forms will be assigned ratings sufficiently high for the necessary maintenance of sets in public use. WPB issued this explanation of the procedure, given by Linford C. White, chief of the WPB Distributors' Branch:

"Priority assistance in the purchase of repair-shop material for the maintenance of home radios may be applied for on form PD-1X by distributors and dealers who buy directly from manufacturers.

"The procedure does not impose any requirements upon the consumer or the repair-shop operator, but by making it easier for the large distributor to obtain parts it maintains established links between producer and home set owner.

Preference ratings will be assigned by the Distributors' Branch only to items necessary to the functioning of receiving sets. No fancy, non-essential radio gadgets and no phonograph parts will be rated on form PD-1X, nor will repair parts for Army, Navy and other government-owned radios. Assistance in acquiring the latter is available through other established procedures."

In the Scrap!

The idea of requesting servicemen to turn in a defective radio part in exchange for every new part purchased from their parts distributor, has been initiated by George Barbey, Reading, Pa., jobber and head of NEDA. Many hundred pounds of scrap metal have already been turned back into proper channels in this way.

Chicago Dealer Shows a Victory Window

There's plenty of up-to-the-minute wartime appeal in this display by Avon Radio, one of Chicago's prominent sales-and-service outlets.

H. L. M. Capron
Merchandising Editor

CAP SAYS:—

● "It can't be done—if you think it's impossible."

● Many radio dealers and servicemen, like the Arabs, "are folding their tents, and stealing away." Why?

● Because they can't keep their business going? Or because they think they can't?

● You're half licked when you think you are.

● What are you *doing* to hold sales, save expense, maintain profits? Are you out after business, or just waiting and hoping for business to *come* to you?

● Gas and tires are precious—have you tried a motor-scooter, a bicycle, roller skates, or plain shoe leather—to get and do service work in the field? Or do you wait for your customers to use *their* gas and tires to bring *your* business to you?

● Have you thought about the many "substitute" lines and services appropriate in your community to supplement your waning radio sales? Or are you waiting for something to happen?

● Check up on yourself and what you are doing, again.

● The going may be tough, but you're not licked—until you think you are.

ELECTRONIC FUTURE FOR RADIO MEN

(*Continued from page* 19)

as systematic a manner as possible. It also permits the skipper to concentrate upon watching for strikes.

Automatic steering requires a compass for indicating the craft's heading, a device for indicating and measuring the changes of heading shown by the compass, and a motor, operating in response to these measurements, to return the craft to the desired heading.

But the magnetic compass is small, cheap and reliable, and aided by photo-cells can be useful for automatic steering.

PE Cell Doesn't Load Compass

A beam of light, reflected, from the compass card, gives an indication of the change of heading of the craft without hindering the compass. Photo-electric cells thus service to follow exactly the movements of the light beam.

The photo-electric eyes watch the compass continually by means of a beam of light reflected by a mirror mounted on the compass card. When the eyes indicate that the ship has deviated from the set course, they pass small currents which are amplified by radio tubes and finally apply helm so as to bring the yacht back to her course.

Robot Action

The robot also moves its eyes so that they follow exactly the movements of the compass card. This movement then indicates the extent of the yaw from the set course. The amount of helm applied is proportional to this movement. When the boat stops yawing from her course, the robot stops applying helm. If the amount of helm has not been sufficient, the yaw continues and the robot again applies helm. If the amount of helm is sufficient and the craft starts back toward the set course, the robot removes helm in such a way that the rudder is amidships when the set course is reached. The robot therefore can measure the extent of a yaw and apply an amount of rudder proportional to this yaw.

In Tall Buildings

Earlier in this article, mention was made that electric eyes can level elevators. In Radio City, electric eyes are being used to adjust the cables of the highest-lift elevators in the world, those that run to the 65th floor. So long are these steel cables that when a 175 pounder enters the car at the ground level, the steel cable stretches enough to drop the car nearly one-eighth inch. There is no way to prevent such lengthening in the long cable, except to "inch up" the car itself. This an electric eye does, by starting the motor momentarily, so that, as each new passenger steps onto the car, depressing it, the electric eye under the floor, sees the lowered level, and inches up the motor, lifting the car floor until it is again even with the floor level.

Lightning Photos

Another electronic application in a tall building near Radio City on Fifth Avenue is used for the novel purpose of taking pictures of lightning striking the Empire State Tower. When rising electrical potentials indicate that a stroke is imminent an automatic electronic detector on the Empire State Tower sends a signal and automatically readies the camera, just before the stroke occurs. This is tipped off by the state of electrical stress which occurs just before the lightning flash. In this way, the camera shutter is opened just before the imminent flash, and so does not have to be left open for long periods which might fog the negative.

Each summer season since 1935 pictures of lightning strokes have been made of the Empire State Building—a fine fixed target for lightning because its structural steel frame carries strokes harmlessly into the ground. On the thirty-ninth floor of 500 Fifth Ave., are three intricate cameras pointed at the tower to make pictures, correlated with oscillograph readings made on the building itself.

The Empire State Building was struck six times during the past Summer. Two of them were of a more or less freak variety—single strokes when there was no general thunderstorm. One occurred at high noon.

Wartime Servicing

Suggestions for making changes and substitutions while replacement parts are cut by war shortages

• Wartime necessities have left no branch of civil life or industry untouched. The radio serviceman like many in other professions is feeling the pinch of material shortages. The radioman may even have a greater difficulty due to the tremendous demands placed upon the radio industry to produce the vital communication and other radio apparatus needed to win the war. None of us will complain of these reasons for fewer parts for civilian radios. The answer to the problem is make fewer parts do more jobs, conserve and reclaim parts from old sets, and see that parts which are beyond reclaiming find their way back into the nation's scrap pile.

Shortages are being experienced to a more or less degree in almost every type of part; tubes, condensers, transformers, variable potentiometers, etc. Solder, copper wire, tools, tires, gasoline, and about everything else must be used for profitable jobs only. Test equipment is even more rare than the proverbial hen's teeth. Treat it with all the care you would give a millionaire uncle!

Tube Problems

Tubes in the popular types, especially the fast moving AC/DC types that suffer from line voltage surges and pilot light failures, are becoming increasingly more difficult to obtain. About the only answer here is substitution of other types. In many cases this will not be practical due to the extensive changes in circuits. Loctal tubes can in some cases replace less available types *if* loctal sockets are available. The reverse substitution is also to be kept in mind. In most cases it will be necessary to use a tube which is as nearly as possible electrically interchangeable.

If it is necessary to substitute a similar type of tube for one that is not available, be sure to pick one which has the same filament current rating as the one it replaces if the circuit is of the series filament type. The voltage rating need not be the same unless the sum of all tube filament voltages is more than the line voltage. If the filament voltage of the new tube is less than the old one, a series resistor will be required, of course, to make up the difference.

In most cases, the only other changes will be an adjustment of the bias voltage and possibly the screen voltage. In some of the converter circuits, the socket connections may require shifting to take a different tube. In some cases it may also be necessary to change the circuit slightly, for example from a Hartley to a plate tickler-feedback oscillator. The older type of tubes using the top cap may answer the problem of those single ended tubes not available. The glass, metal, GT interchangeability is always a help. See chart in January 1942 Radio Retailing Today.

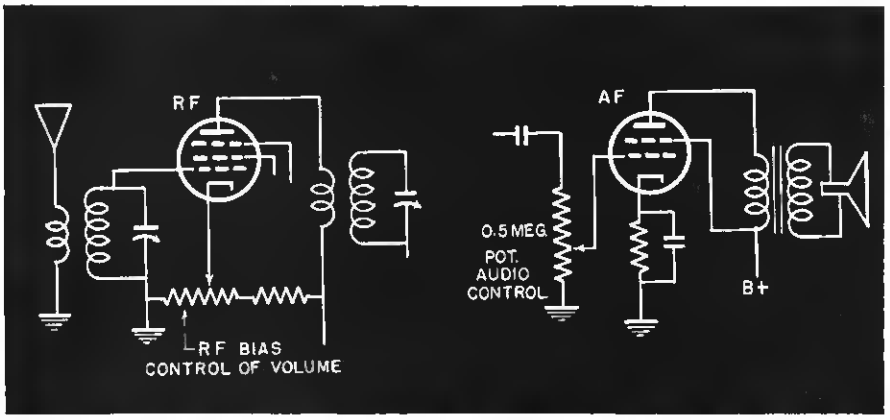
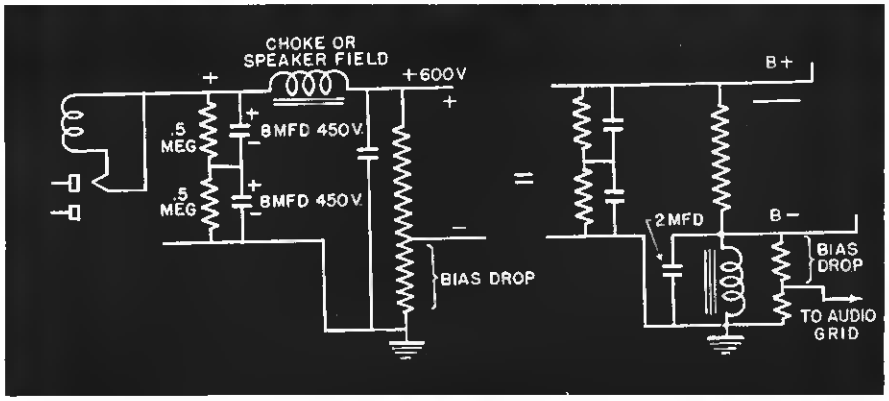


Fig. 1—Wire wound bias control potentiometers can be eliminated by substituting audio volume control in grid circuit of audio tube. Replace bias potentiometer by fixed resistance to give recommended bias.

Resistor Methods

Many minor circuit changes can be made to get around a shortage of some special part. Wire wound power resistors and potentiometer controls are on the scarce list. In sets where these units are faulty, always try to repair the part if reasonably possible. Wire wound potentiometers where broken at one point can sometimes be easily fixed by removing the strip from the case and reversing it so that the contact arm no longer runs along the worn surface. The broken part of the winding can then be repaired by joining the ends by twisting them together. This will probably require removing one turn to give the necessary wire. In the semi-variable and tapped power resistors, it is usually impossible to repair by removing a turn at the break With the semi-variable type trace out the break with an ohmmeter by sliding one probe along the bare contact surface until the exact spot of the break is determined. This break can then be bridged by sliding two contact bands so as to straddle the break and joining them with a jumper. This method is alright if the bands do not short out more than 5 to 10 per cent of the total resistance.

Fig. 2—Power supplies with output voltages above 450 volts can use electrolytics if connected in series and protected with voltage dividing resistors. Speaker field or choke can be used in place of a section of bleeder as shown at right.



