

**GOTTA RUSH
DAT CAR SET, BOSS!
MAH SUGAR'S
WAITIN!**

**HERE
TICKEE—
RADIO
PLEASE.**

**CAN YOU FIX ME
UP WITH BLACKOUT
EQUIPMENT?**

**I'VE BEEN
WAITING
AN HOUR!**

**CAN I GET
MY 'PERSONAL'
FIXED RIGHT AWAY?**

**BE RIGHT
WITH YOU,
FOLKS!**

**GIMMIE
SOME
TUBES.**

**HEY! COME DOWN
TO THE PLANT AND
GET THIS ELECTRONIC
APPARATUS GOING**

**REALLY—!
YOUNG MAN!
I MUST USE THE
RECORD PLAYER
FOR GUESTS TONITE**



**THE BUSY SERVICE SHOP
GETS A "BLACKOUT" TEST**



Institutional?... *and How!*

Whadd'ye mean—institutional?

Well, it's this way. Mallory is an institution with the radio service fraternity; studying your problems, working out new helps for you, bringing new ideas to you, to make your work more effective and more profitable.

Any old time that you have a problem that puzzles, bring it to Mallory—and see for yourself what happens. You will know whether you have received Form Letter No. 45-A, or whether you have had a real answer to a baffling question.

Mallory is in business to help you. Whether it be the selection of a volume control for a 1928 model receiver, the procurement of a 3000-ampere electroplating power supply, taking the hum from a public address system, or any of countless other problems in service, substitution or procurement... the recommendations of the Mallory engineering department are yours for the asking.

Remember, that in the Mallory laboratories are experts in almost every branch of radio, electrical and metallurgical engineering. We repeat—they're here to help. They're making Mallory a live, progressive aid to industry. You can bet your life it's an outfit that you can depend on.

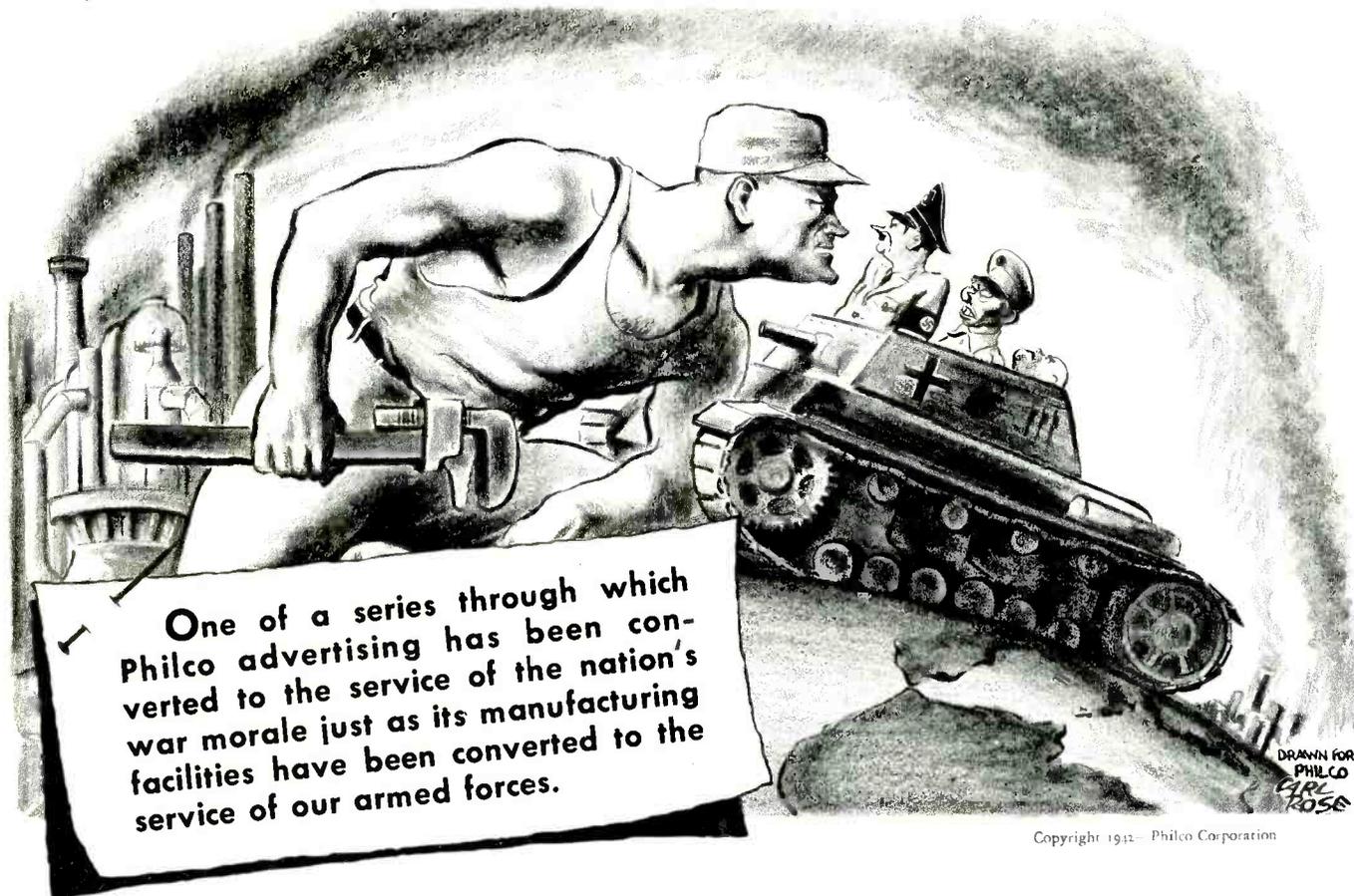
Institutional?—and How!

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

Cable Address—PELMALLO

P. R. MALLORY & CO. Inc.
MALLORY
Approved Precision Products

"Who's telling who where to get off?"



Copyright 1942—Philco Corporation

"More! Better! Sooner!" is the war-cry of Philco's soldiers of production. In this cartoon, Carl Rose interprets the spirit that spurs them on. Posted on the walls of the Philco factories, it is one of a series being drawn for Philco by America's leading editorial cartoonists as an inspiration to the men and women who are helping to produce the weapons of victory.

★ ★ ★

WE HAVE a job to do . . . the biggest job that has ever faced the minds and muscles of American industry. This is the time for our workers to prove that we have earned our reputation as the world's masters of mass production! This is the time for the genius of our industrial scientists and engineers to preserve their gift to America, the world's highest standard of living! And preserve it they will, gloriously and decisively. Production, *in the American way*, is the key to victory!

And with that victory another triumph will come. Peace, yes! Freedom, yes! But a vastly greater enjoyment of both for us all. The new and deadlier swords that men fashion with fierce inspiration today will be beaten into plowshares of untold happiness for tomorrow.

Here at Philco, our engineers and scientists

are devoting their toil and their genius to the weapons of war . . . communications equipment, airplane and tank radios, artillery fuzes and shells. Already in their laboratories and assembly lines, the fruits of their efforts hold undreamed-of promise for the future. American industry will deliver the implements of victory to our brave and valiant forces . . . and with them, new and abundant joys for the tranquil years of peace!

Free Limited Offer . . . While available, a full size reproduction of the original drawing by Carl Rose will be furnished gladly upon request. Simply address Philco Corporation, Philadelphia, Penna., and ask for Cartoon Number 5W.

PHILCO CORPORATION

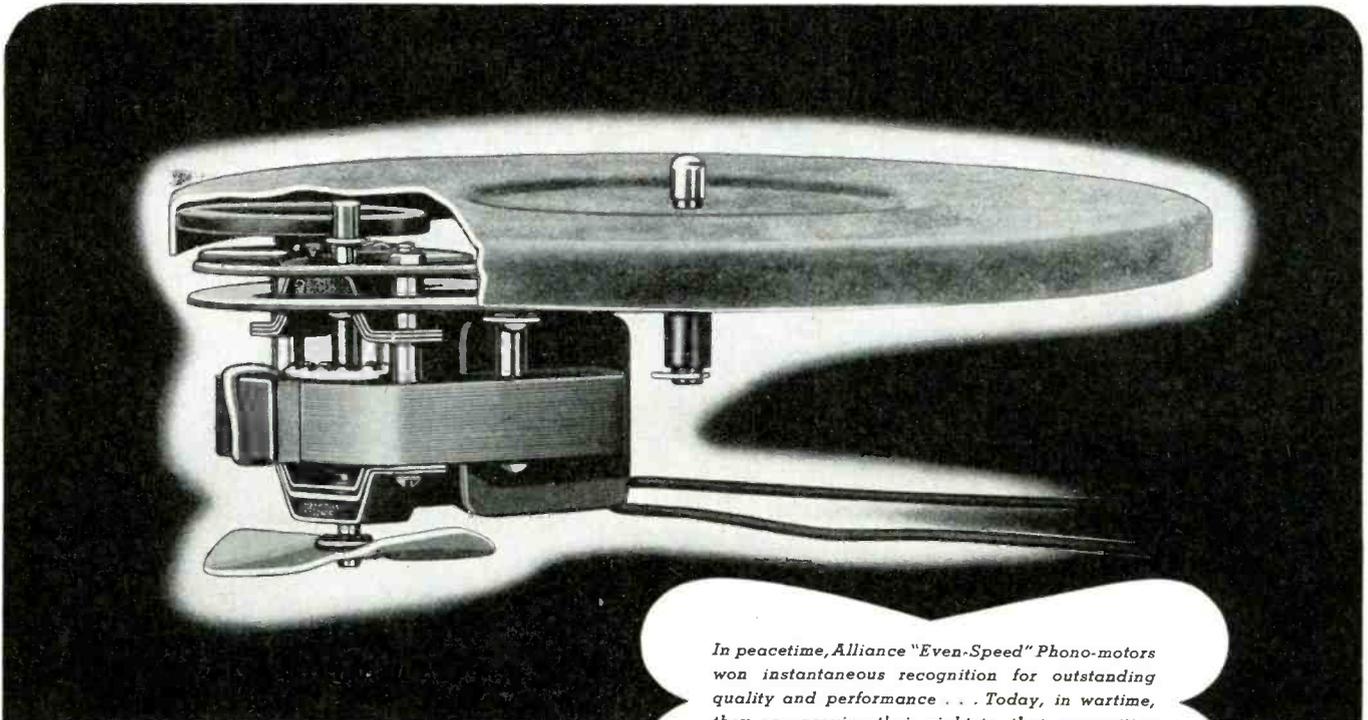
Through its national service organizations, Philco offers to its millions of owners throughout the land, at uniform and reasonable charges, the means of conserving and prolonging the use and enjoyment of Philco products.

**RADIOS, PHONOGRAPHS, REFRIGERATORS
AIR CONDITIONERS, RADIO TUBES, PARTS**

**INDUSTRIAL STORAGE BATTERIES FOR MOTIVE POWER,
SIGNAL SYSTEMS, CONTROL AND AUXILIARY POWER**

RADIO RETAILING Combined with RADIO TODAY, June, 1942, Vol. 27, No. 6. 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. Moulie, Technical Editor. Staff: E. T. Bennett, N. McAllister, 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. Entered as Second Class Matter at Post Office, New York, N.Y., under the Act of March 3, 1879. Member of A.B.C. Copyright by Caldwell-Clements, Inc., 1942.

..._VICTORY IS TODAY'S BUSINESS



In peacetime, Alliance "Even-Speed" Phono-motors won instantaneous recognition for outstanding quality and performance . . . Today, in wartime, they are proving their right to that recognition through dependable, efficient service.

Every Jobber's Part is Vital

- Manufacturers, dealers and servicemen today are counting on jobbers — counting on them to meet today's problems. There are no more new phonographs—no more new radio-phonograph combinations. That means old machines must be kept running—parts replaced and made to last. Service takes on a new meaning.
- Here at Alliance, while we are mainly engaged in contributing to the war effort, everything possible is being done to help the jobber. Phono-motors are still available to jobbers for replacement—the same high quality motors that have made Alliance performance the standard of comparison.
- In providing superior parts for replacement, we hope to build goodwill among your customers and their customers, to provide a sound foundation for future business. Then, when Victory comes, all of us can return to a new and greater volume of "business as usual."

ALLIANCE MANUFACTURING COMPANY
ALLIANCE, OHIO



Ammunition

FOR THE BATTLE OF PRODUCTION!

How "The Business you helped to Build" is Beating the Promise to America . . . to bring closer the day when you can again sell RCA Victor radios in a world at peace.

As early as September, 1939, RCA Victor foresaw the vital role we would be called on to play in a war where *communications* counted for so much! At that time, long-range plans were made to put our plants on a war production basis.

By September, 1941, we were already engaged in war production to an extent that amply justified our judgment. In a published advertisement, we stated: "With RCA Victor, defense comes first. By comparison, we hold nothing else important."

Because the spirit and unity of the men responsible for production is the most important

factor in production, we inaugurated at that time the "Beat the Promise" campaign which has since become nationally famous. New and better ways to put industrial sound to work, cartoons, posters, contests, group meetings—and virtually every method of stimulating workers to turn out better equipment, faster, and with less waste—were used.

That program is still continuing—will continue until victory is achieved. 70 other companies engaged in war work have adopted it in part or whole, using material and methods prepared by RCA Victor. It has vastly influenced industrial operations employing millions.

And it is helping to bring closer the day when *you*, the RCA Victor dealer, can again carry on your business in a world at peace.