If it is not possible to make a simple repair on the wire wound control, it may be possible to change the circuit and use a less critical composition potentiometer. Most of the wire wound type controls are used as bias controls on one of the RF or IF tubes. This method of volume control can be replaced by connecting a composition type potentiometer in the grid circuit of an audio stage as shown in Fig. 1. The wire wound control can be replaced with a fixed resistance that will put the required minimum bias on the tube. This is most easily done by putting a series resistance of a few hundred ohms in the cathode lead of the RF or IF tube. The correct value is given in most tube manuals.

Circuit Changes

In the multi-tapped type of resistor the burn-out usually comes in just one of the sections. If this section is a small part of the total resistance, it may be possible to short across it and leave it out of the circuit, making corrections in set voltages with low wattage series resistors. For example, the tap supplying the current for screen grids may become useless due to a break in the bleeder on either side of the tap. If the section which is open is only a few per cent of the total bleeder resistance, it can be shorted out and the screen current taken from a proper positive point and a series dropping resistor used if the voltage is too large. Be sure to bypass this resistor carefully since it may be a common impedance for several tubes.

Power Supply Repairs

In power supplies, the problems are transformers, filter condensers, and chokes and the previously mentioned bleeders. Some of the old time sets which are showing up in the service lineup need new filter capacitors of the paper type no longer obtainable. Since many of these old sets use 250, and 210 audio tubes with 500 to 750 volts, electrolytics are not suitable if used singly. Two or more may be used in series of course to handle the voltage. Be sure to use the voltage equalizing resistors across each condenser as shown in Fig. 2.

Another possible solution to the bleeder burnout question can sometimes be handled as shown in Fig. 2. If the section of the bleeder between ground and B- should fail, it is often possible to put the filter choke or speaker field in place of this resistor section. The resistance of the coil should be approximately the same as the bias section of the bleeder. If the drop across the choke or field is too great, a voltage divider made up of two ½-watt resistors may be shunted across the coil so that the grid return will pick up the proper bias. For example, if the voltage drop across the coil were 60 volts and 50 volts bias was needed, a 10,000 ohm and a 50,000 ohm resistor in series across the coil would give 50 volts across the 50,000 ohm resistor which should be the one between the B- and the grid return lead of course. The speaker field should be well by-passed if there is any hum in the output of the set.

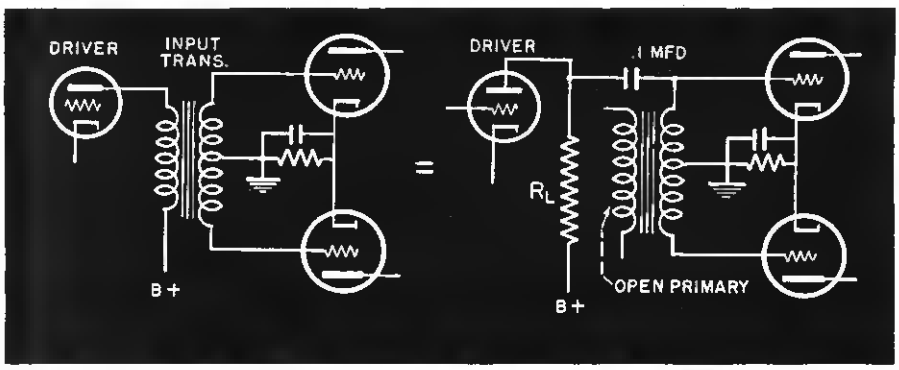


Fig. 3—Open audio transformers can be shunted by load resistance in primary circuit and capacity coupling used between driver and secondary. Can be used for either single ended or push-pull stages.

Bridge Circuits

If the secondary of the power transformer burns out on one side of the center tap, it may be possible to use the remaining good half with a bridge rectifier circuit using two tubes such as 25Y6, 50Y6 or similar types with separate cathodes and plates for each section. If the transformer has been damaged by a short circuit, it is not safe to re-use it without repairing damaged insulation and removing the damaged windings.

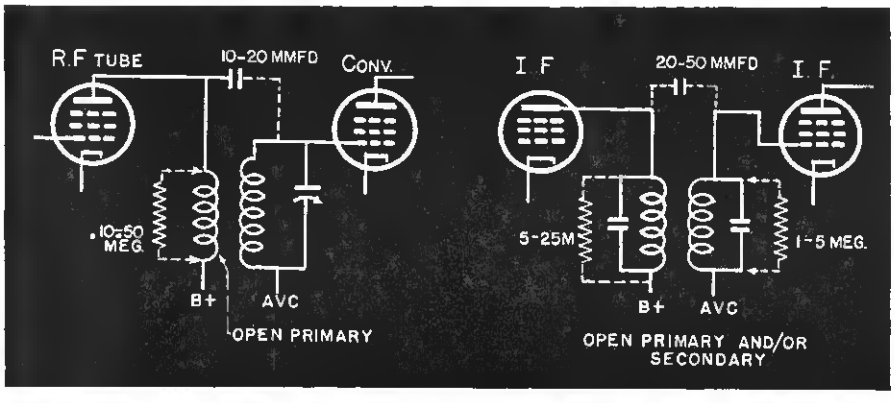
An open filament winding will probably mean a separate filament transformer although there are some possibilities in using the rectifier winding as the filament supply and using a high voltage filament rectifier tube with a dropping resistor directly across the line. The 5-volt rectifier winding will run the 6.3 volt tubes a little low but usually will not impair operation to a serious degree.

In audio amplifier circuits, the substitution for unavailable transformers can be made quite easily. Since the primary is usually the winding which opens up, it is a simple matter to put a resistance load in the plate circuit of the driver and connect the audio signal to the secondary through a coupling condenser. This is shown in Fig. 3 and the method is OK for either push-pull input or single ended stages. The size of the load resistor will depend upon the tube and the available supply voltage. Tube manuals will give appropriate values. The coupling condenser will have a pronounced effect on the frequency response of the circuit. It will resonate with the secondary at some frequency and the gain will be highest there. If the capacity is made large it will cause the lows to be boosted. The gain will be reduced since no step-up is realized.

In RF and IF circuits, the special coils are usually the headache. For last resort repairs, try those shown in Fig. 4. They will reduce the gain and selectivity, but they will put the set back in operation.

In all cases of re-vamping and substitution for parts not obtainable, it is essential that the solution be simple enough to permit a profit to be made. Rewiring the set, etc., are out since the charge that would have to be made is out of proportion with the value of the set in most cases. Customers these days realize that they must put up with certain inconveniences. Do inform them of any major change you must make in order to get the set back into operation and get their approval of changes that run into more expense than previously estimated.

Fig. 4—RF and IF coils that cannot be replaced by substitute types can be put back into service through resistance-capacity coupling. Always use replacement coils when available to insure maximum gain and selectivity.



Alignment and Service Notes—RCA 15X, 36X

The circuit of the second production of this compact model is shown in the accompanying diagram. This super uses a separate oscillator tube and a 12SG7 mixer with a conversion gain of 100. The oscillator signal is introduced into the cathode circuit of the mixer. The signal is by-passed around the 3300 ohm bias resistor in the cathode of the 12SG7.

Notice that the RF bypass capacitor for the diode load is part of the trimmer of the second IF transformer. The cathode of the 35L6GT is biased by a 120 ohm resistor which is not bypassed. This gives some degeneration and improves response.

The IF transformers are aligned at 455 kc. The signal should be connected to the IF grid (12SK7) through a 0.01 mfd. capacitor and the set dial tuned to a quiet point about 1600 kc. Adjust the last IF transformer for peak output. Feed the signal to the mixer grid (12SG7) and adjust the first output transformer for peak output.

To align the RF end of the set, connect the signal generator to the antenna terminal of the set through a 200 mmfd. capacitor and tune the set and generator to 1500 kc. Adjust the antenna trimmer and oscillator trimmer for peak output. Repeat RF alignment for maximum performance.

Voltages and typical stage gain values are given on diagram.

Juke-Box Business Boon to Servicemen in Wartime

Business in restaurants, taverns and ice-cream parlors is booming—because of war activity, and also because in each of these establishments there has been placed a device known familiarly to all Americans as a "juke box" or automatic phonograph. Now the radio-amplifier portion of this instrument and the mechanism itself frequently needs servicing.

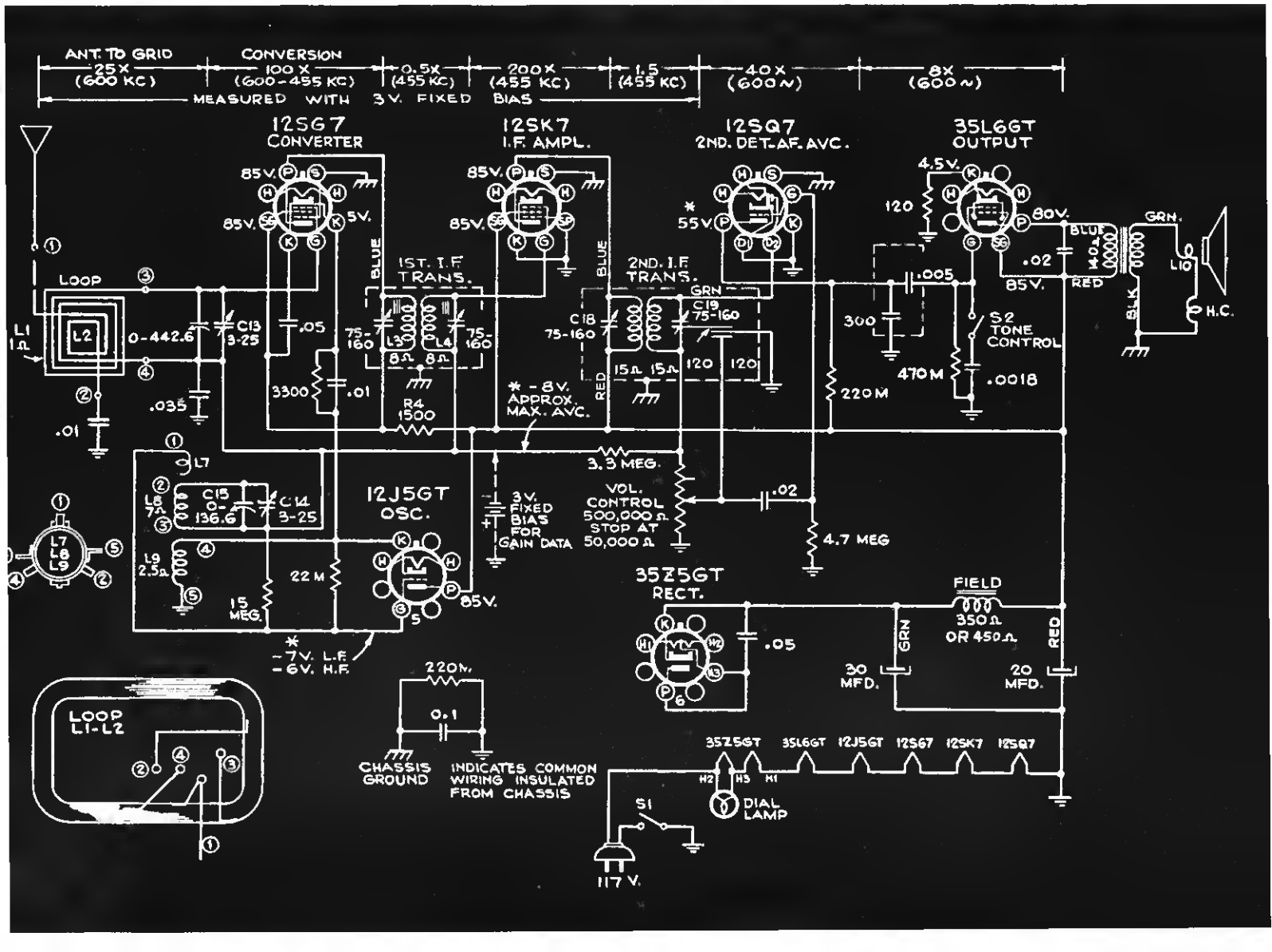
Radio servicemen in Ogdensburgh, Plattsburgh, Sacketts Harbor and Messena, N. Y., report that soldiers from nearby training camps and defense workers are giving these juke boxes constant use. As a result the serviceman must replace tubes and other worn-out components on an average of once every two weeks, to keep All America happy via music—a great morale builder.