BUY
U. S. WAR
BONDS

RCA VICTOR

RCA MANUFACTURING COMPANY, INC., CAMDEN, NEW JERSEY

RADIO RETAILING Combined with RADIO TODAY, June, 1942

3

General Electric advertising YOUR STORE



ON THE AIR!

Over the Coast-to-Coast CBS Network, people needing radio service will be told time and time again, on the G-E Radio News Program, to go to qualified service dealers who display the emblem of the G-E Electronic Radio Tube.

IN MAGAZINES!

The public will be directed to dealers displaying the Pledge Plaque of the G-E Electronic Radio Tube as qualified to give radio service.

THROUGH THE MAIL!

Dealers qualifying under the sign of the G-E Electronic Radio Tube will be supplied with envelope enclosures for mailing to customers and prospects.

AT POINT-OF-SERVICE IDENTIFICATION

To closely identify your store with G-E's powerful national advertising program, General Electric offers dealers an attractive Pledge Plaque and a Window or Door Decalcomania featuring G-E Electronic Radio Tubes.

IN THE CLASSIFIED TELEPHONE DIRECTORY

In towns of 50,000 population and over, G-E offers you the opportunity of listing your name under G-E's nationally advertised emblem heading — The Sign of the G-E Electronic Radio Tube.



*The Public Will be Directed
to the Sign of
G-E Electronic Radio Tube
for Qualified Service*

GENERAL  **ELECTRIC**

will direct the public to
for RADIO SERVICE



**USE RADIO SERVICE
TO KEEP YOUR RADIO IDENTITY**

Now that no new radios are being manufactured for the duration of the war, you soon will no longer be able to advertise radios for sale.

After you have sold your last radio—what then? The answer is—Radio Servicing.

Every radio owner will want to keep his radio operating at peak efficiency—will want it to see him through the wartime emergency.

Radio dealers and servicemen will want to carry on with the all-important job of keeping America's radio sets playing.

Radio servicing, with its increasing volume sales of replacement tubes and parts, will become increasingly important as radio sales dwindle. The service business offers dealers the opportunity to keep their identity in radio and earn a good profit besides.

So General Electric steps in with a great national advertising program specifically designed to direct people to your place of business for radio servicing. To you as a radio dealer who must face these business wartime conditions, this General Electric Radio Service Plan is important. Phone, wire, or write your G-E Radio Distributor for complete information.



Electronic
RADIO TUBES

**SO TIE UP WITH
THE G-E RADIO
SERVICE PLAN**

**RADIO, TELEVISION & ELECTRONICS DEPARTMENT
BRIDGEPORT, CONNECTICUT**



Only the
BIG SHOW
Matters Now

THIS season, for the first time in many years, there'll be no Radio Show. With the entire industry absorbed in the nation's war program, even this traditional event may seem like small potatoes now.

Nevertheless, we of Sylvania shall miss the get-together at Chicago, with its renewal of old friendships, its cementing of new ones.

And we'd like to offer the trade this assurance: Like you,



we are convinced that radio is a vital weapon of home defense, and we'll do what we can to keep radios working on the civilian front.

Today the tubes we are building are stouter, better, longer-lasting than any we've ever turned out. Moreover, our laboratories, working for war, are making discoveries that hold promise — once the peace is won — of a new and even brighter era in radio.

HYGRADE SYLVANIA CORPORATION

EMPORIUM, PA.

Also makers of HYGRADE Incandescent Lamps, Fluorescent Lamps and Fixtures

To the Farnsworth Dealers of 194?

ALL manufacturing facilities, financial resources and personnel effort of the Farnsworth Television & Radio Corporation are now being devoted 100 per cent to our nation's war program, and that is as it should be.

Our organization was engaged in the production of war material long before the cessation of civilian radio production became an industry requirement. Consequently, the period of complete conversion of our plants has been greatly lessened.

Our organization remains intact—every man in our management group, engineering,

factory, sales and advertising, is now working on new assignments of such magnitude that it is inevitable their scope of knowledge and vision will be broadened by the tremendous effort required—they are learning how to do things better and on a greater scale.

It is apparent that we will emerge a greater organization prepared and able to pick up our peacetime program and greatly accelerate and expand the progress we had so notably achieved in the field of musical reproduction, radio, television and allied phases of electronics.

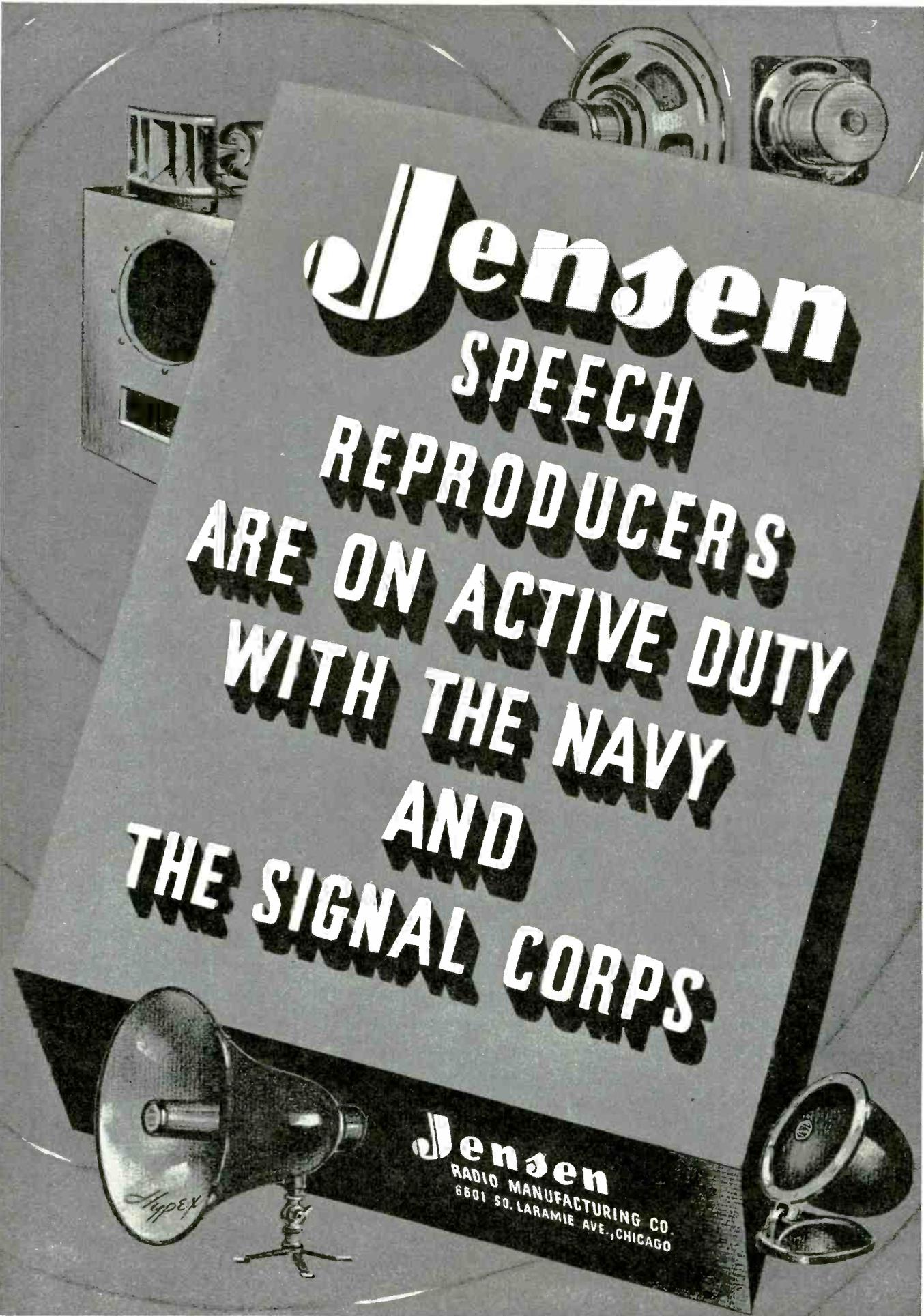
During peacetime the funda-

mental policies of Farnsworth as a Corporation were always controlled by the cardinal principle that we should concentrate our efforts in the field of electronics.

Of importance to the Farnsworth dealers of today and the future is the fact that during wartime all of our work is also being conducted in the field of our original choice—the things we are doing today will indeed mean a great deal to our distributors and dealers of tomorrow. Farnsworth Television & Radio Corporation, Fort Wayne and Marion, Indiana.

Farnsworth

MANUFACTURERS OF RADIO AND TELEVISION TRANSMITTERS AND RECEIVERS. AIRCRAFT RADIO EQUIPMENT. THE CAPEHART, THE CAPEHART-PANAMUSE AND FARNSWORTH PHONOGRAPH-RADIOS



Jensen
SPEECH
REPRODUCERS
ARE ON ACTIVE DUTY
WITH THE NAVY
AND
THE SIGNAL CORPS

Jensen
RADIO MANUFACTURING CO.
6601 SO. LARAMIE AVE., CHICAGO



*Nationally Known
Organizations use
RAYTHEON tubes!*

WESTERN UNION
POSTAL TELEGRAPH
STEVENS HOTEL
HOME STAKE GOLD MINE
A. O. SMITH CORP.
RINGLING BROS.
RAFLEX

NORTHWESTERN UNIVERSITY
LEARADIO

SOLDIERS FIELD - CHICAGO
FEDERAL COMMUNICATIONS COMMISSION
U. S. COAST GUARD

U. S. WEATHER BUREAU
U. S. FORESTRY SERVICE
U. S. LIGHTHOUSE SERVICE
U. S. GEODETIC SERVICE

U. S. ARMY
U. S. NAVY
U. S. MARINES

AMERICAN AIRWAYS
PAN AMERICAN AIRWAYS
SANTA FE - SUPER CHIEF

These concerns and thousands of other important organizations have chosen RAYTHEON tubes as the result of engineering tests and experiences . . . for their superior performance and dependability.

RAYTHEON PRODUCTION CORPORATION
NEW YORK • CHICAGO • LOS ANGELES • ATLANTA • NEWTON, MASS.

NOTICE: If you have not obtained RAYTHEON'S interchangeable Tube Chart, it is important to get one of those cards at once from your RAYTHEON jobber. Speeds up radio repair service and simplifies your tube stock by elimination of a large number of types.



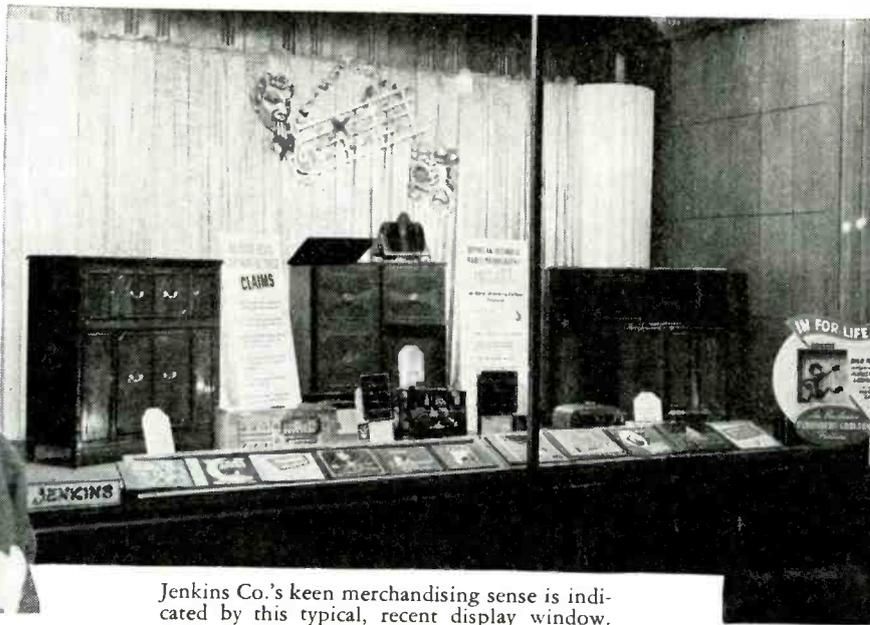
RAYTHEON
RADIO TUBES

DEVOTED TO RESEARCH AND THE MANUFACTURE OF TUBES FOR THE NEW ERA OF ELECTRONICS

RADIO RETAILING Combined with RADIO TODAY, June, 1942



E. J. McGRANNAHAN, Manager,
Retail Appliance Department



Jenkins Co.'s keen merchandising sense is indicated by this typical, recent display window.



AVERY FOUTS, Service Manager,
has numerous expert assistants

How a large radio and music house is handling service business

By careful planning, Jenkins Music Company, Kansas City, Mo., has geared itself for the day when new radios are gone.



● EMIL VOLKART, serviceman, explains Jenkins' price policy: Free estimates on any set . . . Minimum \$1 charge for repair work needing only a few minutes; \$1.50 an hour for work taking longer . . . Minimum \$2 charge for outside call on any type or size of set . . . \$2 hourly service charge for repair work done in home.

● JIM LAURENCE, serviceman, testing a chassis. Jenkins has all modern test equipment, with each piece mounted so it can be used anywhere in shop—preventing bottlenecks. Factory parts only are used and good inventory is maintained. Jenkins takes advantage of Stromberg-Carlson 24-hour service on factory parts to speed deliveries. →

● You've heard of Jenkins Music Company of Kansas City — they're one of the nationally known names in radio retailing. Hence their action in building greater service business has more than ordinary interest.

Says Mr. E. J. McGrannahan, manager of Jenkins Retail Appliance Department, "As the time approaches when new sets will be completely gone, we find our service and repair business jumping rapidly.

"But our greatest current problem in expanding this department is the shortage of skilled manpower. We are attacking this problem by hiring

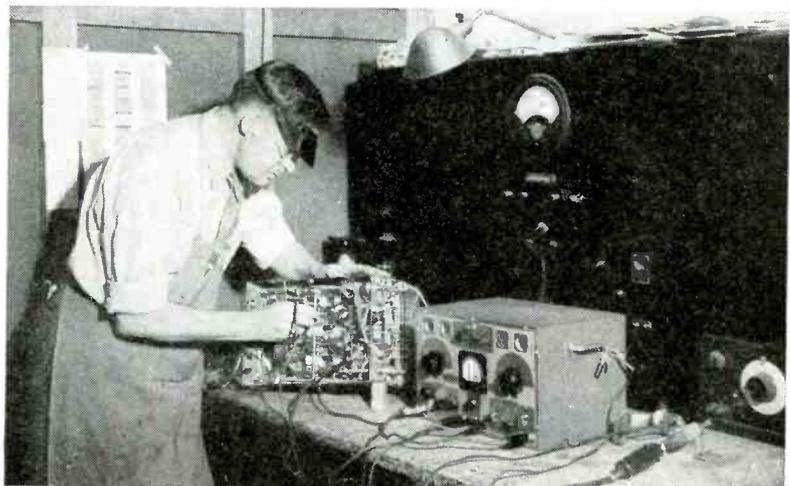
students and training them, and by taking men beyond the draft age who can qualify. *We are also experimenting with women to sell tubes and parts, and for shop repair work. This is proving very successful.*

"A service business hinges on thorough workmanship. Practically every set needs small adjustments in addition to the trouble reported. To fix these you have to charge a price that will let you continue to do good work. This doesn't mean gouging. A fair price will cause satisfied customers to recommend you — and that's how business grows."

IN RADIOS, TELEPHONE, SOUND SYSTEMS . . . THERE IS NOTHING FINER THAN A

STROMBERG-CARLSON

ROCHESTER, NEW YORK





"Be It Ever So Humble—
There's No Place BUT Home This Summer."

So advertise Station WABC, N. Y., in this year of shortages in tires, gasoline, and railroad and bus transportation.

Collect Your Money

Today most of the costs of doing business seem beyond the control of retailers and radio business men. But exceptions are the matters of credits and collection.

Management can still control the credits it grants, and the efforts it makes to collect money due.

Now that such a large number of people are earning at an increased rate, and buying is free, it is especially important that there be no let-up in the radio man's efforts to "get the money in." Until his dollars are actually in the till, the radio man has had all his trouble for nothing. And the time to get the money in, is when the getting is good.

Diathermy Registration

The plan of the FCC to register all home and professional diathermy and similar short-wave radio medical devices, will have at least two benefits. Prime reason is of course to locate all of these devices, which with a few changes can be converted into powerful short-wave transmitters and possibly be used to communicate with our enemies. Such an illegal use occurred recently in an Eastern city. Fortunately, the spies were apprehended.

THE DISCOUNT MAN

I'm in a hurry, Mr. Smith,
My radio quit today.
There's nothing very wrong with it,
Except that it won't play.

I have a friend in Hackensack
Who knows a man in Maine;
He got it for me WHOLESALÉ and
Shipped it down by train.

Now it's a brand new Blooper-Six,
And still in guarantee.
But I don't want to bother Bill
When he has favored me.

I think it needs a tube, or still
A wire, perhaps, is loose.
A small adjustment, here or there
Would make it reproduce.

I bought it from the factory branch—
You think they'd take it back?
Perhaps you'd better fix it up
If it won't cost much jack.

And so the wholesale discount-man
Is smart, he will insist;
He buys his set, but seldom knows
Conditions that exist.

He has no stock, nor license fees
Entitling him to buy
At prices that are less, you know,
Than paid by you or I.

To say the least, it's hardly fair,
But business has its way
To compensate for merchandise
That's bought without fair pay.

A brand new set, perhaps it is,
Sometimes will have a flaw.
It finds its way directly to
The discount man we saw.

Now servicemen are wise to this—
A boast will stir their ire.
The "wholesale" yarn won't help their
price.
Instead it may be higher.

Remember then, from time to time,
You'll hear of wholesale men,
Who thought they paid *much* less than
you,
But paid more in the end.

T. Leslie Lindsey

RADIO RETAILING COMBINED WITH RADIO TODAY

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

The second benefit of this registration will make itself apparent when post-war television blooms. Nearly every video fan has experienced the annoyance of having the picture program matted out by the un-shielded, and in many cases un-filtered raucous signal from a diathermy machine. Registration of these machines will do much to insure good television reception in the future, since offending machines can then be quickly identified and the necessary corrections applied.

Shocks for Eavesdroppers

I supposed every possible contraption for a radio set had been offered in these pages. But now a soldier in camp has devised something new.

He comes from a farm where electric fences are used to keep cows and pigs away from gardens.

So when the soldier-boy wanted to keep his buddies from using his radio in his absence, he bethought himself of an electric-fence shocking unit. This he so rigged up that any unauthorized dial-twirler promptly got a shock!

Saps Who Buy "Wholesale"

Offsetting recent journalistic claims that "Only Saps Pay Retail Prices," the New York Council on Retail Trade Diversion now estimates that 25 million dollars a year is lost by New York City purchasers in fake "wholesale" transactions. Radio has been the victim of these practices to an extent where such sales by "wholesale" outlets actually exceed sales through retail channels in the NY area.

Misleading practices intentionally followed, inevitably result in loss to the consumer. The report estimates half of the "wholesale" transactions to involve misrepresentations, rolling up a 25 million loss for the saps who think they are buying wholesale!

• The search for new services, new merchandise, new economies, goes on at an emergency rate among the radio men of the nation. Many are still concerned with their vital responsibility to "Keep Every Radio Working" but others of the sales specialists have turned to new lines unrelated to radio. All types of activities, representing the war "moves" of the trade to date, are reported here-with.



HOME DECORATION—The radio and appliance firm, Southern Appliance Co., Memphis, has bought out a paint-and-wallpaper retailer and now sells home modernization for well-paid war plant workers. Herbert Streuli, head of the firm, has hired four new salesmen—veterans in the new lines—to act as "big brothers" to appliance salesmen. Appliances have been moved away from two walls of the store, for new lines display.

CUT OVERHEAD—Suggestions from Modern Appliance Store, Montpelier, Vt., are that (1) Overhead should be sliced, (2) Stores should do best possible job on servicing (getting work and planning it carefully so that a good profit is realized) and (3) Take on any new and appropriate merchandise that's available, whether radio or not. Tone of this New England advice indicates that radio stocks will last a very short time.

SERVICE DRIVE—A girl secretary is now on the phone at Helshro's store, New Orleans, making 10 to 20 calls a day, soliciting service. Calls are grouped in areas to save tires and gas. More than 50 per cent of those called respond, suggestions, and sets are fixed in homes if possible. Housewives whose sets need no repair are asked to give names of friends; prospects are told frankly the store needs business.

MORE FURNITURE—From a state where industrial war work is heavy, and buying power is up, comes a report from J. E. Sheuk & Sons, Harrisburg, Pa., that radio stocks should last till '43. After that, the best bet is thought to be "to sell furniture and home furnishings and to promote radio service." Thus the shop continues concentration on homemakers, many of whom are already on the store's list of acquaintances.

RE-VAMPED SETS—Reconditioned radios get top attention at A. C. Denny Radio Co., New Orleans. Mr. Denny now has waiting list for newer models; realizes 40 to 50 per cent mark-up on average sale. He gets the sets mostly from pawn shops, one at a time, but also from auctions and open markets. Keeps around 75 sets in stock, offered with 30-day guarantee. Also emphasizes P.A., and some marine radio.

BETTER RADIO—Aggressive advice from Philadelphia Radio Service Men's Association is for servicemen to stop being "fixers" and to become experts in "finer radio reception." PRSMA points out that no radio owner wants to be without a set now, and radio men should not wait for sets to quit, but should sell hard the idea of regular "tune-ups." Don't talk parts—talk about "a clear new voice for the old set."

WORK FOR U.S.A.—The auto-radio specialists, Krauss Bros., NYC, have transformed their basement into machine shop which turns out small parts for war production, \$15,000 worth monthly. Started with two machines; now uses 35 men working 24 hours a day. Products are used by Army and Navy; both prime and sub-contracts. Depleted radio stocks still displayed, and servicemen continue with auto-radio service.

It's YOUR MOVE...

TWENTY-FOUR POSSIBLE STEPS TO TAKE TO STAY IN

GAMES AND TOYS—Eye-catching "Game Room" has been set up in the Haynes-Griffin store, NYC, showing some 200 games and "toys" and keeping the firm in home entertainment business. Items range from \$2 to \$25; the assortment recognizes current vogue for gambling games and those with "war" nature. All are appropriate for those thousands who will now spend more time at home rather than driving around.

MANUFACTURING—A leading radio and appliance shop (name withheld) in Minneapolis, Minn., has turned all shop facilities to war manufacturing. The firm has government contracts to produce a small radio and now has extra men working overtime. Remainder of regular stocks still on display, but war contracts take up 90 per cent of store's time. Considerable store re-arranging and study of production costs necessary.

RADIO ALARMS—Adroit use of photo-electric devices in the store—in the window or at the entrance or in the aisles—will call attention to air raid alarm systems now stocked. Light-beam interruptions may be used to set off alarms, turn on lights, start a record playing. Emphasizes automatic nature of the radio alarm devices and provides a good opener for demonstrations of interesting merchandise.

BACKYARD VENTILATORS—Fan units, specially built to give stores and homes adequate ventilation and still be completely “blacked out”, are getting interest among dealers. Particularly appropriate for retailers with some experience with attic fans or larger ventilating units. Small plants working on war orders, whose needs rate priority preference, are now prominent prospects. This merchandise good for coast towns.

TRAFFIC-BUILDER—Dealers draw many new people to their stores by adding dramatic angle to collection of scrap records. Such flashy announcements as “10,000 Old Records Wanted” attract wide attention to the disc counter. There’s no danger of getting too many old records. A stunt that will help worthy charities, build traffic and sell new records, accessories, storage albums, record cabinets, etc.

RECORD ACCESSORIES—Dealers may now prepare to answer new query made by record-buying public—“how can I make my records last longer?” This development follows recent WPB order limiting record production (because of shellac shortage) and puts sales emphasis on “gentle” needles. Record cleaners and brushes, better storage facilities, etc. Special displays of any items that will cut wear and breakage are particularly good.

MUSICAL LINES—Observation at Hippodrome Music Shops, NYC, is that dealers may count on radio stocks lasting longer than planned, because people are not buying at anticipated rate. Otherwise, new lines here are musical so far—odd lots of music boxes, harmonicas and smaller musical instruments—and all records and accessories available. Wants to specialize in type of business which has been the store’s long suit.

LEATHER JOBS—Among smaller items with some chance of surviving priorities is a group of leather-covered products. They entered radio when retailers got started on buying leather-covered cabinets or cases to doll up smaller chassis in different colors. Now they’re extended to record indexes, cigarette holders, jewel boxes, and picture frames (military-colored cloth) designed especially for friends or families of service men.



GLASS AND PLASTICS—“Ingenuity Show” staged by Lewis & Conger, NYC, displayed wide variety of products made from substitute materials. Best bets for radio men were black-out reflector discs of plastics; glass building-blocks for lamp bases, book-ends, etc.; electric fans with Masonite blades and silver-wire windings; plastics ice-cube trays; refrigerator dishes of earthenware, Pyrex and Joaquin-ware; plastic and wood lamps.

WARTIME PLEDGE—Radio men still using the “Wartime Pledge” from February issue of Radio Retailing Today in windows, on counters and on shop walls. Reports indicate that it helps to (1) Identify radio servicing with Victory effort, (2) Give customers an idea of the size and importance of the radio man’s job, and (3) Give the serviceman credit for “bringing in” endless flow of vital wartime broadcasts.

RECORD CABINETS—More expensive record cabinets being featured, to help get new lines out of small-unit-price class. Often in authentic period designs, they have high appeal for buyers of classical records. Can be sold partly on basis of general usefulness and beauty, besides value as record storage unit. Has advantage of keeping dealer on familiar ground as merchandiser of radio-and-record products.