Radio servicemen find that operators of these "music-makers" are ready and willing to pay any labor charge up to $2 an hour, because when service is needed—it is needed immediately. Several hours loss of operation means money to the operators, so they are perfectly willing to pay for quick replacement or repair work.

Weekly Inspections

The following plan has been worked out in Northern New York state. The servicemen in the section make a regular weekly inspection of juke boxes in approximately a 30-mile radius, checking tubes and the record changing unit as well as giving it a thorough "going over." This keeps the juke-box in tip-top playing condition. The average juke operator is happy to pay the weekly check-up or juke insurance charge.

Usually a half-day or one day a week is devoted to making the rounds. Many of the operators in small villages depend on this weekly check-up as they have no competent serviceman available. Frequently these visits lead to more revenue since the owners of the restaurants and hotels, etc.



have radios of their own at home and they usually turn over their repair jobs to their "juke" repairman, and often put in a good word to their customers for the serviceman.

Some servicemen will query about the problems of gas and tires for the out-of-town hops. Boards are inclined to consider maintenance and repair of juke boxes an occupation necessary to the keeping up of public morale and hence the servicemen is generally safe on that score.

The usual charge is $1.00 to $1.25 a week and if faults develop, this initial price is used to cover the first hour's labor.

$50 to $60 per Day!

An average town of 300-1000 population has between 2 and 5 jukes and a distance of 30 miles from the city will unearth a dozen such towns. It has been found that a serviceman can check approximately 50 jukes a day —with an income of $50 to $60. Gas, tire, oil and car expenses come to $5 tops. A ten-hour day is worth about $15 to the serviceman at repair shop prices and the juke box check-ups and repairs net him an additional $25 to compensate for the day's activities.

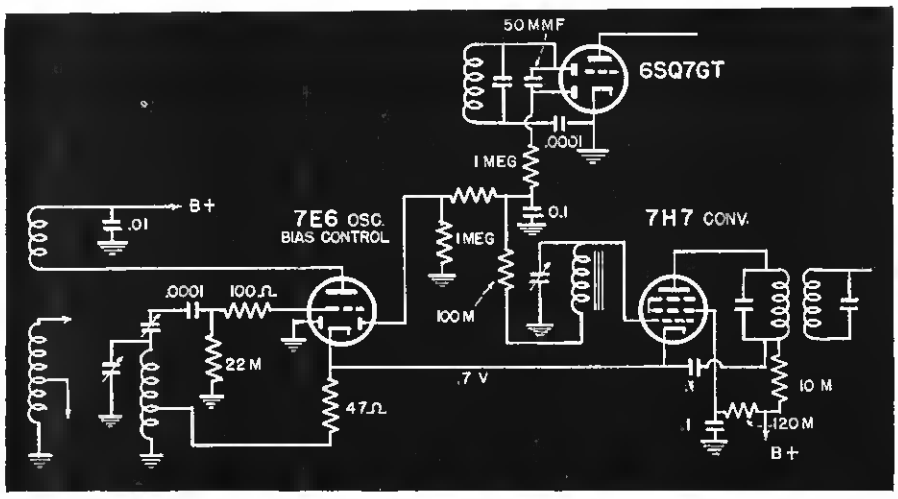
Servicemen are advised to carry as many tubes as possible on their run, as tubes are usually the core of the trouble when the juke box breaks down. Safety fuses also very often go on the fritz. Speaker adjustments to eliminate tinny sounds come next on the list of common defects. Occasionally the record-changing mechanism goes on strike and the serviceman can allow for a fifteen-minute period of alternate cussing and moaning. But all in all "juke box" maintenance is a profitable source of income for the radio serviceman.

Diode Bias Control Used on Silvertones

Automatic control of the bias voltage applied to the RF tubes is provided in some Silvertone models. Model 5502 (chassis 101.687) is shown in accompanying diagram. The oscillator tube in this circuit is a combination triode-diode. One of the diode plates of this tube is connected to the regular AVC bus through a voltage divider formed by two 1 meg. resistors. Thus if any AVC voltage is present, about half will be applied to the diode plate making it more negative with respect to its cathode. The oscillator signal is connected to the 7H7 converter through the lead between its cathode and the oscillator cathode.

Since the cathode of the oscillator is at RF potential with respect to ground, on half the RF cycle the cathode will be more negative than ground and current will flow between the diode plate and cathode if the diode plate is not more negative than the cathode. Thus if no signal is being received, there will be very little AVC voltage and the diode plate in the oscillator tube will practically at zero voltage with respect to ground. Part of the oscillator signal will thus be rectified and furnish a minimum bias for the RF tube through the AVC filter network.

When a signal is being received, the AVC voltage will make the diode plate more negative and less of the oscillator signal will be rectified. The rectified oscillator voltage is thus used to regulate the minimum bias and the rectified signal controls the bias during the reception of signals.



The circuit for the Silvertone diode control described below.

Motorola Wireless Record Player

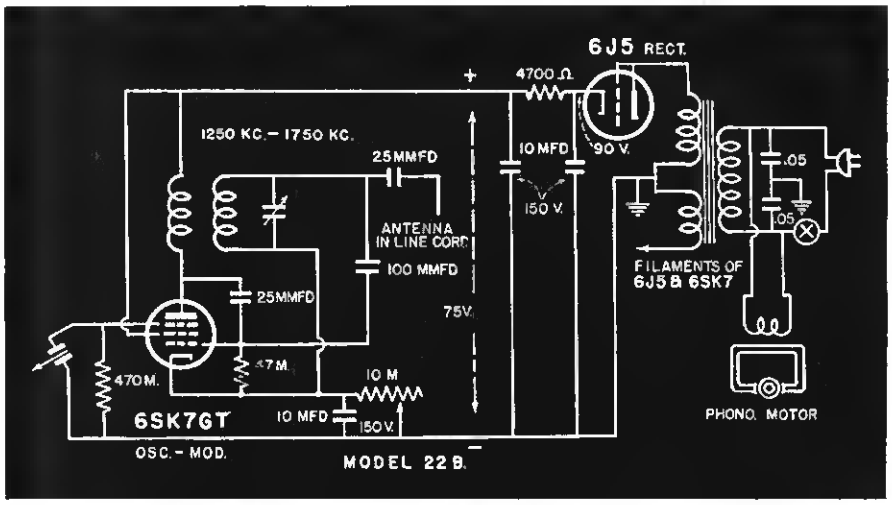
Model 22B wireless record player made by Motorola is shown in the accompanying diagram. The built-in half-wave power supply uses a 6J5 with grid tied to plate as a diode rectifier. The filter system is resistance-capacity. A 6SK7GT is used as a tickler feedback oscillator suppressor grid modulated by the output of the phono-pickup head. The low grid to plate capacity of the pentode is increased by the external 25 mmfd. capacitor to increase the feedback. The volume control is in the cathode lead of the oscillator. The radiating antenna is a separate wire in the line cord coupled through 25 mmfd. to the grid coil.

Tube Engineer to Army Signal Corps

Ralph S. Merkle, commercial engineer, Hygrade Sylvania Corp., Emporium, Pa., has been commissioned First Lieutenant in the Co-ordination Branch of the U. S. Army Signal Corps.

Lieut. Merkle was Technical Editor of Sylvania News, and for a number of years he has been in charge of preparation of technical literature issued by the Sylvania radio tube division. He will now be stationed at Washington, D. C.

Diagram for the Motorola wireless record player, described above.



LETTERS to the Editors

Vital Need to Keep 'Em Working

Editor, Radio Retailing Today:

I have read your last issue with a sense of gratification because of the many firms and contributors who are trying to help the service branch of the industry solve its problems. Innumerable as their problems seem to be, it is apparent that progress is being made.

We, here in this firm, have had before us for some time the question of our status, insofar as our place, in the eyes of our Government, is concerned.

Our question is: To exactly what extent *has* our Government endorsed radio service men's work? Just what is our status as an essential wartime need? Are we considered of enough importance to the public that in the event that we need tires for our service cars or gasoline to keep our cars on the road, *are we going to be able to get them?* All the O.C.D. matter which has come to our hands has stressed the point of keeping the radio in operating condition at all times. These booklets and pamphlets, we understand, are O.K.'d by Government offices. Are we to suppose then that these offices are advising the people that their radio serviceman *will be always at hand* to supply the service of maintaining these sets?

As our company services an area of approximately 13 to 20 miles, it would be almost an impossibility to anticipate the amount of fuel needed to carry out our services in advance. We hesitate to formulate plans for the future handling of radio service, not being able to anticipate the possible category into which our business may fall.

Ray Pentecost, Manager

Metropolitan Radio Service, Chicago, Ill.

Record Situation Needs Working Over

Editor, Radio Retailing Today:

At the present time the record companies could prevent a situation which is definitely hurting the retailers. With the curtailment of phonograph record production it is obvious that the time has arrived when the record companies could create only one outlet for their products, namely, the retail dealers.