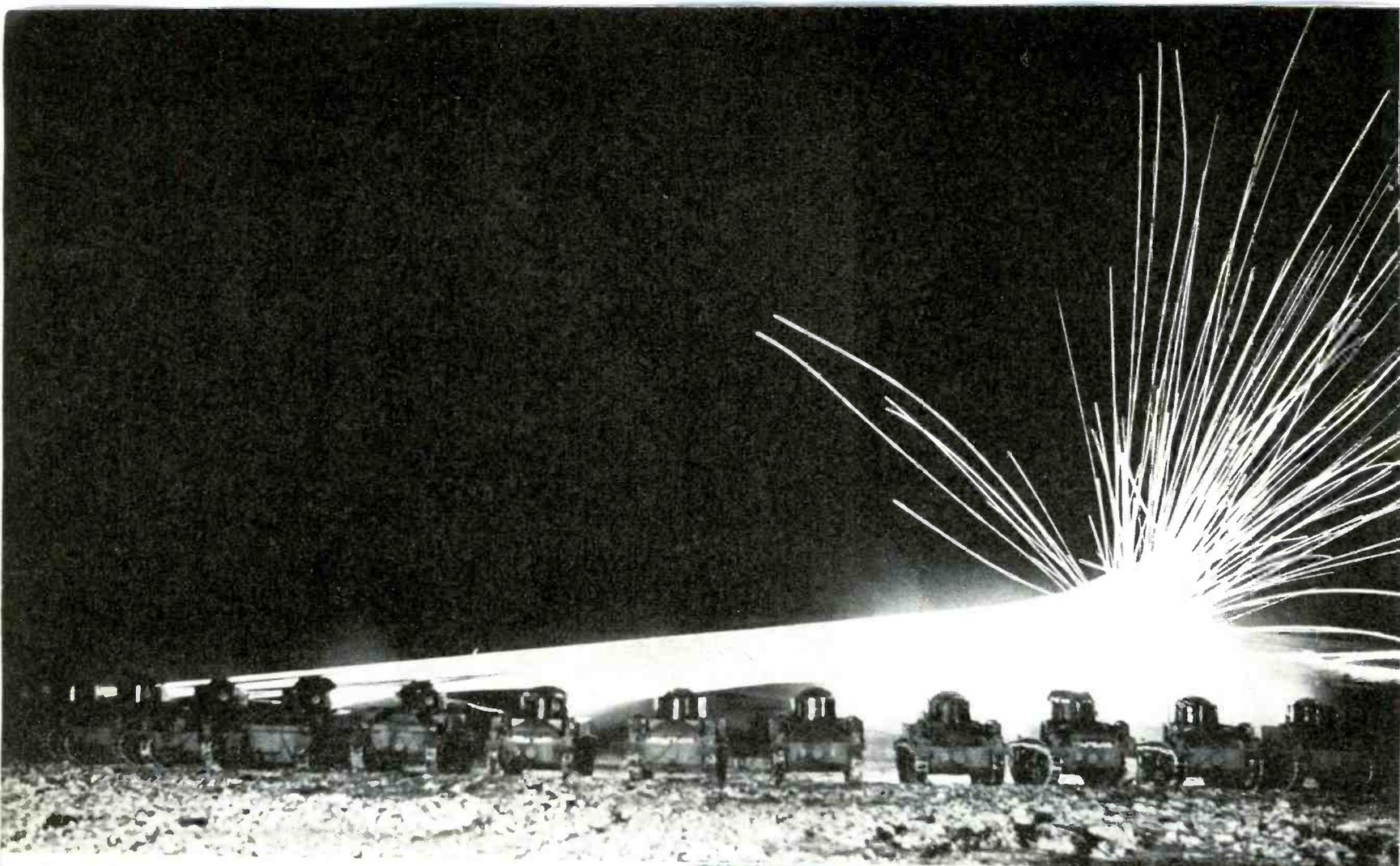
In the WAR GAME

BUSINESS IN FACE OF WAR SHORTAGES

APPLIANCE SERVICING—J. F. McAllister, sales exec of Utah Power & Light Co., Salt Lake City, has won wide notice for 3-ply suggestion on “how to survive.” He recommends emphasis on appliance servicing, farm sales (which get priorities), more development of the home lighting business. Suggestions based on belief that “dealers should stay within their own industry as much as possible and develop every possibility for revenue.”

BACK-YARD PICNIC—Watertown, N. Y., radio dealers co-operated with local Niagara-Hudson power company in a utility window display, counseling passersby to “beware the tire and gasoline shortage” and this summer “picnic in your own back-yard” to the music of a portable radio set or table receiver on a cord extension. Dealers furnished sets for the window, and card carried names of local dealers and services.

BICYCLE REPAIRS—While bicycles “come in” again, demand for repairs and adjustments rises sharply. These matters are mainly simple and can be done by radio and appliance service men, without too many extra tools or machinery. Fits in with service regularly done by dealer on other merchandise. Many bicycle owners these days just starting need more attention than experienced cyclists would require.



Above, the firepower of new tanks zings out its call to Victory, and its call for even more war production of all weapons. Photo by U. S. Army Signal Corps.



Above, the workers at General Electric sign individual "promise" cards for fighting Americans. Cards are hung on factory mural as permanent inspiration.

Below, officials of the Crosley Corp. see the last of peacetime radio 'til the Japs are done in. L. to r., Ben Roe, G. E. Smith, R. C. Cosgrove, J. H. Rasmussen.

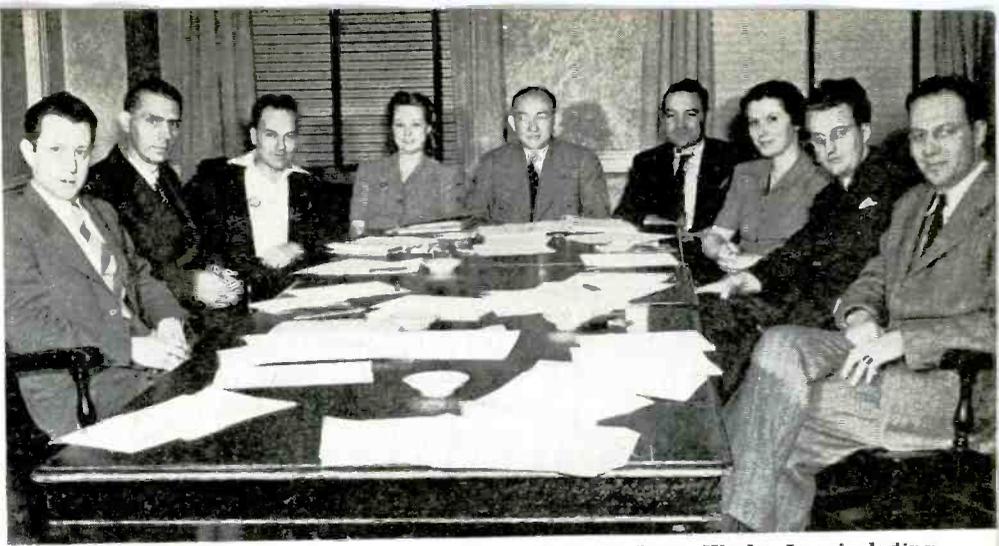


Above, Philco televises the scene over WPTZ as a blood donor shows how easy it is to serve the Red Cross and its "blood bank" campaign for the Army and Navy.

Final wind-up of Recordio production is noted by president C. M. Wilcox, right, and sales head W. L. Hasemeier of Wilcox-Gay Corp. Factory skill now goes to war.

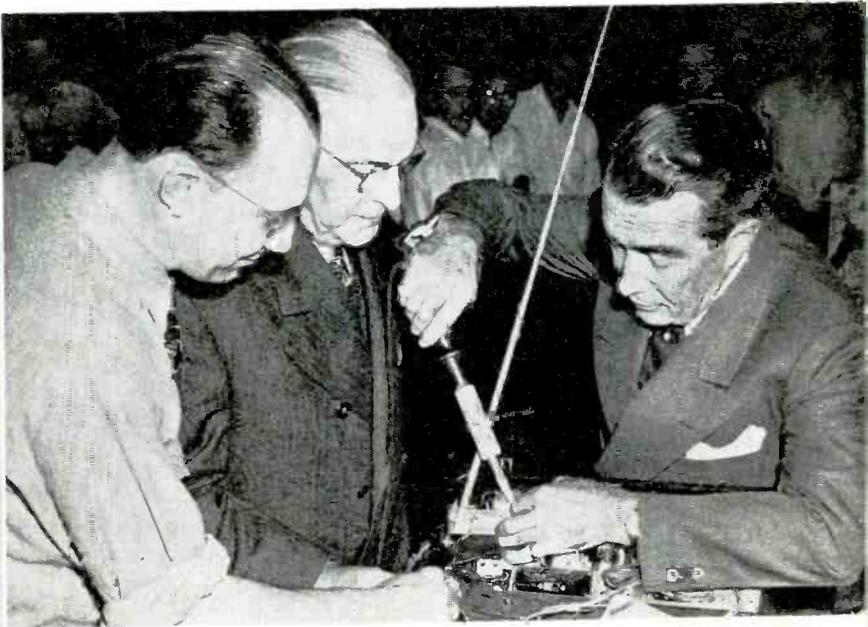


INDUSTRY "CONVERTS" TO WAR



Above, the "Victory" board in session at Tung-Sol Lamp Works, Inc., including company execs and labor representatives who planned big "Army and Navy Day" rally for 2,000 employees. Program brought Army and Navy speakers, Tung-Sol officials and labor heads to address workers at plant, where work is now 85 per cent war production.

Below, RCA Mfg. Co. workers are proud to fly the All-Navy "E" award beneath Old Glory. This plant is the "Beat the Promise" one in war production.



Above, the very last of Zenith portable clipper radios gets its final solder from Commander E. F. McDonald, Jr. Factory now "converted."

Below, "last radio 'til Victory" celebrated at Stromberg-Carlson. L. to R., Jack Pilling, Dr. Eay Manson, W. M. Angle, Lloyd Spencer.



War Tactics



U. S. Army Signal Corps Photo

for Jobbers

“Conversion” by Distributors Involves New Lines, New Activities

• Distributors the country over are getting into new lines, new activities, new interests. They're fitting into the Victory effort and doing their best to stay in business at the same time.

What merchandise, and what new services the jobbers undertake for the duration, depend greatly upon their individual communities. But in most cases they have to take steps of some kind because of the general shortages in radios and appliances.

Highlights of the changes being made in representative areas are presented herewith, to give some indication of what radio's wholesalers have thought of so far.

LINES TO LAST—The well known New Jersey jobber, Krich-Radisco, Inc., is picking new merchandise and activities with a view of continuing them after the war. Among other things, this distributor offers sewing machines for school use and for government use; replacement ice-trays

for refrigerators (made of plastics); and books. On the latter item, Krich-Radisco has done extra work and has expanded a full line of books about music and recordings into other non-musical fields also.

This jobber is active in sound work, too, having recently installed an outdoor paging and announcing system in an Eastern shipyard. Reports are that this yard has greatly increased its efficiency by using the system, since it provides for paging key personnel and for communicating with all employees simultaneously for general announcements.

MORE RECORDS—“We have taken on a new line of phonograph records,” reports George Wedemeyer of Wedemeyer Radio Co., prominent parts distributor of Ann Arbor, Mich., “and we have put more effort behind the sale of certain items that we can still get without priority . . . items which in the past were not considered worth

working on but which do develop a sizeable amount of business.”

Mr. Wedemeyer fails to see much value in a jobber taking on non-radio merchandise, if it is already being properly distributed in his territory, but says that “however, we are ‘on the alert’ for anything that might look likely.”

BIG SOUND INSTALLATIONS—Jobbers' new activity in large-scale public address is illustrated by recent jobs done in the New England area. Raymond Rosen & Co., Philadelphia, have equipped three vessels in an Eastern shipyard with a new system providing instantaneous transmission of messages from any part of the ship to members of the crews.

Erskine-Healy, Inc., of Rochester, N. Y., another RCA jobber, have put in a complete sound system at the Ritter Mfg. Co., giving the plant new facilities for paging, music reproduc-

tion, radio programs and warning alarms, etc.

The Eastern Co., distributors of Cambridge, Mass., are particularly active in sound work. A notable job was recently completed at Ft. Devens, Mass., where this jobber put in a centralized system for linking together the 46 buildings of a hospital. Eastern has also finished a mobile system at Camp Edwards—a 25-watt job mounted on a 2-wheel trailer with detachable speakers on a truck. This unit is used in classes, drills, athletic events, and for announcements and instructions.

HOME FURNISHINGS—More than 60 distributors of the Crosley Corp. have taken on new lines including floor coverings, lamps and lighting equipment, Panelite, wallboards and chests, paint, furniture, china, unpainted wooden furniture, work clothes, phonograph records, coal stoves, ice boxes, mirrors and specialty glass products. They were able to locate appropriate unrestricted merchandise through help from headquarters, and by attending the merchandise shows and exhibits in various key cities. Also a 300-line advertisement

was inserted in the "Business Opportunities" section of the New York Times, and proved to be very effective in locating manufacturers of available merchandise.