For years we have had to see these companies and distributors selling over the counter to the operators, wholesale, while our orders went unfilled until they had the time to wait on our orders which were called in over the 'phone or sent in by mail.

We are now approached on the idea of making a retail purchaser turn in one record or more to get another. This is a fine thing for a retail customer to do who has been using utmost care, in the selection of a library of fine music, whether classical or popular. Operators have for years been able to cut their operating costs down by two to five cents and sometimes more per record due to the fact that they could sell it second-hand. We have had our profits cut drastically because of the fact that we cannot get radios, or radio-phonographs or record players. What have the operators lost? Nothing.

The operator has no need of new equipment and can not get it for it is not being manufactured. He can still find locations for his old equipment which may be stored in his garage or work shop. He can not get "bumped" out of his location and still he does not cut his commission to the location. Why? I should think that the record companies would realize by now with the decrease in operation costs that the phonograph operator would be in a position to pay more for his records and thru the retailer. As is, he can go to the distributor and buy records at our cost and turn in one record to three on the basis which we do. The phonograph operator is the one reaping a harvest. Why should he not turn in one record for one purchased. This would certainly stop the retailing of used records.

In our community, an operator has a big sign spread over his door, offering USED RECORDS for 10c and 15c. Now isn't that a nice thing for retailers? Where did he get those? Why should he not be made to turn in three for one? How is a person who bought a record player out of limited funds and also budgeting themselves to possibly one, two or even a dozen records building up a library, per month, going to turn in one record or more to get a new one?

Shortsighted?

Should this record business go out like others in this emergency only the record companies can be to blame. They all say "why we would be glad to quit selling the operators if the others would." This is the story of each major company. Should this record business be handled exclusively by retailers then they could more accurately plan production for the future. They could really get some outstanding figures.

This is a thought which is being expressed by other dealers, too. You may mention it in your magazine, but not under my signature.

A Retailer

Big Broadcast Season Under Way!

Eddie Cantor presents to Frank Mullen, NBC v.p. and gen'l. mgr., a special recording made by the comedian for NBC's "Fall Parade of Stars," a novel campaign in which NBC stations are participating.

Necessity is a DUTCH UNCLE *Today*

If you're busy many hours a day and worried about how to get the replacement parts you need . . . remember that Mallory is on your "team" and trying to help you in every possible way.

It's going to take real teamwork to get through these tough times . . . with wartime restrictions and materials shortages. Here are three practical suggestions:

1. ***Use Mallory Standardized Parts.*** Mallory has long pioneered in developing universal volume controls, condensers and other interchangeable radio parts . . . adaptable to many makes and models of receivers. Other parts manufacturers have done the same . . . since standardization simplifies repair work and permits minimum inventories.

2. ***Use Ingenuity and Information.*** Today, Necessity is the Dutch Uncle of Invention. You've got to be smart enough to improvise . . . to use substitutes when the exact part you need for a certain job is out of stock. That doesn't mean using inferior merchandise. You can still install Mallory parts or any others made to precision standards. But you *must* "know your stuff". And there's no better way to obtain practical servicing information than to get a copy of the latest "MYE", the Mallory Radio Service Encyclopedia.

3. ***Ask for Expert Technical Help.*** Mallory radio engineers have plenty of practical experience, in laboratory, factory and in the field. They're ready, willing and able to help solve your toughest problems. Just write to our Application Engineering Section, Wholesale Division.

Remember, "come hell or high water", we're here to help you!

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

NOTE—Radio servicemen may now secure from their nearest local O.P.A. Board copy of a restriction manual explaining the application of Maximum Price Regulation #165 which affects all service trades.

PROPOSE TRAINING HIGH-SCHOOL SERVICERS

Many radio men now doing servicing have reason to expect, before long, their entrance into the Armed Forces. In many instances these radio operators have expended years of effort and hundreds of dollars in mastering their profession. Building up a worthwhile community clientele has been a struggle. If they are called to the colors what is to become of their service businesses? And what will the community do without radio service?

In some instances, women operators can be trained. In other cases, wives of servicemen can take over. But other steps may be necessary to take up the slack.

Train High-school Seniors

A group of northern New York servicemen now come forward and propose the following method. Arrange with the local high school this fall to offer an intensive course in radio servicing, open to all high school seniors who have had one year of physics. This course to be offered five nights weekly, two hours each night for a ten-week period, and to be taught by a local radio serviceman who will supplement classroom lecturing with periodic trips to the service shop, where students can actually iron out minor set ailments to their heart's content.

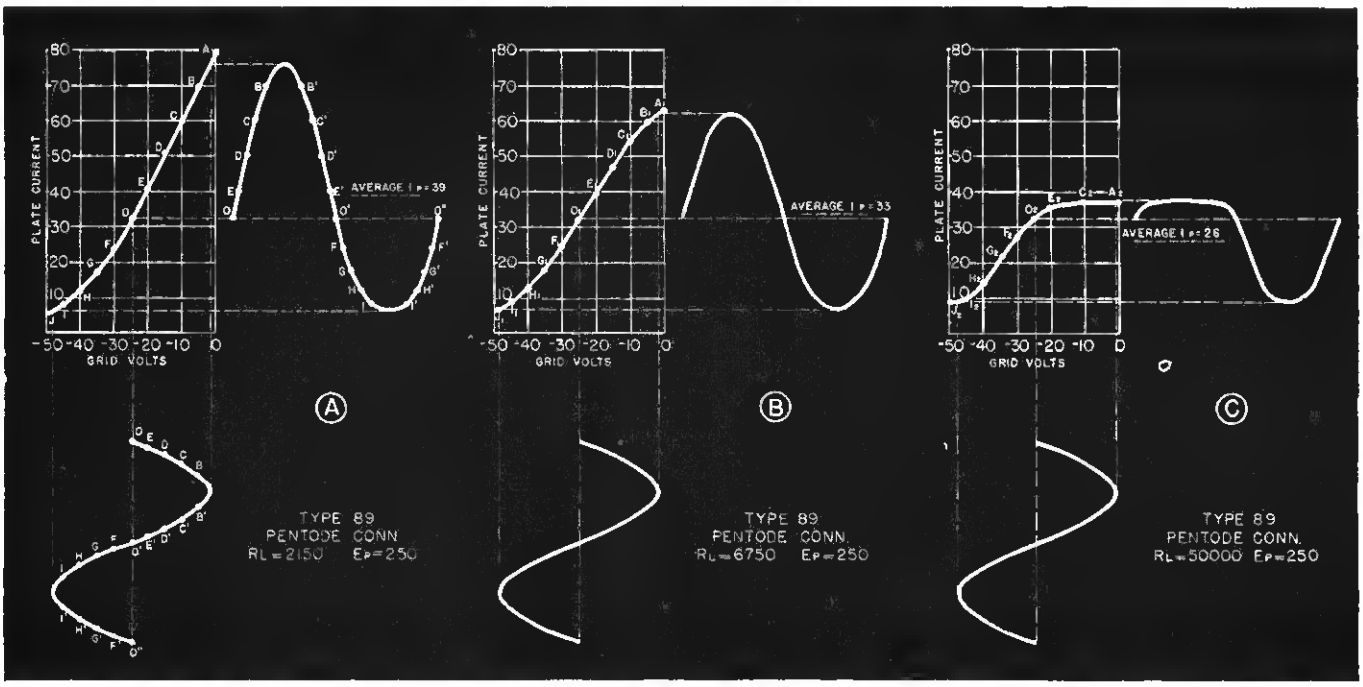
Classes would be small, limited to perhaps a dozen, or preferably as few as six at a time. At the end of the ten-week period, servicemen could select one or two students and make an arrangement whereby they would operate his shop during his absence on an "evenings-only" basis. They would receive a weekly wage, varying with the number of set jobs worked on during each seven-day period. They would not have to be familiar with sales promotion, advertising, etc. as during the war such tactics would not be all-important.

Customers would pay for all repair work by check or postal money order so that periodic check-ups could be made in the event of financial arguments. Students would attend school during the day and work at night, so no educational headaches would be involved.

This procedure would keep the repair shops open as a community service and would give the servicemen some slight revenue—enough possibly to cover rent, shop overhead and cost of service equipment.

Here are some of America's future servicemen, high school students at Watertown, N. Y., starting radio training via extension course from Syracuse University.

Amplifier Distortion with Improper Load Resistance



Output distortion caused by incorrect values of load resistance for 89 pentode. Value in A is too small, B is correct, C is too high. In class A amplifier, average or DC plate current should change only slightly when grid signal is applied. A large change indicates distortion due to incorrect load resistance.

Electronic Device Helps Lumbermen

Steel saws used in sawmills are often ruined by bits of metal or hard substances embedded in the logs or timber being sawed. Near quarries, for instance, stone and iron are often blown into trees and the bark later grows over the wounds, concealing the presence of the foreign material.

If such trees are later sawed for lumber, the saw may be damaged with possible injury to the saw operator. Steel tools and pocket knives have thus been found embedded in the trunks of trees reaching the saw mill.

Coil Tells Story

To prevent such trouble, an electronic device has been developed to detect the presence of any metal in logs, so that such metal objects can be chopped out before sawing begins. The principle used is that of the sensitive "exploring coil" as already applied to locating buried metallic treasure, metal ores, or hidden pipe lines. When the coil is passed over a log, an unbalanced signal is heard in ear phones if the location of a piece of hidden metal is approached.

This is only one of many electronic applications to be found in the lumber industry, where radio tube devices are helping to boost production needed for war. Much of the new equipment is used to insure the safety of workmen, as well as to facilitate the sorting, sawing and storing processes.

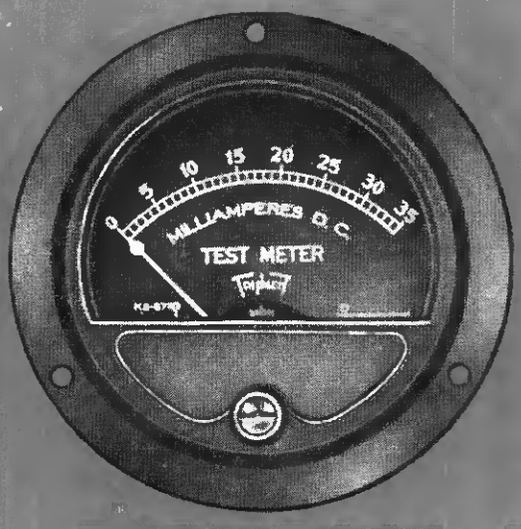
Jobbers Urged to Sell Capacitors to U. S.