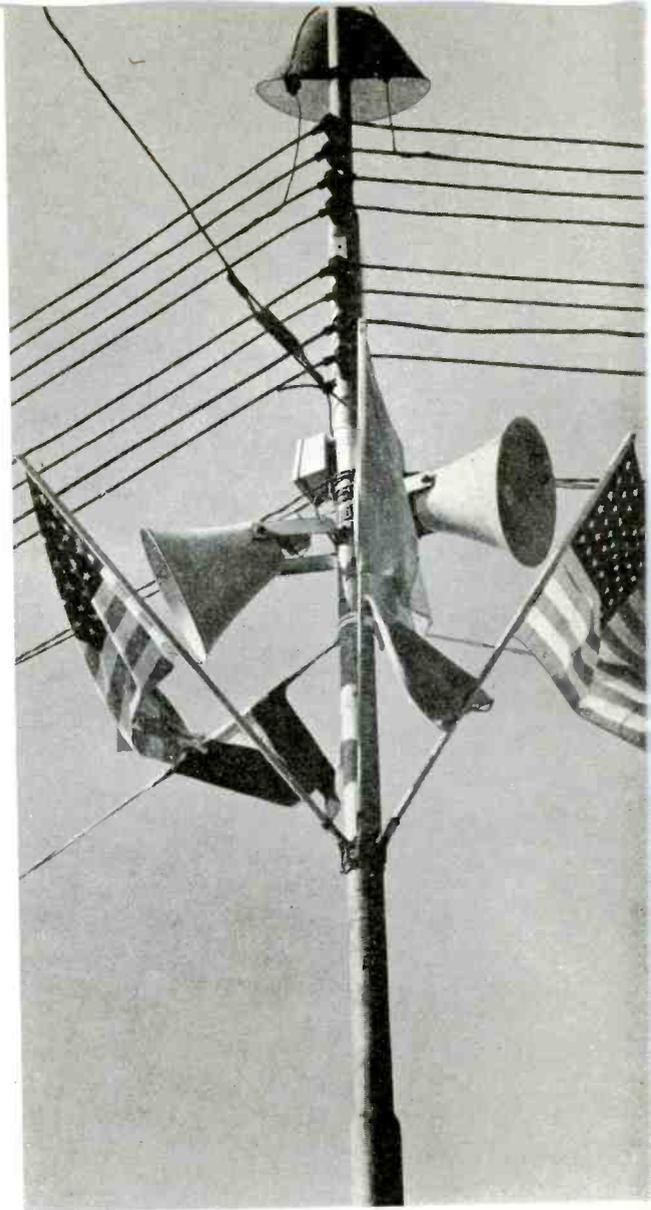
STIRRUP-PUMPS—A Washington, D. C., distributor looks on stirrup-pumps, used for extinguishing incendiary-bombs during air-raids, as a promising line for the radio trade to handle. It is expected that several million such small hand-operated pumps will be authorized for manufacture, and the distribution of these new air-raid protectors, might well fall in radio channels. Gas masks, of which some 20 million may soon be manufactured, offer another item for radio distributors.

CAR-RADIOS FOR WAR-WORKERS—Motorola distribs are directing their dealers' auto-radio sales effort to the "new-rich" class of war production workers. Car-radio buying power has switched from the white-collar class to the new-rich industrial workers who have (1) cash and (2) assurance of continuing tires and gasoline. With speeds limited, such drivers now spend more time in their cars on their daily

Jobber's "countermen" are girls in neat slacks, in latest war move by Radiolab, Kansas City and Wichita distributor. The NYA-trained recruits are shown here with city sales manager A. O. Gray.



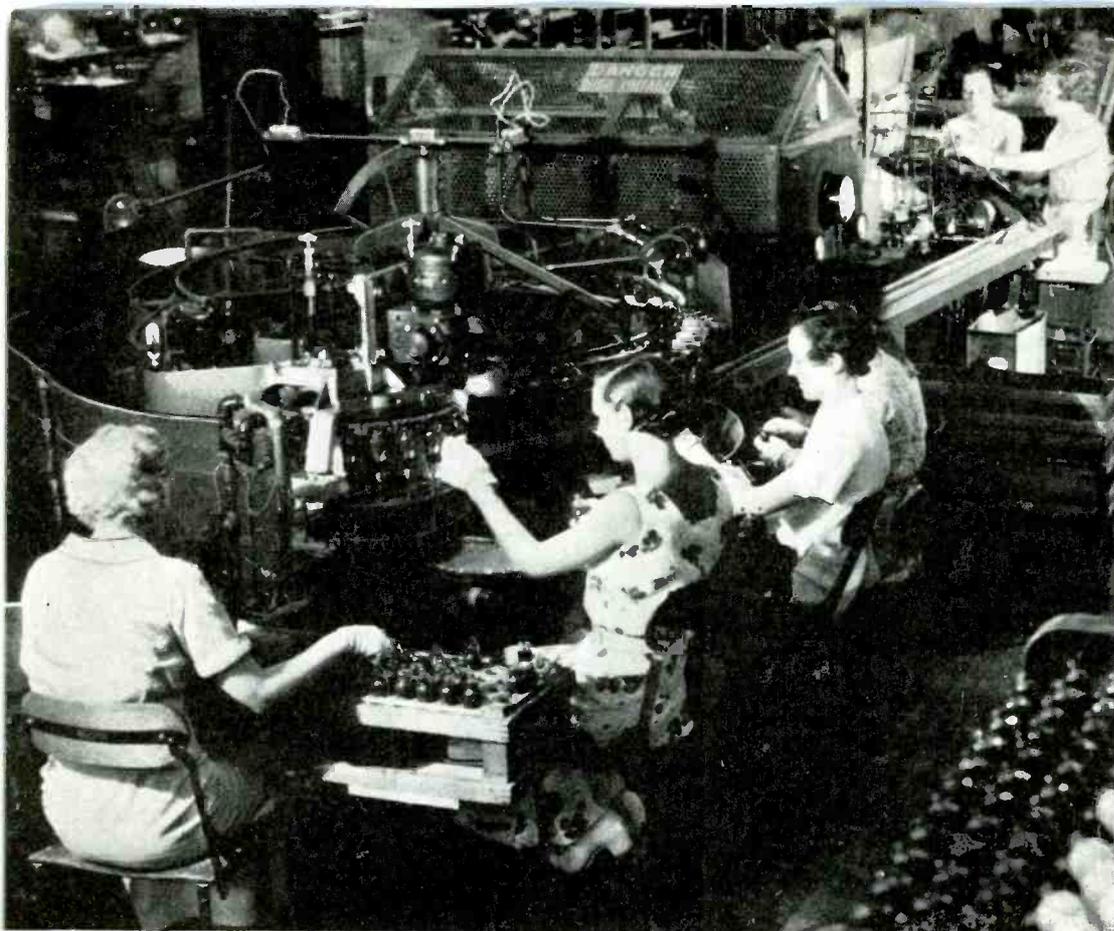
RADIO RETAILING Combined with **RADIO TODAY**, June, 1942



Special sound installations are among wartime activities of jobbers. This is part of Philadelphia job done by dealers Muller & Kelso from equipment supplied by Radio Electric Service Co. University speakers.

trips, and want news and entertainment as they journey to and from work. Auto-radio sales are expected to continue to such war-plant workers right through the war's duration.

SERVICE CONTACTS—The attitude of the southern distributor, The Yancey Co., Atlanta, Ga., is that all radio men should get hep to the importance of keeping their contacts with set owners. This means that they should do a specially good job on service, and as a jobber, Yancey will do its best to help servicemen on this. This distributor expects an increased business in parts and tubes, but is running with a greatly reduced store force. Another thing that will help is to bend all possible efforts toward getting priority orders for sound equipment, on jobs where special ratings are deserved.



Shortwave heating—first applied to “bombarding” vacuum tubes—now has important war uses for hardening metals.

● All around us everywhere are uses of electronics—but without special knowledge, even a radio man is not likely to notice these applications, scattered and concealed as they are, among the things of everyday life.

That elevator you rode up and down in, today, probably has an electronic leveling device, which, after the operator has pushed the button, stops the car automatically at the exact floor level. That traffic-light that halted you, was probably also timed by the flow of electrons through a vacuum tube. The pictures in your newspaper showing yesterday's events in Europe or in the Pacific sector, came to you by grace of electron tubes.

Control lights; operate alarms

Working in cooperation with electrons in photo-cells or “electric eyes”, electron tubes turn on lights when it gets dark, and turn them off again when they are not needed. Such electric eyes also serve as alarms against fire or trespassers, for they respond to the slightest shadows; even a wisp of smoke will serve to ring a bell.

In industrial plants they push doors open for factory truckers, at the approach of the workmen's shadows. Silently and automatically, without impact and without the touch of a human

hand, the door swings open as the trucker comes near it. His mere shadow, falling upon the sensitive plate of a photo-electric cell, has served to control the current that opened the door.

In industry and business it is necessary to match shades of colors with exact, undeviating accuracy. Fabrics, dyed materials, paint samples must be matched, and mistakes cannot be tolerated. Pastes, powders, special items (like coffee and cornflakes) need to be tested for color shades. When it comes to color-matching, the human eye is easily misled (especially the poor, inexperienced *male* eye). But a portable electric color-matcher now effectually solves the problem.

Counting products

Counting is a primary job for the tireless electron tube. Products on production lines are totalled by photo-cells no matter with what speed they whiz past.

In paper mills logs are being counted by electric eyes, automati-

cally, as they flash by. Cans and packages are counted, and faulty labels are instantly detected.

Deposits of valuable minerals, vital to war, are detected by electronic instruments. And down in the Gulf Southwest, oil prospectors, without pointing a drill but with electronic detectors, are definitely locating great pools of petroleum—many feet below the surface of the ground.

The industrial uses of electronic tubes range from safer surgery with “the radio knife” in case of plant accidents, to talking pictures for instruction of plant workers,—from boiler-level alarms to smoke-elimination,—from anti-sabotage alarms to the wholesale extermination of injurious insects that infest valuable food-stuffs,—from railway control to safety devices around dangerous machines. In factory production, electron tubes

Electronic

Unexpected Uses of Electron Tubes

are used to regulate, to analyze, to synchronize, to measure and to grade many commodities.

Industrial Sound Jobs

A new use is for paging doctors in hospitals, or executives in factories. The switchboard operator need give the name only once; the machine will then repeat the name at regular one-minute intervals over loudspeakers throughout the whole building until the person paged *answers*—when the name is automatically erased and paging stops. As many as five persons can be paged independently at one time, with names being separately added and erased as calls come in and are answered.

Recordings have been used to serve costly telephone tolls when long messages or speeches are being sent. The message is first recorded at a speed of 16 r.p.m. and when put on the wire is speeded up four times, to 64 r.p.m. The resulting gibberish, unintelligible to the ear, is again recorded at the receiving end, at 64 r.p.m. When this



record is then slowed down to 16 r.p.m. the speech emerges clear and distinct, with a cost of only 25 per cent of normal telephone tolls.

In modern war plants, electronic apparatus of the sound-amplification class plays an invaluable role in inter-communicators, alarms, anti-trespasser protection, air-raid signals, and music played during working hours.

Music for industrial plants, played from loudspeakers scattered through the workrooms, speeds up production and stimulates morale.

Benefits to Employees

To secure the maximum of result from the use of music, considerable care must be given to the proper kind of music to play for the workers and the length of the playing sessions. The type of music played during the rest periods, if any, is also very important.

Opportunities

in Communities Everywhere



ELECTRON TUBES AS WAR-WORKERS

- | | |
|------------------------|--|
| Anti-sabotage Alarms. | Infra-red photo-tube relays. Capacity relays. |
| Counting products. | Photo-tube and capacity-relay controls. |
| Door-openers. | For industrial trucks, delivery doors, etc. |
| Motion Limiters. | Operating cut-off saws, painting sprays, etc. |
| Safety stops. | On punch-presses and other hazardous machines. |
| Temperature controls. | Accomplishing close regulation of heats. |
| Color-matching. | Spectroscopically-accurate comparison. |
| Timing controls. | Simplified interval settings by dials. |
| Welding. | Thyratron or Ignitron control of duration. |
| Short-wave Bombarding. | Rapid and controlled heating, hardening. |

Employees appreciate factory music and generate good will among associates as well as toward management. They consider the program theirs.

Scientific comparative tests show that boredom, characteristic of repetitive-type industry, and workers' fa-

Less fatigue, logically means less accidents, hence, by reducing fatigue music helps toward greater industrial safety.

Benefits to Management

Improved employee relations means greater good will, morale, and team work.

Happy and contented workers mean less turnover, thus providing more experienced employees, and consequently a greater number of potential supervisory and management personnel.

Management is more interested in improved efficiency and better quality, than in greatly increased production.

Labor problems are reduced by timely addresses to employees on the problems and progress of the company's business. These may be recorded for rebroadcast to other shifts.

Aid to Safety

Greater employee safety is possible, because safety messages can be broadcast to the entire organization instead of in groups of employees or by departments.

Employees' interest is stimulated in competitive production activities by broadcasts of winners, and comparative standing of departments.

General announcement features, such as routine messages, recorded safety talks, time and fire signals, etc., to all employees, are added advantages.

Favorable national and local prestige, publicity, etc., can be gained from use of industrial music.

tigue typical of most industries is decidedly reduced by the playing of proper music.

Psychologically the employee gets mental stimulation and pick-up from inspirational, cheerful, bright and lively programs.

Along with security of employment, surveys show that improved working conditions are a very important and desirable factor with all workers. Industrial Music adds a note of rhythm and pleasantness to everyday occupations and is reflected in better employee-employer relationships.

Ends Clockwatching

It also eliminates clock-watching and discourages distracting employee conversations. It adds rhythm and improved coordination to the work, causing it to move faster and easier, according to employees.

Turntable and amplifiers for industrial-music installation at Harrison, N. J. Normally 500 selected records are kept on hand.

Record Salvage Job



In this exclusive photo from Havana, Cuba, the schoolboy Miguel Garcia waits on record customers during after-school hours at the store called "La Estralla." Youngsters can also be valuable in community collection of old records.

● One of the immediate jobs of the record retailer is to shoulder his responsibility in collecting old records.

Salvaging the discarded discs is a key part of record production, since the supply of new records was limited by the shellac restriction order from the War Production Board. In most cases the dealer is now required to turn in a percentage of old records for the new ones he gets, but aside from this need the whole industry will be generally benefited if the dealer organization will now show some energy and enterprise on this score. The general supply of record materials will be greatly improved if the individual merchandiser will do his share in the way of a prompt and effective salvaging program.