Responding to an urgent wartime need, the Aerovox Corp., New Bedford, Mass., which has its mica production capacity already stepped up several dozen-fold over pre-war levels, and now dedicated 100 per cent to war needs, has just sent out a vigorous appeal to jobbers asking them to make existing mica capacitor stock available to Uncle Sam. Special inventory forms have been provided so that jobbers can simply, quickly and explicitly tabulate their available stock and send the information to the Army-Navy Communications Production Expediting Agency, Pentagon Building, Arlington, Va.

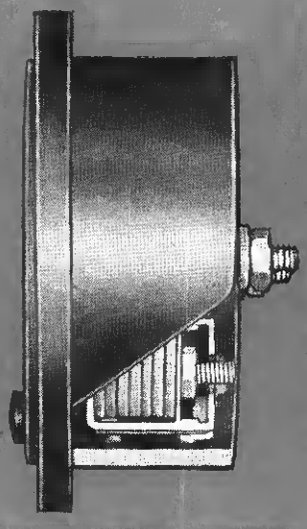
"Forget the usual reasons for holding on to that mica capacitor stock," urges Charley Golenpaul of Aerovox. "This is no time for 'Business as usual.' Don't worry about your status as a jobber, or about staying in business. You'll remain a jobber; you'll stay in business; you'll get more stock in the not distant future when this desperate emergency is over."

When Space is at a Premium

TRIPLETT *Thin Line* INSTRUMENTS

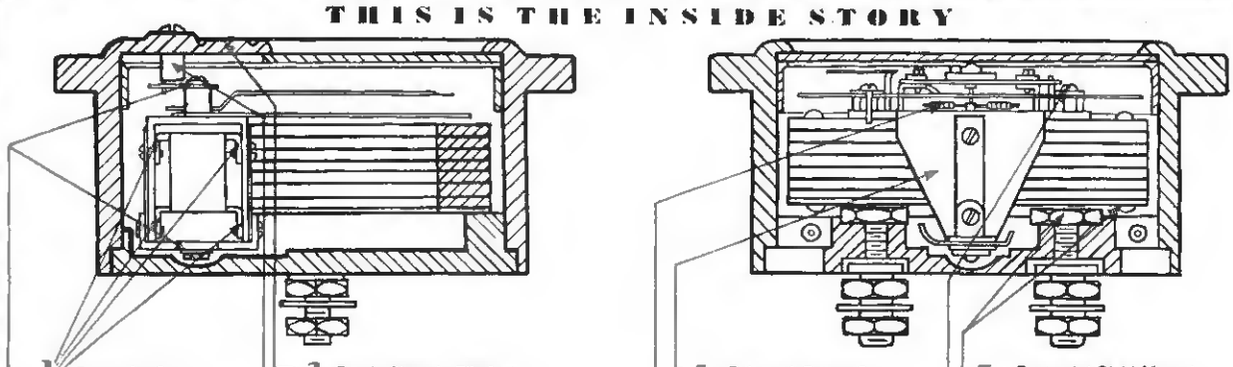


Full size of Instrument. Note deep shroud for glass protection—and "Quick-Look" Scale.



This molded case contains *full size* Triplett Mechanism. Rugged Construction—Compact Convenience.

THIS IS THE INSIDE STORY



1 Four-point Core Support

2 Full Metal Bridges on Top and Bottom

3 Bezel Shroud Eliminates Unwanted Glare

4 One-piece Formed Spring Zero Adjustment

5 Balanced Frame Construction

6 Solid Balance Cross with Screw-type Balance Weights

7 Four-point Rigid Magnet Clamping

8 Separate Dial Mounting Independent of Top Bridge

Thin-Line Instruments also have Standard Large Coil Triplett Movements. Furnished with Osmium pivots for special requirements. All these features make for greater rigidity under vibration; greater permanence of calibration; greater user satisfaction.

TRIPLETT *Thin-Line*

memo

PLEASE INSERT INITIALS OF YOUR EXECUTIVES ✓

FOR CIRCULATION TO...

Triplett Thin-Line Instruments meet rigid requirements for dependable performance. Though occupying minimum space they are *not* miniatures. Mechanisms are standard size with emphasis on excellent performance over long periods. Standardized installation. Made in three styles of cases — Molded, Metal Wide Rim and Metal Narrow Rim.

Triplett Thin-Line Instruments, available for many industrial applications, can be depended upon for precision performance in limited space. For full details write for "Triplett Thin-Line Bulletin".

THE TRIPLETT ELECTRICAL INSTRUMENT CO., BLUFFTON, OHIO, U. S. A.

Stromberg Workers Volunteer Tire Inspection

War workers at Stromberg-Carlson Mfg. Co. have distinguished themselves by being the first employe group in the U. S. to pledge themselves voluntarily to regular tire inspection. The step was taken at a recent "rubber for Victory" rally in which the SC workmen foresaw the trend toward compulsory tire inspection. The pledge was taken to make immediate inspection and 2,500-mile check-ups thereafter.

The move has received the congratulations of William M. Jeffers, rubber administrator of the War Production Board. Mr. Jeffers sent a wire to Stanley Manson, labor-management chief of Stromberg, to the effect that "Appreciate the cooperation of Stromberg-Carlson employees. We are going to need a lot of that kind of spirit."

Members of the labor-management committee said that "These regular voluntary inspections will provide hundreds of additional miles to the workers by impressing on them the necessity of regular care."

Mostow Ready With Childen's Records

Making a series of announcements to the record-merchandising trade is The Mostow Co., Merchandise Mart, Chicago. The firm is offering a group of phonograph records for children packed in "Mardi Gras" gift style. The records are described as unbreakable, and six of the double-faced discs are included in the feature gift unit. Records of the story-telling type, as well as musical selections appropriate for the youngsters, are offered by Mostow.

This company declares that orders can be filled immediately, and thus makes an appeal to those who are now thinking of pre-Christmas ordering for the record department.

Precision Methods

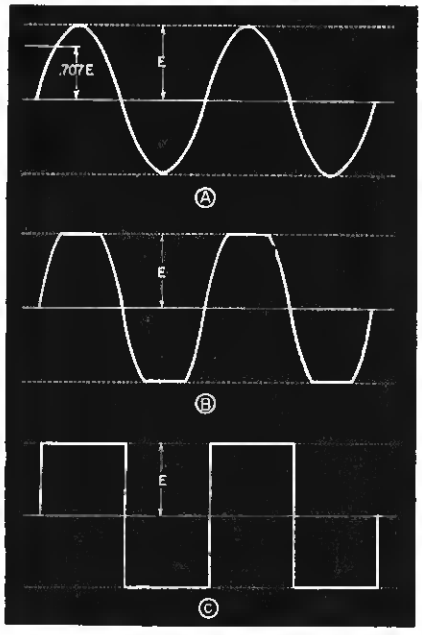
These are times when radio equipment must undergo exacting tests before units leave manufacturing plants. This is a test expert at Hallicrafters, Chicago.

Tri-State Jobbers Meet at Pittsburgh

The Tri-State Radio Parts Distributors Assn. of Western Pa., Northern Ohio and West Virginia, a chapter of NEDA, recently held a meeting in Pittsburgh, with George Barbey, NEDA head as the principal speaker. He gave members the latest information from Washington regarding Limitation Order L-183 and the use of PD-1X application forms, and also reported Washington's attitude on standardization of radio replacement parts.

Members attending the get-together were: Samuel P. Applebaum, Radio Parts Co.; Harry Caplan, Cameradio Co.; M. V. Mansfield and B. E. Cracraft, John Marshall Co.; J. V. Duncomb; H. Hauenstein and C. D. Gahagan, Radio Repairs & Service Co.; V. M. Randle, Randle & Hornbrook; Walter Hollenback, Hollenback's; Burke Hill and Glen Zimmerman, Zimmerman Wholesalers; Art E. Winters and Robert L. Kline; Winteradio; Chester Davisson & Paul Lawman, Professional Radio Supply; William Schuster, Warren Radio Co.; Cecil Rhodes and Henry Trenton, Trenton Radio Co.; Henry Morrison, Morrison Radio Supply; James Ross, Ross Radio Co.; Owen Smith, Warren Radio Co.; Ed Lips and E. J. Tydings, Tydings Co.; Ray King & Earl Irwin, King & Irwin; A. G. Wertz and A. J. Reid, Cambria Equipment Co.; Alex Gettman and Winston H. Taylor, Chemcity Radio Supply.

Square Waves vs. Sine Waves



The common sine wave can be transformed into a square wave by "clipping" the peaks and amplifying. The process is shown in above figure. Clipping can be performed by applying very large sine wave to grid of a tube. The cut-off and saturation characteristic will flatten top of wave.

NEW REGULATIONS FOR RADIO

Late last month a group of representative retailers attended meetings in Washington, held by OPA, "to begin the development of regulations dealing with the elimination or curtailment of certain non-essential retail services." This was one of the early steps in OPA's efforts to get a "retailer assistance" program under way, whereby dealers would cut out the "frills" from their operations and lower the cost of doing business under OPA ceilings.

Under discussion are such matters as deliveries, store hours, customer returns, exchanges, adjustments and sales on approval; and lay-aways, will call, gift wrapping, special decorations and activities for sales promotional purposes.

OPA does not intend to relieve retailers from continuing to supply essential services if they have done so in the past, but will aim the new program at the elimination of superficial services which are holdovers from prewar days—which the public no longer expects, and which under the circumstances the government does not want.

In a new order issued by WPB, on the subject of production of dry cell batteries and flashlights for civilian use, batteries for the portable type of radio have been entirely eliminated as being non-essential. The reason given is that "most of these sets can operate on AC household current."

Curtailment of civilian production, as outlined by this order (L-71 as amended) is put on a quarterly basis and will have this result: "Only 35%

Rep Gets Around

Here's a veteran radio representative whose total miles traveled in the U.S. is one of the records of the industry. It's F. V. L. Smith, 265 W. 14th St., NYC, dist. manager for Continental Electric Co., who started 60 years ago in radio and electrical work.

"A Record a Day Keeps Blues Away!"

Recorded messages for the men in the Armed Forces are now a popular morale-helper throughout the U.S. Employees at Wilcox-Gay Corp., Charlotte, Mich., make plenty of the records for WG men now in uniform, keeping factory studios busy as the company honor roll grows. Here, D. E. McGaw, Leo Wilcox and Don Hosmer demonstrate the idea at Recordio plant.

of the number of radio batteries produced in 1941 will be manufactured. These will be primarily for radios used on farms."

For the next three months, the order provides that Class A manufacturers of radio batteries will be allowed 30% of their monthly production. Class A firms are General Dry Batteries, Inc., Cleveland National Carbon Co., Inc., New York; and Ray-O-Vac Co., Madison, Wis. Class B companies, which includes all other manufacturers in the field, will be allowed to produce batteries equal to their 1940 production.