Get Going

And in spite of the fact that various patriotic and charity groups are involved in old-record drives, the public is not yet educated fully about the importance of their "forgotten" discs. Fans are throwing them away every day because nobody has told them otherwise. It is up to dealers to help

to get the word to consumers immediately, so that any waste will stop at once.

Just the other day in a downtown record shop in New York City a woman called up to say that her maid had broken two sets of prized records, and she wanted to replace them. The dealer interrupted by advising her to be sure to save the pieces, but the customer replied that she had already thrown them away, not knowing that they were of any value.

Call for Scrap

There are several ways for a dealer to get his customers "in the grove" for the salvage era. Certainly he should cooperate with any patriotic or charity campaign in which his store is considered a unit. But in any case he should see to it that the records are coming in.

One way to collect them is to engage a schoolboy or a Boy Scout on a "commission" basis. He may be some lad who wants to earn extra money during summer vacation, and he should be popular among schoolmates and members of boys' organizations so that he will have plenty of

contacts. He may get clubs interested in the salvage as a group project or he may do the whole job himself, but if he is a wide-awake and aggressive youngster he will get plenty of records for the dealer.

Stunts for Window

Window displays featuring masses of old records are good bets. People are always interested in unusual amounts of merchandise shown in a new way, and it may be wise to conduct a "how many records are there here?" contest if part of them are broken up so that they cannot be counted by the entrants. Similar windows which have been piled full of old radio tubes have been very effective, and the device will likewise work for records.

Some dealers have been able to get lots of old records from dance studios. These outfits wear out a great many popular records because dance music is their business. In many cases they have been stored away because somebody wasn't quite sure whether they were really worn out.

Ask Everybody

For dealers who do any form of canvassing, whether by phone or house-to-house, this method of contacting the customer represents an excellent way to suggest that old records be given up. Often the salvage subject is a good way to approach those customers who need to be reminded of the record shop and its services. It's an excuse to contact inactive fans.

Where the phoning gets results to the extent that the dealer must send a man or a boy out after the records, the pick-ups should be grouped in one area, to get the greatest possible economy in gasoline and tires.

If the retailer does a good job of getting the records in, it will have a plus effect on his store traffic. Some dealers have reported that the matter has already brought folks into the store who were never contacted before. To become a "depot" for old records is to get acquainted with more and more people.

(Continued on page 54)



THE WILCOX-GAY CORPORATION IS PRODUCING FOR WAR—Wilcox-Gay factories

are groomed for the task of producing the weapons of war. Where once Recordio for pleasure was built there now flow the vital implements of war. Every man at Wilcox-Gay has tackled this colossal job with the enthusiasm and grim determination that characterizes free men.

PLANNING FOR PEACE—While hands are busy forging the weapons of war Wilcox-Gay officials keep an eye to the future. Careful plans for the post war period are already in process. The Recordio of tomorrow is taking shape, spurred by the findings of intense research and invention for war. The Recordio of tomorrow is certain to be a "surprise package."

WILCOX-GAY CORPORATION

CHARLOTTE, MICHIGAN • "Producing for war . . . planning for peace"

"Conversion" Faces Dealer

Turning to Servicing. Combining Store Forces.

Many more radio dealers now begin to see the pattern which their businesses must take "for the duration." But all too few have made any very definite plans, or are actually seizing the initiative, forcing the issue.

It is inevitable that some small businesses will "fold their tents, like the Arabs, and as silently, steal away."

Those who have neither the spirit, nor the ability, to solve the problem of preserving their business integrity, will be little missed when they go.

Those radio retailers to whom radio was "just another line,"—a "leader" to lure new accounts to their stores,—should now close their departments and forget about radio.

Though radio production for civilian use has ceased, and stocks are restricted, still the *real* radio dealer is not going to pass out of the picture.

Radio servicemen and organizations will find their business on the upswing.

Some enterprising dealers have even created maintenance "routes," covering these routes at regular intervals, and on a monthly fee basis.

Taking On New Lines

But beyond the merchandising of their service departments, dealers will be seeking new lines of merchandise to sell in their stores.

There are, of course, many types of merchandise which can be sold. But

"No, ma'm, he's not bothering me?"

radio dealers will make a serious mistake if they just "take on" other merchandise, as they have long been accustomed to "taking on" another brand of radio.

Many factors should be carefully considered before you take on any other merchandise.

You know all the "tricks" of the "radio game," the sources of supply, the "right" distributors and "lines"—and how to sell.

Every other type of merchandise has *its own* "tricks" and sources of supply, and "right" distributors.

If you don't know them, as you do radio, you'll learn them the "hard way" and perhaps, the sorry way.

But even if you *think* you know where to get, and how to merchandise the contemplated outside line, look again, before you take the step.

Study Market Intensively

Look around, and see who is distributing this merchandise, in your area. Are they doing a good job and are they satisfied, themselves?

Is the distribution adequate to meet the demand? If not, why not?

Are the retailers now handling this merchandise unaware of the opportunity which you think exists to sell more? Or are there some other reasons why they are apparently asleep, which you do not know about?

Why do you think you can do a better job than those who now are (and for long have been) handling this merchandise?

Think again, and see if you are still sure you can do a better job in a line you don't know, than are those who do know it.

Perhaps you can. It has been done before. If you're sure, go ahead, and give it everything you've got. But if there are reasonable doubts, take it easy, until you *are* sure.

Many, who have given serious study to the situation which now confronts many businesses, in general, and radio retailers in particular, are of the opinion that consolidation, or merger, with another business of a complementary nature, at least "for the dura-

tion," offers the most logical and desirable answer.

When you give this suggestion serious thought, many advantages become apparent.

Merging with Another Business

First, it brings together personnel who "know their business."

Second, it halves or very substantially reduces, the expenses of both businesses.

Third, it doubles the ingenuity and thinking power of each organization merged.

And there are many other obvious and important advantages which must be quickly apparent to those who study the idea.

To some, the idea of any loss, or merging of identity is repugnant. Forget it!

It's natural, desirable cooperation. Cooperation of two or more people for their mutual advantage. Cooperation, even as the United Nations, large and small, are cooperating for *their* common good.

But of course, there are some who cannot, and will not, cooperate with anyone.

They deserve to keep their headaches all to themselves. And they will.

Basic Considerations

In your plans for the future,—and you must plan,—keep certain basic factors in mind.

First, you can pay your expenses only with the gross margin of your sales.

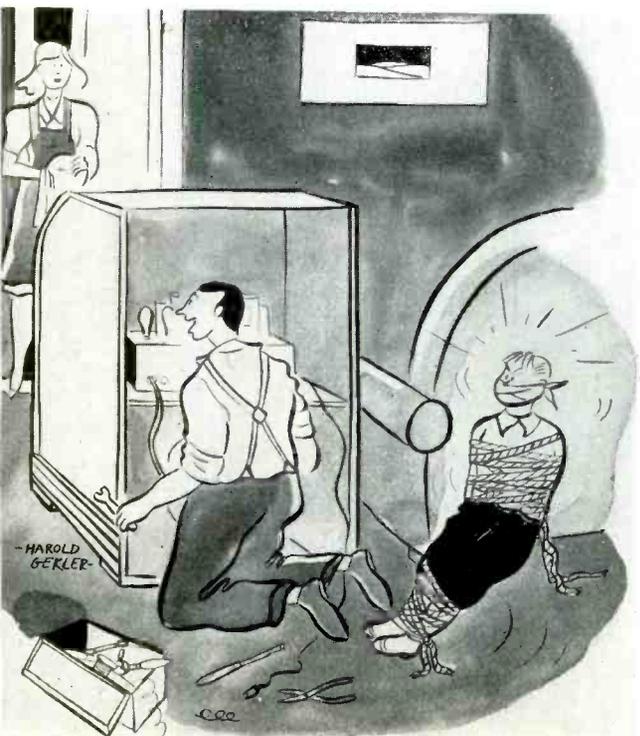
You must have sales, and you must have a gross margin in excess of your expenses.

Second, your "expense-to-sales ratio," that is, dollar expense expressed in percentage of sales, goes up as sales decrease, unless you take definite action to *reduce* your dollar expense. From these facts there is no escape.

You must therefore, plan quickly and certainly, to maintain your sales income, and to control or reduce, your expense outgo.

There are many things you *can* do.

The *important* thing is *do* some of them!



Clear Decks *For Better Listening*

Metal Radio Tubes will clear the decks for better radio reception. 80,000,000 metal tubes are now in use. We make and recommend metal tubes for best performance.

Handle Ken-Rad Metal Tubes and Be Sure of Satisfied Customers.

with
**METAL
TUBES**



KEN-RAD

Metal Radio Tubes



KEN-RAD TUBE & LAMP CORPORATION, Owensboro, Kentucky

Crisis in Parts

Telegraph Survey of Jobbers Reveals Limits of Stocks

• "Present stocks cannot keep our door open for more than 40 to 60 days!"

Such is the typical outcry of the radio parts distributor today. The jobber is out on his own private life raft, with no rescue in sight. He's making reports which say "deeply concerned" and "we can see the end" and he wants action.

A survey among the distributors recently netted a pile of telegrams from all parts of the country. Many of them sounded desperate, except for the fact that these men know how important their industry is in upholding national morale, and they are therefore hoping for relief. We will refer to them as Jobber A, B, C, etc., for obvious reasons, but their resounding words remain intact.

For instance, Jobber A speaks up as follows: "The public will get along without new sets if they can have their old ones repaired, but such repairs are impossible without local stocks of replacement parts being available. Radio is vital to public morale and our war effort. We predict that if the manufacture of radio replacement parts is stopped or greatly curtailed the public attitude will do more to curtail the present war effort than can be conceived at present. A bushel-

basketful of parts will keep hundreds of sets in operation and the government needs the public on its side now as never before!"

However, Jobber A will be out of business in 60 to 90 days, he says, if new restrictions on parts are enforced.

America Must Listen

The telegram from Jobber B says that "we are much concerned about this matter and anxious to help in any way we can to convince the War Production Board of need for parts to keep America's radios in repair. What can we do to help? Without new shipments we would be entirely out of replacement parts within 45 to 60 days."

"Twenty-five per cent crippled now, and it will be 75 per cent in three months!" is the report from Jobber C. Going a little more into the details, Jobber D wires that "Our best estimates are that our present condenser and resistor stock will last three months; coils, four months; tubes, speakers and volume controls, six months; and transformers, nine months."

Also calling his shortages by name is Jobber E: "For many months we have been out of test equipment me-

ters, many types of tubes and condensers, many transformers required by certain sets. On present curtailed basis, have receiving tubes to last forty days, condensers two weeks, volume controls three weeks, resistors one month, transformers two months, speakers forty to sixty days, solder none, soldering irons thirty days, wire thirty days, miscellaneous necessary items not to exceed thirty days."

Dwindling Fast

How the remaining parts stock can be spread out is indicated by Jobber F: "We can only say that should we fill orders giving the quantities desired by those who intend to stay in the service business, our stock would be eaten up in less than thirty days.

"However due to the increasing demand of priorities we have tried to spread out the balance of this merchandise to a greater number of customers in order to keep everybody happy, and in doing so have lengthened the time our stock will last."

Jobber G wires that "We are now completely out of many items, and on others, will be out within the next few days. On many items we carry a very limited stock, depending on the factories to replenish these items to us. As our stocks comprise practically only necessary parts for the repairing of radio receivers, we will be seriously short of necessary parts unless we can secure a limited day to day supply from the factories."

Already Serious

Jobber H has it figured out that "All our fast moving items will be gone within five or six weeks. At the present time we are out of about 15 per cent of our stock. If we were to receive no more merchandise we would be out of 25 per cent of our stock within two weeks and 50 per cent within a month."

Basing his estimate on sales during the past three months, Jobber I reports that "If materials cease coming in, present stock would last 90 days." Jobber J sees the end quicker than that, and says that his stock will last "At current rate of sales over all inventory, 60 to 75 days."

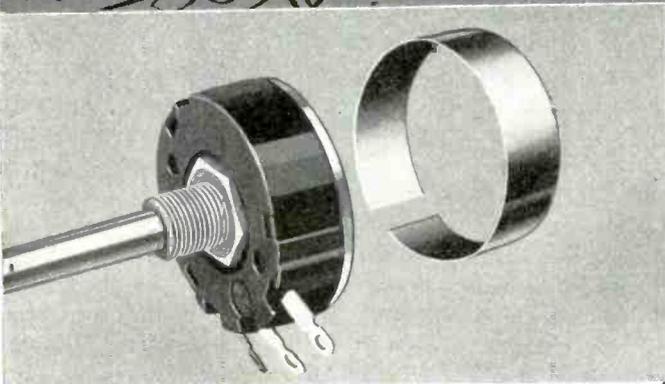


Photo by U.S. Army Signal Corps

Uncle Sam's raw-material and radio demands have caused unprecedented shortages in civilian radio.