Rauland Expands Activities

The president of Rauland Corp. of Chicago, E. N. Rauland, announces the expansion of the company's activities, through the acquisition of title to the American patents of the Gaumont-British Picture Co. of America, Cinema-Television, Ltd., and Baird Television, and also the rights to patents on all future developments of the Gaumont-British Picture Corp., Ltd. of London, in the fields of television, electronic tube developments and other light-sensitive devices.

The Rauland Corp. has taken over in its entirety the laboratory and engineering staff as well as the equipment of these companies, and plans for the expansion of electronic engineering activities are already under way.

Military and industrial applications of light-sensitive devices are an important aspect of the patent acquisition since Rauland is engaged almost exclusively in war production.

NEWA Cancels Fall Convention

Nat'l. Electrical Wholesalers Ass'n. announces that its Fall Convention, originally scheduled for October, has been cancelled. Arrangements have been made, however, to hold a meeting of the Executive Committee at the Hotel Pennsylvania, New York City, October 28 and 29.

Philco's Salvage Program Nets Tons of Scrap

As part of the nation's effort to conserve and re-use all possible war materials, 120 carloads or 4,800,000 pounds of steel turnings have been salvaged in Philco's plants in the first half of 1942 it was announced by John Ballantyne, vp. in charge of operations. Tons of brass, aluminum, and paper were also collected.

Other parts of Philco's carefully worked-out salvage program include the dismantling of television production facilities, the development of a new tin-saving solder, and the elimination of many die parts needed for manufacturing replacement parts.

NEW

SYLVANIA "SLIDE-GRIP" HANGERS now come on the continuous-row industrial fluorescent fixtures. These mounting clamps provide faster installation and easier maintenance, and allow for better alignment of fixtures. Offer a variety of applications for chain, surface, rod or messenger-cable mounting. Sylvania Elec. Prods., Inc., Ipswich, Mass.—RRT.

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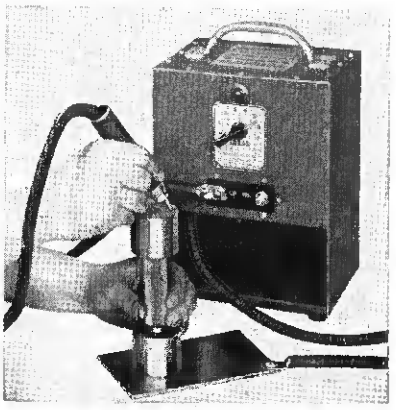

IDEAL NO. 18 "MACHINE SHOP" metal etcher housed in a portable all-steel case, 8 in. x 10½ in. x 7 in., marks all iron, steel and their alloys. Has 14 heats, 115 to 1300 w. heat indicating lamp and heat resisting handpiece. Heavy asbestos covered secondary cables. Renewable work plate. 115 v., 50-60 cycles standard, other voltages & frequencies available. Ideal Commutator Dresser Co., Sycamore, Ill. —RRT.

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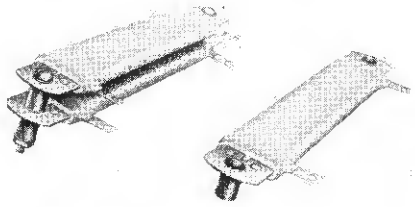
AMFILE PHONO RECORD CABINET is 5¾ in. wide and accommodates 25 records. Each record is housed in its own numbered compartment, which number is entered on the face of the record and in the Contents Register. Bound in pin seal simulated leather; 4 colors—blue, green, maroon or black. Two sizes for 10" and 12" records. $2.75 for 10" and $3.25 for 12". Amberg File & Index Co., Kankakee, Ill.—RRT.

PRODUCTS



VITROHM STRIP RESISTORS, especially suitable in aviation, radio and installations where space limitations and high unit space watt ratings are required, employ strong, flat refractory cores for the resistance wire winding. Mechanically banded terminals are spot welded in position on the core, and the core and winding are sealed in a fused-on Vitrohm enamel. Each unit is fitted with self-sustained mounting bracket and spacer. Available in sizes ranging from 1½ to 6 inches in length with ratings of 30 to 75 watts. Ward Leonard Electric Co. Mt. Vernon, N. Y.—RRT.

●

Radio Dealers Can Sell Hearing Aids

In line with the article "Are You A Victory Dealer" appearing in our August issue, there is another item that presents a logical and natural addition for the radio dealer,—the hearing aid is first cousin to a radio. Anyone trained to sell radios can quickly adapt himself to hearing aids. The same is true of servicing. A decided war-time advantage is that women and men outside the draft age have proven to be excellent at selling hearing aids.

The Crystal-Vox Hearing Instrument Company, 1249 Washington Blvd., Detroit, Mich., is offering a high-grade precision laboratory-built hearing aid to dealers and to territory distributors. Although it has the advantage of retailing for less than the leading instruments, the discounts are generous. The instrument itself is the result of the research and experimental work of one of America's pioneers in vacuum-tube hearing devices. It was developed in the laboratory of a Michigan radio company, thereby incorporating unusual engineering knowledge and manufacturing experience.

The head of the firm, Walter C. Bieneman, has been in the hearing-aid business for years. "The Crystal-Vox has been engineered to eliminate the tedious tests and confusing choices usually required of both prospect and salesman," according to Mr. Bieneman. "It is simple and easy to demonstrate and to wear." Hearing aids and their batteries are classified by Uncle Sam as "Health Supplies" and therefore enjoy a priority rating next to war materials.

Zenith's Big-Scale War Program

A Six-Step Plan to keep Zenith's name before the public has been announced by the company's vice-president J. J. Nance.

It includes a national advertising campaign with the theme "1917 War run by Telephone—1942 War run by Radio"; a workable service plan to provide adequate servicing facilities for set owners; a personnel placing plan for distributor and dealer organizations; assistance for distributors seeking "New Lines" to replace civilian radio business; a sustained, large-sized space, trade paper advertising campaign, and number 6 is a monthly company newspaper written as a "letter from home" to all individuals connected with Zenith in factory, distributor and dealer organizations or in the armed forces.

A member of each Zenith distributing organization has been appointed as field editor for his territory for the paper which is tagged the "Zenith Radiorgan," supervised by Edgar G. Herrmann, sales manager.

Since its first issue Zenith has received enthusiastic letters and wires from Zenith dealers and distributors as well as those now serving Uncle Sam.

One dealer now in the Army wrote that "The Radiorgan" made him feel as if he again belonged to the business he was engaged in, in civilian life, and that other men in the service expressed the wish that their company would put out something like it.

FM Station Ready to Go

The FM station of Metropolitan Television Inc., W 75 NY, is now making tests and expects to go on the air with regular programs six hours daily in November. Metropolitan Television Inc. is jointly owned by Abraham & Straus and Bloomingdale's.

It will be known as the "Information station" according to I. A. Hirschmann, v.p. of Bloomingdale's and of the station.

"Major emphasis of our programs will be on the news, music, and education, with behind-the-scenes information on current events in these fields," says Hirschmann.

Westinghouse Plants Receive "E" Pennants

Rear Admiral Wm. Carelton Watts of the U. S. Navy recently presented Army-Navy "E" pennants to 5 Pittsburgh-area plants of the Westinghouse Elec. & Mfg. Co. "for high achievement in the production of war equipment."

The company is now producing war equipment at the rate of $500,000,000 worth a year.

GE Salvages 100 Train Loads

By salvaging everything from outdated rubber stamps to an obsolete power plant, the General Electric Co. will recover and return this year 380 million lbs. of waste, enough to fill every car in 100 average freight trains.

Men at each of the company's plants are developing new ways of reducing the amount of material needed in manufacturing. A suggestion system is also in effect by which the workers suggest methods of increasing production and conserving vital materials.

All the scrap is transferred to salvage depts. where it is classified and sorted into 125 different classes. These departments have facilities to reduce scrap to convenient shipping shapes. GE's scrap yield will be swelled this year by the company's "treasure hunt" for war-scarce materials in conjunction with the nation's "Salvage for Victory" campaign.

Major Glasser Reports for Boston Duty

Harold A. Glasser, well known in the field as a merchandising specialist and inventor of the Conservador used in Philco refrigerators, is now a Major in the United States Army.

He has taken leave of absence from his duties as sales manager of the Appliance Div. of Bruno-New York, Inc. and is now serving at the Post Exchange Division at the Port of Embarkation, Boston.

Rep Goes to War

M. K. Franklin, pioneer radio rep in the Minneapolis area who is now a first lieutenant in the M.P.'s at Ft. Lawton near Seattle, is shown here with Mel Foster, another Minneapolis rep. Between planes, they review wartime radio news.

Milwaukee Distributor Sponsors "Rad"

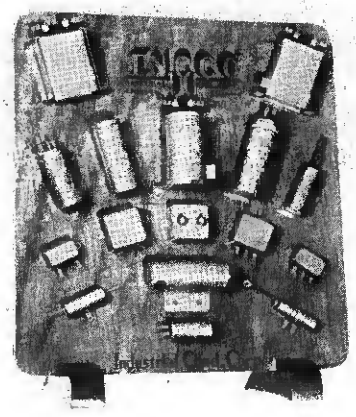
One of the more exceptional steps taken by a radio distributor, on the matter of wartime "substitute" lines, is the "soap" business being developed by Roth Appliance Distributors, Inc., 647 W. Virginia St., Milwaukee, Wis. This firm has been working with a large soap manufacturer, and has developed an all-purpose soap called "Rad" which has the water-softening ingredients factory-processed into it.

Dealers Like It

Twenty-one of the leading appliance retailers of Milwaukee have taken on "Rad" and department stores are aggressively promoting it. Dealers are interested in the high unit price; the smallest sale possible is a 25 lb. wooden bucket retailing at $5.75. However, since Roth is now distributing "Rad" nationally, dealers can get 125-lb. drums or 200-lb. barrels, and dish it out like sugar in a grocery store.

Roth reports that "soap profits are not as large as those to which appliance dealers have been accustomed, percentage-wise . . . however, the repeat business (with no trade-ins and no service factors involved) is such that the *net* profit is more interesting to the dealer than that of the trade-in business."

Condenser Display for Jobbers



A new counter display of light colored wood is ready for distributors of Industrial Condenser Corp., 1725 W. North St., Chicago. Sixteen condenser types are mounted on this 18" by 20" unit. New Inco plan calls for distribution through jobbers, with stocks carried by each, to insure prompt delivery locally.

Electronic Cop Warns Speedsters

Driving at night along a highway near St. Paul and Minneapolis, the motorist's attention is caught by the sudden turning on of a large illuminated signboard ahead of him. A second or two later the sign flashes the speed of his car in lighted numbers, big enough to read a mile away. If the speed is too fast for the danger-spot ahead, the sign flashes an additional warning in the words "Slow Down."