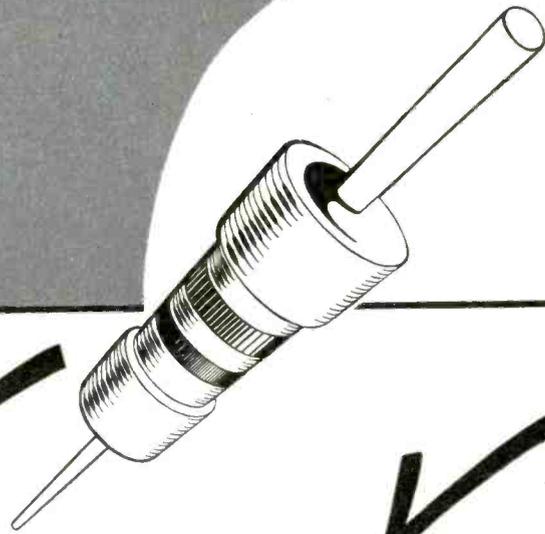
Always

Specify Centralab



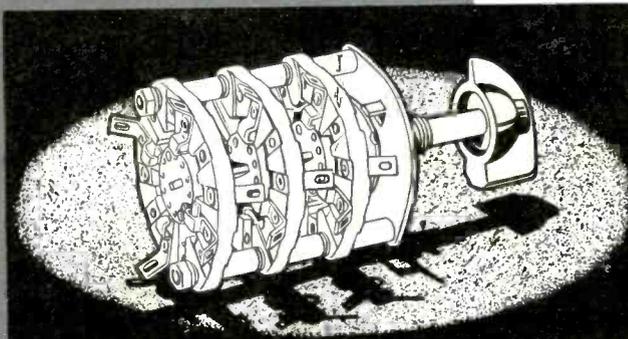
CONTROLS

Featuring the famous WALL TYPE resistor element which hugs the inner circumference of the black moulded bakelite case. Exclusive non-rubbing contact assures quiet smooth rotation and long life. Available in STANDARD, MID-GET AND ELF with or without switch cover.



RESISTORS

Available in two types: RADIAL LEAD and AXIAL LEAD. Both feature a center core of resistance material, surrounded by a dense shock-proof ceramic providing strength and protection against humidity. Core and jacket are fired together at 2500 degrees F: into a single solid unit, hard and durable as stone.



SWITCHES

Both selector and transmitter switches are available in an infinite number of combinations . . . ideal for high frequency circuits with minimum losses.

Most switches are supplied with an "adjustable stop" index . . . permitting the selection of from two to twenty-three positions.

CENTRALAB through every emergency continues to adhere to its policy of "performance plus" at all times.

The slogan "ALWAYS SPECIFY CENTRALAB" which has appeared in our advertising from the very inception of this name is as timely today as it was fifteen years ago.

Today as then . . . there is no substitute for **QUALITY**.

Write for Catalogue No. 23

CENTRALAB: Div. of Globe-Union Inc.
Milwaukee • Wisconsin

Your Lease

Right to Cancel Contract Under War Conditions, as Interpreted by the Courts

• The question has arisen whether, or under what circumstances, a radio retailer may equitably ask for the termination of his lease or the diminution of his rent because of the destruction (or substantial destruction) of the beneficial use of the leased premises caused by statute, government order, or other act resulting from the existence of a state of war.

Although each case must be decided upon its own peculiar facts, the prior decisions bearing upon the question must be considered. There are as yet no decisions in the radio retailing field, so that analogous cases must be looked for in other fields of industry.

In Wake of Auto Shutdown

One of the latest of these cases is *Colonial Operating Agency, Inc. v. Hannah Sales & Service, Inc.*, decided a few weeks ago in the New York Municipal Court. It was there held that an automobile dealer, forced out of business by the Government Priority Orders, was entitled to be freed from the obligations of its lease. The rule governing the case was stated by the court to be that "if a statute is adopted after the making of the lease and it deprives the tenant of the beneficial use of the property—that is, prevents him from using it for the primary and principal service for which it was rented—the lease is terminated although other incidental uses might still be made of it. To say that the lease continued for some other use of the premises would be to make a new contract."

In another very recent New York case, *Signal Land Corporation v. Loecher*, City Court of Queens, the real purpose for which the premises were leased was to carry on therein the business of selling and installing oil burners. This purpose was understood by the landlord at the time the lease was entered into. The tenant's defense to the action, which was for rent due, was that by reason of the OPM priority orders it had been prevented from carrying on its business of selling and installing oil-burners

and that the performance of the lease on the part of the tenant was thereby rendered impossible. The court found that the tenant had sustained the burden of proof.

When Premises Become "Impaired"

In 1939 the Ohio Court of Appeals, in *Buell v. Indian Refining Co.*, 62 Ohio App. 108, 23 N.E. 2d 329, affirmed a judgment for the tenant in an action by the landlord for rent of an oil and gasoline filling station because a bridge, about 1000 feet from the premises, on a road which passed the filling station, was destroyed and the route was subsequently changed, so that it did not pass the leased premises, rendering them wholly unfit for the purpose for which they were used.

In this case there was a clause giving the tenant the option to terminate the lease "if the use of the premises as an oil and gas filling station should be prevented or impaired" by such a contingency as happened. This provision was held clearly to point to the "use" of the premises as a filling station as being the subject of the lease. The tenant, the court said, "wanted the premises for use as a filling station, and for no other purpose. When surrendered to the owners, they could use them for any lawful purpose." And the thing described in the lease, use of the premises for the specific purpose of conducting the business of

a filling station, was impaired by the diversion of the highway.

Going back to the so-called prohibition law decisions, the cases are found to be in conflict. In some of them a distinction is drawn between leases of premises where the use is "permissive" and those where the use is "restrictive." A barroom lease was considered restrictive because the main use could only be for the sale of intoxicating liquors. Under a "saloon" lease the premises could be used as a saloon for the sale of soft drinks, cigarettes, etc.

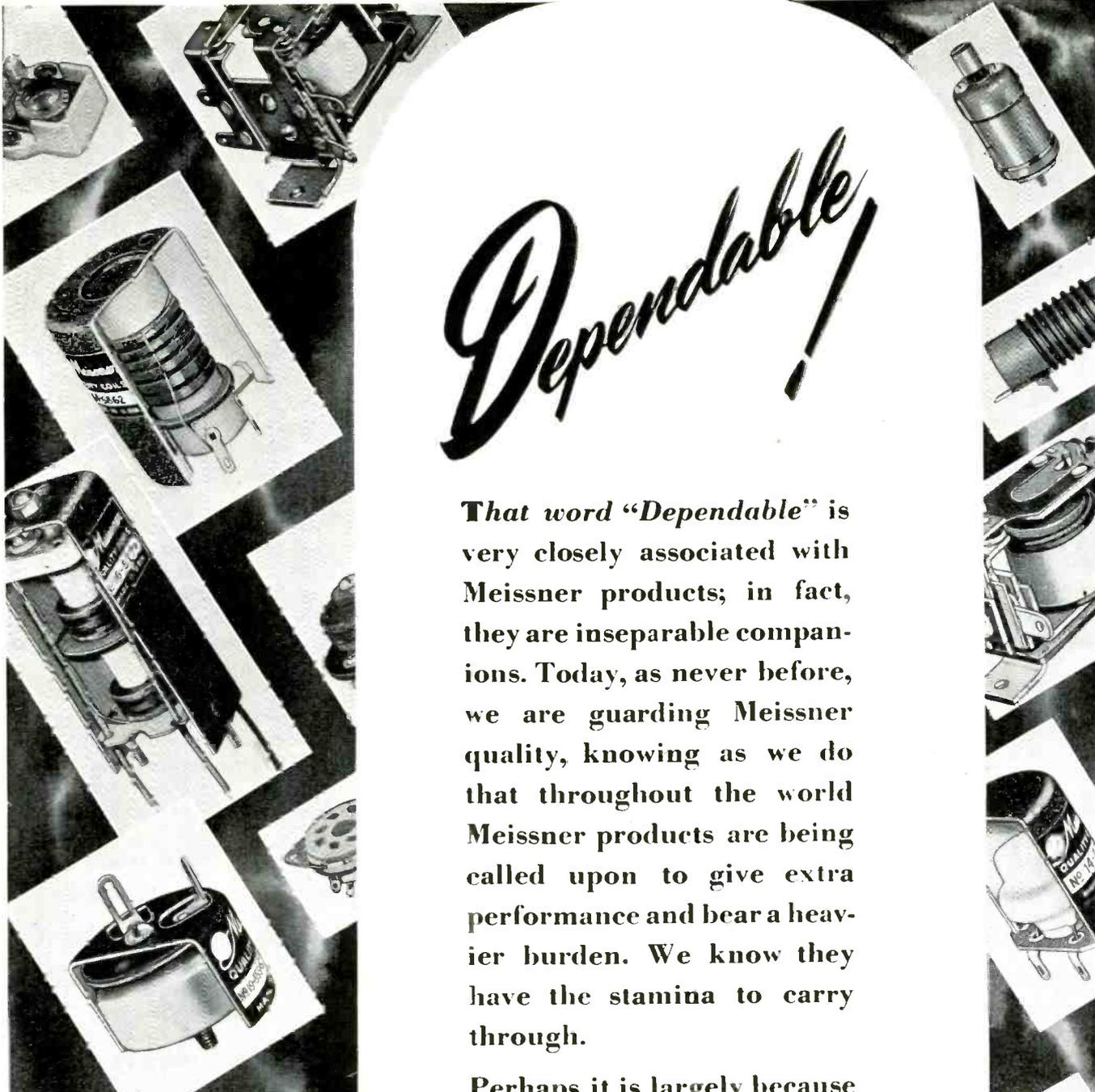
In one of the most recent of these cases, a New York case, *Kaiser v. Zeigler* (1921) 118 Misc. 281, 187 N. Y. S. 2d 638, 641, the court said that "the true rule in such cases is believed to be that if the statute adopted after the making of the lease deprives the tenant of the beneficial use of the property—that is, prevents him from using it for the primary purpose for which it was rented—the lease is terminated although other incidental uses might still be made of it."

If "Primary Use" Is Prevented

The adjudications in England and the United States on the subject of the right to terminate a lease on account of causes produced by the existence of war or the acts of military authorities in the prosecution of a war, left the question still an open one. Summing up these decisions in 1870, the South Carolina Supreme Court, in *Coogan v. Parker*, 2 S. C. 255, took the position that the actual destruction of the property by "casualties of war" was not essential as ground for rescinding the lease, but the destruction of the possibility of a beneficial use such as was in the contemplation of the parties to the lease, is sufficient ground for such rescission. An agreement to pay rent, the court said, "is controlled by the nature of rent. If the conditions under which rent accrues do not exist, there is nothing for either an agreement or a covenant to pay rent to rest upon." But in this case the court disallowed the tenant's offer to prove that he was prevented by the casualties of war from using the premises for the purpose contemplated by the lease, use as a coffee house, because he did not rescind the lease and so far as appeared he might have abandoned the premises without sufficient cause.

The Courts Have Ruled that

- An automobile dealer, forced out of business by Priority restrictions, was entitled to be freed from his lease obligations.
- If a statute adopted after making of lease, deprives tenant of beneficial use of premises, the lease is terminated.
- An oil-burner dealer, sued for non-payment of rent, was sustained because OPM restrictions made lease invalid.
- A gas-station lessee might properly cancel his lease, because a nearby bridge was destroyed, diverting auto traffic.



Dependable!

That word "Dependable" is very closely associated with Meissner products; in fact, they are inseparable companions. Today, as never before, we are guarding Meissner quality, knowing as we do that throughout the world Meissner products are being called upon to give extra performance and bear a heavier burden. We know they have the stamina to carry through.

Perhaps it is largely because

Radio Pricing Under OPA

• Few difficulties were encountered in radio pricing as radio men began to practice the details of the General Maximum Price Regulation which went into effect May 18. Officials of the Office of Price Administration carried the program vigorously into the field, holding meetings, answering questions, establishing regional offices, and outlining correct procedure for all types of retailers.

OPA emphasized an 8-point pricing formula, to help dealers determine ceilings in all cases. It starts with the basic requirement that today's ceilings should be the "highest delivered price in March 1942 for the same goods." If a retailer did not deliver in March an item which he now carries, he goes to the next step in the progressive formula, and so on. The eight steps are shown on this page and serve as a general guide in determining complete price lists.

Seasonal Stuff

For dealers who were wondering about what price ceilings would apply to seasonal merchandise which they were not selling in March, the OPA has issued a special order to cover it. Such products as room coolers, electric fans and ventilators were probably not sold then, so the seasonal ruling is needed.

This ruling included seasonal clothing, furniture, toys and miscellaneous products and the summer appliances

To Price Goods, Apply Formulas in this Order Until One Fits

1. Highest delivered price in March 1942 for same goods.
 2. Highest offered March price March delivery for same goods.
 3. Highest delivered price in March for similar goods.
 4. Highest offered March price March delivery similar goods.
 5. Highest competitor's delivered price March same goods.
 6. Highest competitor's offered price March delivery same goods.
 7. Highest competitor's delivered price March for similar goods.
 8. Highest competitor's offered price March for March delivery similar goods.
-

mentioned above are classed in the latter bracket. Briefly, the new regulation, No. 142, requires retailers of the seasonal goods listed to obtain maximum prices by applying last "season's" percentage mark-up to a cost figure that cannot be more than the highest manufacturer's price in March and may be less. It went into effect May 18 along with the general ruling.

Another new order issued by OPA gives radio retailers until July 1 to file their price lists with the local War Price and Rationing Boards.

Originally, the General Maximum Price Regulation required these lists to be filed by June 1.