"Startled by this electronic speed cop that issues no summonses, the motorist may wonder what mathematical genius is hiding behind the sign. The explanation is simple," says Frazier Hunt, General Electric newscaster. "As one's car passes a certain point on the highway it interrupts a beam of invisible rays. A photoelectric tube turns on the sign, and starts an electronic timer which measures the car's speed. As the car passes the second electric eye the timer calculates the speed, and flashes the speed in lights, as a warning to the driver.

"Radio Nurse" for Dogs

An electronic novelty brought out several years ago by Zenith, was the "Radio Nurse." This carrier-frequency device provides a microphone which can be plugged in at any electrical outlet in a child's nursery, while the speaker end of the unit is brought to the room occupied by the parents. Turning on the "nurse" the parents can listen in at any time on the sleeping child.

Since the Radio Nurse was first introduced, many other uses for it have been devised. One of the most original comes from Bob Lenfesty of Seattle Hardware Company, Zenith Seattle distributors. It seems as though Bob has had some difficulty with his dogs, who are proverbial howlers at the moon. He installed one end of the Nurse in the dog pen and the other in his bedroom, with a duplicate set enabling him to shout back at the dogs to keep quiet. After a few nights of this, his neighbors wanted to know if he had disposed of his dogs—but Bob only replied, "I hired a Radio Nurse," which stopped all questions.

Rep Goes After War Business

An example of aggressive wartime sales methods used by manufacturers representatives is seen in the current material being sent out by Detsch & Co., a western sales office with headquarters at 341 Tenth St., San Francisco.

Addressed to sales managers, one letter says "we are sending you this circular letter as a specimen of the circular work which we take off your hands in issuing reports, quotations, etc. from our main office to all the jobbing trade in the area west of Colorado's eastern boundary, and including the Province of British Columbia, Canada . . . these are times when it is not a sales problem but a production problem . . . and possibly your present production problems are forcing you to contemplate a shifting of your sales promotion to other hands."

Advantages of the Detsch office are then listed as experience, responsibility, capacity, performance, economy and efficiency, with details in each case. The firm also has done considerable work on raw materials shortages, priority rulings, etc., and offers specific help on getting government orders.

S-W Receives "E" Flag at Public Ceremony

A public presentation of the joint Army-Navy Production Award pennant to the Stewart-Warner Corp., was held at Soldier Field, Chicago, prior to a big Army War Show and was witnessed by 21,000 employes and their families.

Brig. Gen. Donald Armstrong, until recently in command of the Chicago ordnance district, presented the award to the company and Commander W. W. Weber, representing the Navy delivered individual insignia for employes. Frank A. Ross, senior vice-pres., Frank A. Hiter, v.p. and gen. sales mgr., John Brewer, Chas. Emmler and Helen Polowy represented the company.

Stewart-Warner, one of the first Chicago industries to shift to arms making, is now "the country's largest manufacturer of shell fuses."

California Radio Pioneers Name Officers

New officers of the Radio Pioneers of Southern California were named at the last meeting of the group, at the Mayfair Hotel in Los Angeles. Carl Stone was named president; George Marshall, vice-president; Jack Perlmuth, vice-president and Garratt Arnold, secretary.

Although the members of the organization are working at a new pace in distributing, selling and manufacturing radio materials for war use, they have retained their monthly meeting schedules at the Mayfair.

Musical Leader

Violet G. Webber is the new executive secretary of the National Association of Music Merchants, with offices at 45 W. 45th St., New York City. NAMM continues to support strongly the idea that "Music Maintains Morale." Mrs. Webber holds similar posts with four other musical trade associations.

Recoton's Free Display Offer

Now available to record dealers is a brightly colored phonograph needle display from Recoton Corp., 21-10 49th Ave., Long Island City, N. Y. It includes, in compact form, a complete Recoton Phoneedle department—a silent salesman to attract customers—suitable for counter or for window. The display comes with five cartons of Recoton needles.

There is a limited number of these self-selling displays for free distribution and they may be obtained by writing Recoton direct, or from one of the firm's regular distributors.

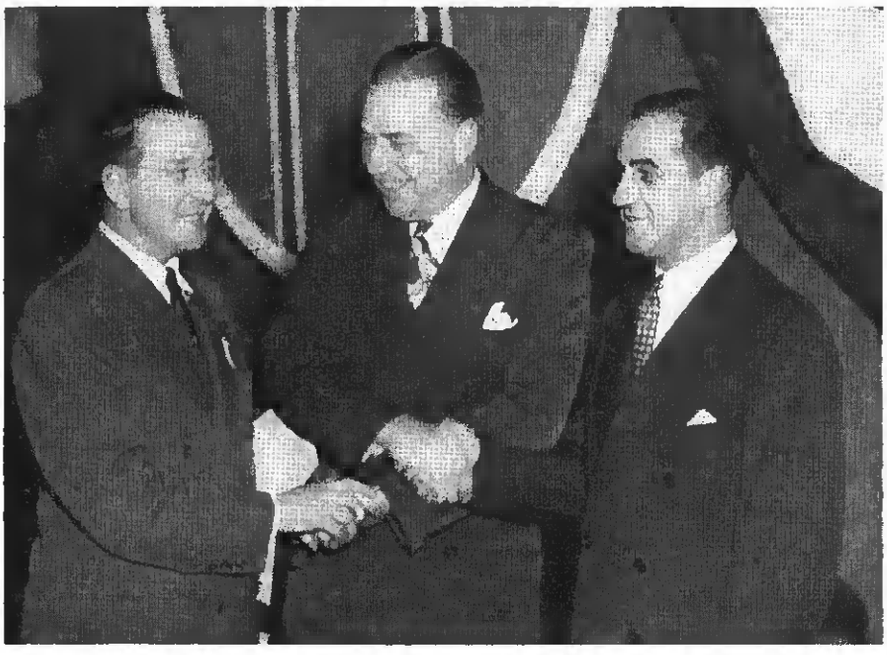
Aide to Recruit Servicemen

Raymond Rosen, Philadelphia, distributor of RCA-Victor products, has been appointed Civilian Recruiting Aide for the Army Signal Corps. Harry Bortnick, promotion mgr. of the Rosen Co. is assisting him to secure qualified servicemen and technicians from the allied communications industries.

Experienced radio and sound men of draft status will be advised to enlist in the Army Signal Corps where their services will be of the greatest benefit.

All men in Penna., Southern N. J. and Delaware interested in enlisting are advised to contact Lt. S. D. Distelhorst, Rm. 623, Customs House, 2nd and Chestnut Sts., Philadelphia, Pa.

Chicago Experts Honored by "E" Award for War Production



These radio men are proud of their "E" rating—W. J. Halligan, left, pres. of The Hallicrafters Co., and Raymond Durst, right, sales manager, are shown with Joseph L. Overlock, regional director of WPB, during presentation of Army-Navy "E" Award to Hallicrafters.

Nash-Kelvinator's First Wartime Convention

Distributors and zone managers of Nash-Kelvinator were recent guests at a four-day meeting in Detroit, to obtain first-hand knowledge of the tremendous war job the industry is doing, according to an announcement by vice-president Frank R. Pierce.

The event also served as a get-together to discuss future plans, in maintaining and strengthening the dealer organization. It included an inspection tour of the company's Propeller Division plants in Lansing, to see what "Democracy's Arsenal" is doing to speed victory for America.

Victor Expands Record Activity

Continued expansion in the record business has moved RCA Mfg. Co. to announce a number of appointments among Victor recording executives.

Frank B. Walker, vice president, will now give full time to matters concerning repertoire and recording. James W. Murray, who has been a key man in the record industry here and abroad since 1928, has joined Victor and will be general manager of the commercial records division.

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New Booklets

Tube Base Data Connections and Chart, a convenient folder released by Weston which assembles together the element connection and base layout of over 600 different types of radio tubes. Includes diagrammatic sketches of the bottom view of socket or base of tubes, a tube base chart indicating the proper base to use for the various tubes listed. Copy may be obtained by writing to Weston Elec'l. Instr. Corp., Newark, N. J.

Precision Tube Co., Philadelphia, has issued a new Bulletin No. 202, dealing with the mechanical and electrical specifications of Precision metal shielded wire by their method of protecting insulated wires enclosed in either thin wall seamless aluminum copper or lead tubing.

Greenlee Bros. Honored By "E" Award

In a lively ceremony on the company grounds at Rockford, Ill., Greenlee Bros. & Co., of which Greenlee Tool Co. is a division, was presented the Army-Navy "E" flag. George C. Purdy, pres., accepted the flag from Lieut. Col. Edward H. Bowman, chief of Chi. Procurement District. Lieut. Com. R. J. Twyman spoke for the Navy and presented employee representatives with "E" pins.

The affair was witnessed by over 3000 people, including employees and their families and guests.

Among the products now being manufactured by Greenlee for the war effort are transfer machines, automatic screw machines for munitions and airplane engines, wood-working machines and hand tools.

Emerson's Service Flag Has 60 Stars

Sixty stars are now mounted on the service flag of Emerson Radio & Phono Corp. and one special star for Joseph P. Marencvuk, reported missing in action.

Emerson has instituted a program for keeping in touch with their men in the service through letters and news items and by doing errands and chores for the men.

Ohmite Expands Again

In addition to the big increase in plant size a short time ago, Ohmite Mfg. Co., Chicago, now makes another expansion in factory space. It provides more space and facilities to produce more units to meet the greatly increased demand in Ohmite's war effort.

Ohmite units are used in planes, tanks and ships, in communications, electronic and control equipment, in industry and research.

Television's Future When Peace Comes

What's ahead for the theater, screen and radio are all so definitely linked with television that their destiny comprises chapters in a new book, "The Future of Television" by Orrin E. Dunlap, Jr., just published by Harper & Brothers. Television will be one of the great post-war industries, says Mr. Dunlap, for many years radio editor of the *N. Y. Times*. Television, he thinks, will exert far-reaching influences on entertainment, education, the dissemination of news, sports, advertising, and the arts.

Will television make obsolete more than 900 "sightless" broadcasting stations and 55,000,000 home radios? What is television's promise to the school and the church? What is to be the fate of singers, comedians, vaudevillians, political orators, cartoonists and teachers? These and many other important questions, such as showmanship, programming and legal aspects are discussed, as the future of television and its widespread opportunities are analyzed.

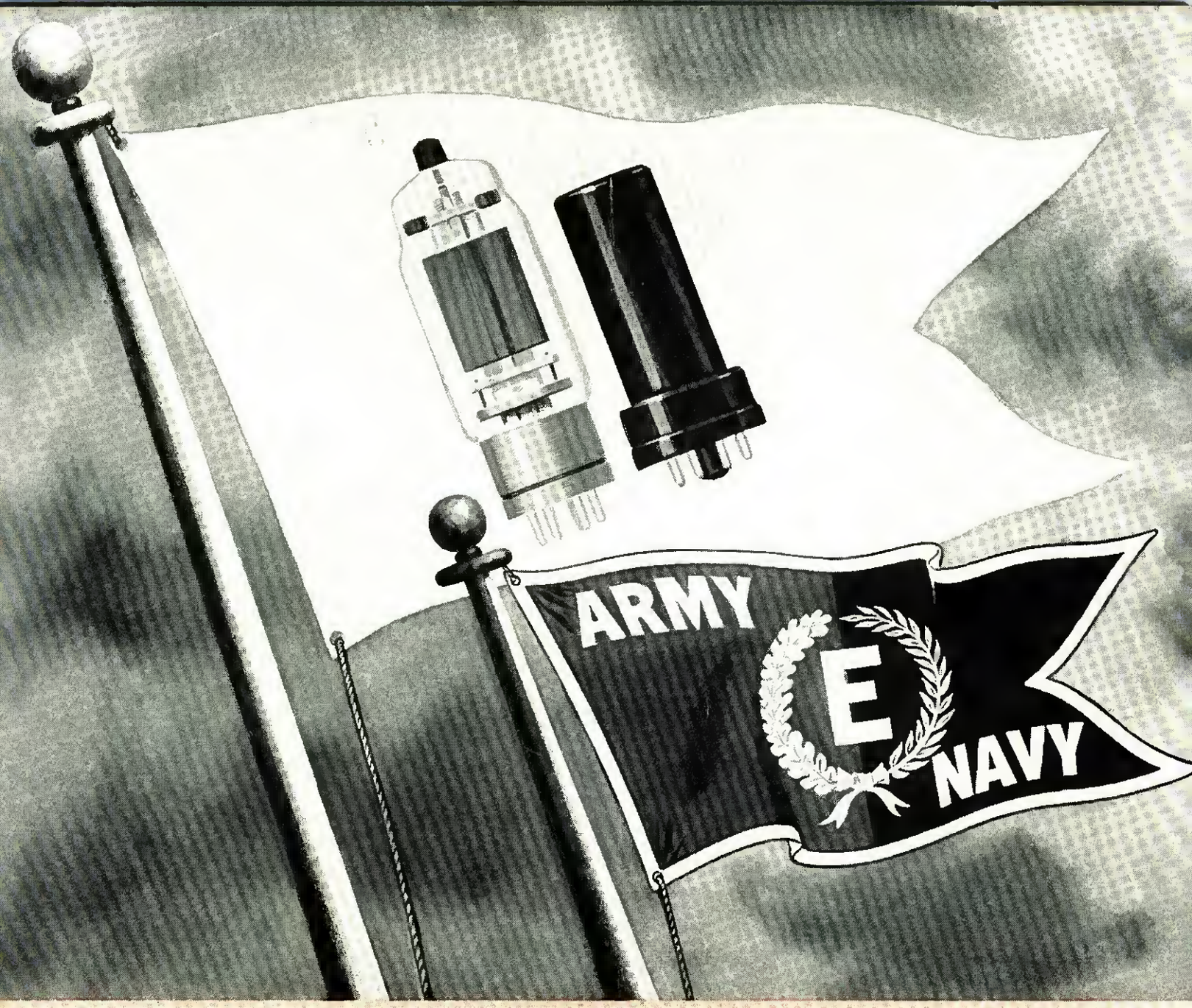
Right now television is being greatly perfected by wartime research and engineering in radio and electron optics. That achievement will be an outstanding contribution of science to the new era promised by the Atlantic Charter. Sightseeing by radio is predicted as a national pastime. Homes everywhere will have all-seeing eyes, because the science of electronics will put television within the price-range of the masses, as it has radio sets. Just as transatlantic liners took on radio voices after World War I, so transatlantic planes will see by radio after World War II, while millions of people in their homes will look in on distant cities, across continents and seas. Radio, which made a whispering gallery of the heavens, is now described as preparing to turn the world into a Hall of Mirrors!

"Dutch" Feldon to Chicago Firm

O. A. "Dutch" Feldon, recognized authority on merchandising and marketing, has joined MacFarland, Aveyard & Co. Chicago Advertising agency, as a partner and vice president in charge of merchandising. This is part of the agency's general expansion program, which includes addition of both space and personnel.

Well-Known Rep Passes On

B. G. Paylor of Dallas, Texas, one of the veteran manufacturers representatives of the South, died on September 17. He represented various parts manufacturers for the past 8 years. Prior to that he was sales manager of the radio department of McLendon Hardware Co. and later McLendon Elec. & Radio Co., Waco, Texas.



HERE'S WHY WE CAN'T FILL ALL RCA TUBE ORDERS

If you have not been able to get all or any of the RCA Tubes you have on order, we have the best reason in the world. We fill all war orders first. There can't be any argument with that.

Here at RCA we don't think anything is important except winning the war. And we're pledged to "Beat the Promise" to produce for the government as many as we can of vital radio tubes so sorely needed by our armed forces.

We'd like to back up our statement that we're doing that by telling you that our Harrison Tube Division was recently honored with the Army-Navy "E" Burgee.

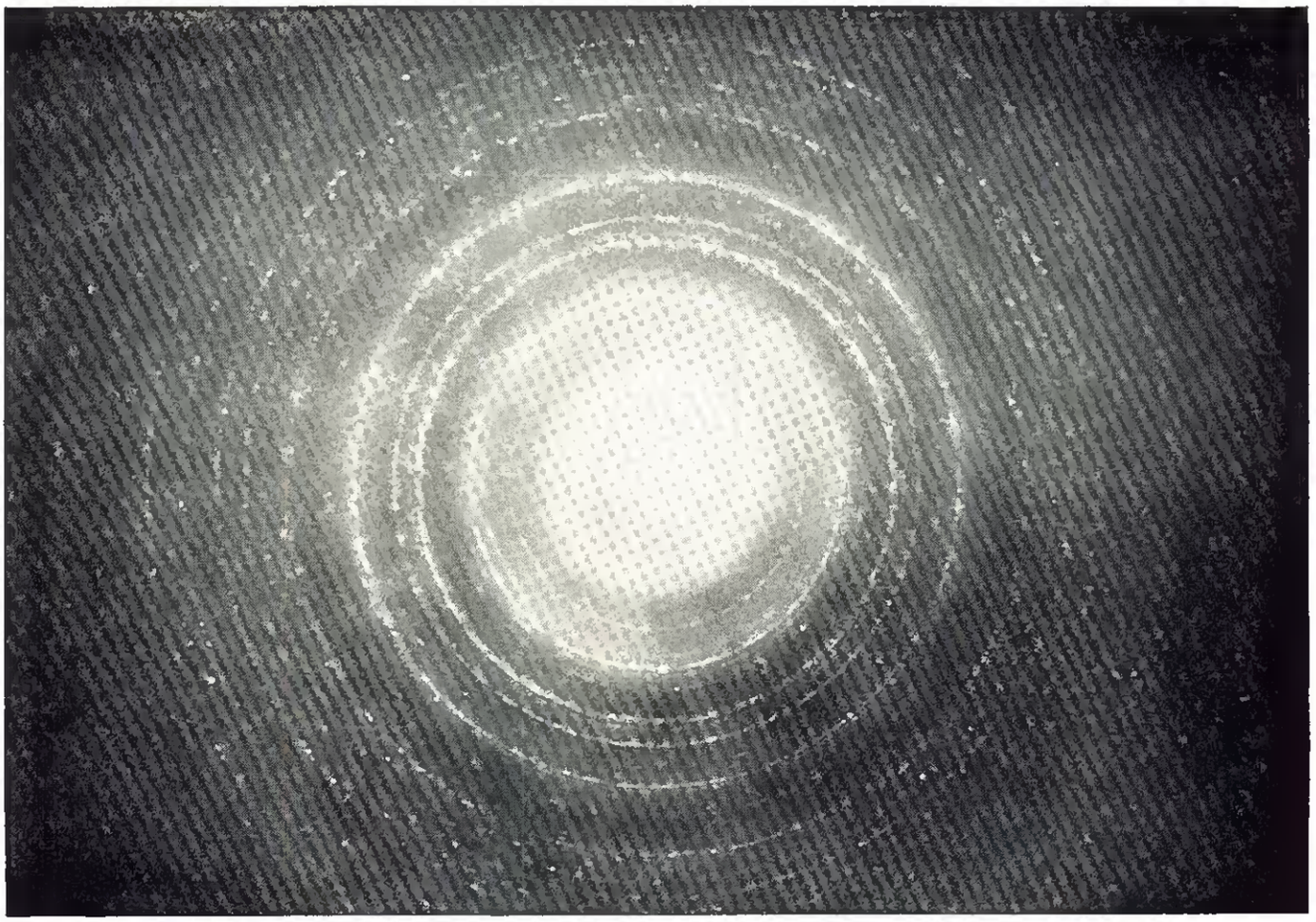
We'd like to extend that pledge to you. But until we've beaten even our "Beat the Promise" pledge, everything else must wait. At RCA the U. S. A. comes first.

BUY U. S. WAR BONDS *EVERY* PAYDAY

RCA

RCA RADIO TUBES

RCA Manufacturing Company, Inc., Camden, New Jersey



A NEW ELECTRONIC SUN!

The famous RCA Electron Microscope has a new attachment—a diffraction camera, so that man's eye can see the enormously magnified structure of an infinitesimal object and actually determine its atomic design.

The *atoms* are not seen but the new adapter *finds out where they are*. The revealing picture looks like the midnight sun. But in reality this is not a picture of anything. It is the spirit of the crystal structure—an assembly of complex clues from which the mathematical detective can determine how the atoms take their orderly arrangements in various substances.

Scientists call the picture a diffraction pattern—a pattern from electrons, which found their way through the crystal lattice—that invisible, exquisite arrangement of atoms which nature fashions from humble table salt to the lordly diamond. It is a set of concentric circles, some diffuse, others sharp. From the dimensions of the circles and the intensities, the arrangement of the atoms in the material is determined, so that the crystal structure can be identified and analyzed.

Thus, RCA Laboratories open new and unseen worlds for exploration as the Electron Microscope coupled with the new diffraction camera sees deeply into electronic and submicroscopic realms.

BUY U. S. WAR BONDS EVERY PAYDAY!

RCA LABORATORIES

PIONEER IN RADIO, ELECTRONICS, TELEVISION

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Other Services of RCA: RCA Manufacturing Company, Inc. • National Broadcasting Company, Inc.
R. C. A. Communications, Inc. • Blue Network Company, Inc. • Radiomarine Corporation of America • RCA Institutes, Inc.