Price Administrator Leon Henderson said that the extension was made "to relieve somewhat the burden of physical work that the Regulation imposes on retailers, especially small merchants whose stocks may contain hundreds or even thousands of items."

July 1 is also the date when the price ceilings on radio service charges take effect, limiting to March levels.

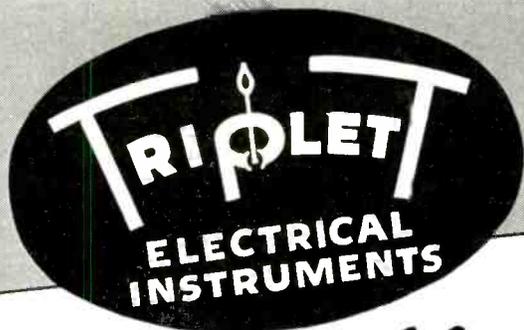
Few "Squeezes"

What retailers should do in exceptional circumstances, to apply for adjustment of abnormally low maximum prices, is also outlined in a new OPA order, but officials say that "we do not expect applications for relief except in the most unusual circumstances." The form to be used in such cases is OPA Form T-1; an original and one copy should be filed with an appropriate regional office of OPA, which office will then investigate the facts.

"Roll Back" Relief

It was emphasized by Leon Henderson that "merchants whose margins are lowered or even eliminated on an article or a group of articles not making up a substantial portion of their total volume must consider it their duty to absorb the difference or to seek relief from their suppliers."

Radio men will also be interested in an interpretation of the Regulation just issued to the effect that "advertising allowances granted by a seller for promotional services rendered by the buyer are not 'frozen' by the Regulation and are not to be consid-



"Portables" Speed-Up War Production Testing

Triplet Portables speed up electrical testing with the dependable accuracy that is a vital part of war production.

And whether your particular interest lies in laboratory service, production line testing, experimental work, field service, or plant maintenance, you will find your need provided for, with exacting and lasting accuracy in the expanded line of Triplet Portables.

In the drive of production-line testing, Triplet Portables supply the full-scale accuracy, the consistent performance, the hair-trigger answers that result from the Triplet method of safe-guarding quality, by making every essential part in the Triplet plant.

If you, like the writer of the letter quoted below, want to back up our armed forces with time-saving production practices, write for complete details on other Triplet Portables, panel electrical measuring and test equipment.

→ →
Excerpt from letter of a prominent manufacturer (original in our files):

"With the Ohm Meter we have on order we can do in . . . seconds, what now takes a couple of hours."



Model 625

Models 625 D.C. and 635 A.C. Portables are unequalled for today's rush in production testing or the rigid requirements of laboratory checking. These highly attractive molded case instruments have long 4.58" hand calibrated mirror scales. The hinged cover closes when instrument is not in use, for added protection. Black molded case for D.C. instruments; A.C. is red. Size is 6" x 5 1/2" x 2 1/2". Has detachable leather strap handle.



Model 425

Another new Portable combining attractive symmetrical case proportions, a long readable scale, and requiring a minimum of bench space when in use. A real beauty in design for those preferring something different. Case and base are molded; base size 5" x 4 3/8". Model 425 D.C. (3.12" hand calibrated mirror scale); Model 435 A.C. (2.88" hand calibrated mirror scale.)

THE TRIPLET ELECTRICAL INSTRUMENT CO.
BLUFFTON, OHIO



Plenty of customers respond to the aggressive promotions of this California dealer. Recording booths and display rooms are at the rear of the main sales floor.

Recorders Hog the Spotlight at Hollywood's "Music City" Store

Glenn Wallich of Hollywood, Calif., enjoyed just average success as a radio dealer until he began to make the home recording business the spearhead of his merchandising. Within six months after he made this decision, his business had outgrown its quarters and he was able to open up an elaborate "Music City" at the corner of Sunset and Vine, the best known intersection in the film center.

Here's the neatly styled corner entrance to Mr. Wallich's Music City, holding its own at Hollywood's best known intersection.



This dealer can sell home recorders, blanks and accessories because he firmly believes the new models to be simple, distinctive, and high quality. His promotion of the products consists mostly of showmanlike advertising and careful demonstrations in the store. Besides the weekly broad-

Southern Jobber Gets Going on Records, Sound & Electronics

What can jobbers do to keep business rolling along? Distributors troubled with "What's going to happen tomorrow" can take a tip from James W. Clary of Birmingham, Ala., who, when the radio parts business is slipping for scarcity of materials, finds it a good idea to sell secondhand phonograph records which he buys from coin machine operators. He uses no advertising at all to sell them, word of mouth advertising doing the trick, and he easily averages \$300 a month in record sales alone.

He also has done a swell job on recording and sound equipment, cutting a lot of records for choirs around town, voice teachers, etc., and has developed a lot of industrial work.

He has also been doing well with the "magic eye", particularly for retail stores, service stations, garages, and

casts, he contacts the local dramatic clubs and gets the members into his "professional" studio; he uses his celebrity friends for stunts at "Music City" and never misses a chance to get acquainted with groups or individuals especially interested in private records of voice or music.

Wallich's organization has increased from four to twenty, and his store has become a mecca for celebrities of radio, screen and stage. He now maintains a recording and broadcasting studio from which weekly broadcasts are heard. The service department and warehouse have overflowed into a separate building.

Mass Appeal

In developing his sales volume, Mr. Wallich has depended upon Recordio, the "home recorder for the masses" made by Wilcox-Gay Corp., Charlotte, Mich. He found that the new Recordio units had many features which helped sales greatly, and that the fidelity of the recordings approached that of professional equipment.

This retailer goes so far as to say that home recording is the key to progress in the radio field today. Sales of these instruments, he says, are not "one shot" jobs; the fans become steady customers for discs, styli, and accessories.

so on to apprise employees of a customer's presence. These magic eyes are installed at the front door of the store or at each end of the filling station or wherever a car drives in at a garage or dealer's service station. As the car passes the ray it is broken and starts ringing a bell.

Clary's jobbing house is located only five doors from the main city post office and with a huge parking lot in back of the store, he can give good service to customers. As a result he has built up a nice drop-in business, cash and carry trade.

"We believe in staying in our own back yard and cultivating it closely to cut down on travelling expenses," Clary explained, "so we stimulate mail order business as much as possible. No job is too small nor too large for us to handle."

NOW

WESTON MODEL 785 INDUSTRIAL CIRCUIT TESTER



**Also Tests
INSULATION
RESISTANCE
VALUES!**



WESTON (Model 792) INSULATION AND CABLE COVERING RESISTANCE TESTER

**... for use with WESTON
Models 785 and 772**

An extremely compact unit, operating from any 100-130 volt AC 50-60 cycle supply line . . . connects into the ohmmeter circuit of Models 785 or 772 by a pair of leads, and provides for resistance measurements up to a value of 900 megohms on the ohmmeter scale. Supplied with Models 785 or 772 on order*. Unit also sold separately for use with instruments now in service.

Already recognized throughout industry as the most complete tool for maintenance test needs, the utility of the Model 785 is now further increased to include insulation and cable covering resistance testing.

Thus this one instrument now serves for checking motor and control circuits . . . lighting circuits . . . sensitive relay circuits . . . communications and electronic circuits . . . and insulation resistance as well. The broad range coverage of Model 785 is as follows:

DC VOLTAGE . . . 0-1/10/50/200/500/
1000 volts—20,000 ohms per volt. (*5000
volt range with external multiplier.)

AC VOLTAGE . . . 0-5/15/30/150/300/
750 volts—1000 ohms per volt.

DC CURRENT . . . 0-50 microamperes,
1/10/100 milliamperes, 1 ampere and

10 amperes (*ranges above 10 amperes
with external shunts).

AC CURRENT . . . self-contained ranges
0-.5/1/5/10 amperes (*higher ranges
with an external current transformer).

RESISTANCE . . . 0-3000, 0-30,000,
0-300,000 ohms, 0-3 megohms, 0 to 30
megohms (self-contained batteries).
0-900 megohms (*with compact Model
792 Resistance Tester described at the
left).

In addition to *wide adaptability* which enables today's busy plants to cut corners and costs in maintenance and other test work, Model 785 also provides the *years of measurement dependability* so typically WESTON. Weston Electrical Instrument Corporation, 581 Frelinghuysen Avenue, Newark, New Jersey.

**Extra equipment on special order.*

Laboratory Standards . . . Precision DC and
AC Portables . . . Instrument Transformers
. . . Sensitive Relays . . . DC, AC, and
Thermo Switchboard and Panel Instruments.

WESTON

Specialized Test Equipment . . . Light
Measurement and Control Devices . . .
Exposure Meters . . . Aircraft Instruments . . .
Electric Tachometers . . . Dial Thermometers.

FOR OVER 53 YEARS LEADERS IN ELECTRICAL MEASURING INSTRUMENTS

RADIO RETAILING Combined with RADIO TODAY, June, 1942



H. L. M. CAPRON,
Merchandising Editor

CAP SAYS:—

Breaks? Luck? PLUCK?

- Many a baseball game has been won by the "break," it's true.
- Ever notice though, that the team with "what it takes" usually forces the "breaks"?
- And so too with radiomen—as with most others.
- Many have been "lucky" you think. Perhaps.
- But vision to venture, plans, and pluck, very often may look to you like plain luck.
- These are tough times and getting tougher.
- Too tough, do you think?
- Then think of the proud Frenchmen—down—but far from out—and realize how tough times *can* be.
- You have real problems before you, demanding answers, to keep your radio business going.
- If you're waiting for "Lady Luck" to force an entrance to your store and chase the problems away, you are doomed to real disappointment.
- Today—it's up to you.
- Concentrate and co-operate.
- Think clearly—plan carefully.
- Act quickly—and surely.
- The "other fellow" may call you lucky—
- But you will know it was plans—and pluck.
- It's late—but not *too* late.

**RADIO PRICING
UNDER OPA**

(Continued from page 28)

and price differentials prevailing in March."

OPA is distributing to dealers the bulletin "What Every Retailer Should Know About the General Maximum Price Regulation," and any radio men who have not received this booklet may get it from their nearest OPA office. Officials are determined that "OPA information and advice will be available to every last store that requests it," although the organization task of the price administrators is enormous.

Regional offices are in Boston, New York City, Cleveland, Atlanta, Dallas, Chicago, Denver and San Francisco,

and state offices have been set up in 16 states. District offices established thus far are in Birmingham, New Orleans, St. Louis, Omaha, Newark, Buffalo, Cincinnati, Pittsburgh, Memphis, Houston, Seattle and Charleston, W. Va.

**All Radio Transmitters
Must Be Registered**

The Federal Communications Commission has ordered every one in possession of a radio transmitter, who does not hold a radio station license for its operation, to apply for registration not later than June 28, 1942.

Previously, the Defense Communications Board had issued an order in which it determined that the national security and defense demand that the Government have knowledge of all persons who possess apparatus equipped for the transmission of radio-frequency

energy, including diathermy outfits, which also must be registered.

A separate application must be made for each transmitter and each application must be sent to the Secretary of the Commission in Washington, D. C. Application forms will be supplied by the Commission in Washington or by any of the Commission's thirty field offices.

**WPB Orders
on Radio**

Considerable stir in trade circles was created when the Inventory and Requisitioning Branch of the War Production Board stated that "we are preparing to take immediate steps to limit all inventories to practicable working minimums." This step was to be taken to provide equitable distribution of merchandise among dealers—a levelling off of available supplies.

Very soon, however, the WPB Director of Industry Operations, James S. Knowlson, said in a special statement that such action was by no means definite, and that further deliberations were necessary. Mr. Knowlson was emphatic in saying that the inventory limitation move contained only "ideas and suggestions, and did not in any sense represent a decision on the part of WPB."

Copper Coming

Other WPB news was that radio parts manufacturers have been given some relief from the copper conservation order M-9-c, which practically prohibited all civilian use of copper after May 31. RMA reported that an extension was granted to July 1 in individual cases to radio manufacturers for immediate and limited production of replacement parts. Such relief had been urged by RMA and conferences with the WPB copper section and also with WPB radio section officials were held with RMA representatives, including Chairman J. J. Kahn of the special RMA committee on replacement and repair parts.

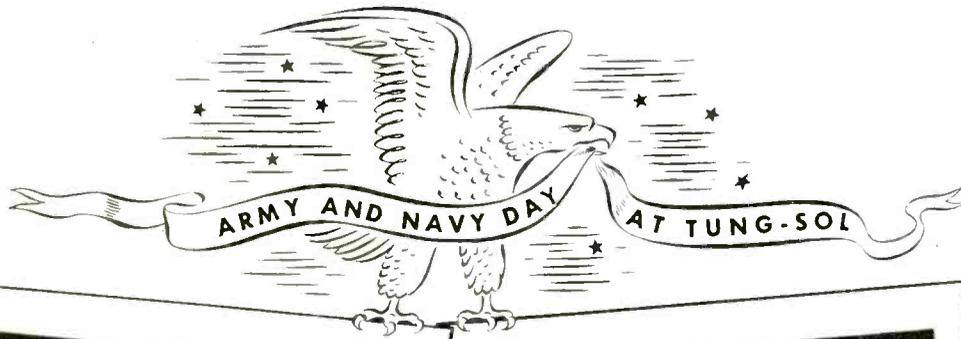
WPB also issued an interpretation of order L-44, which restricts production of domestic radio receivers and phonographs. It expands the definition of a radio set so that it becomes clear that combination receivers and transmitters, television units and blackout devices using vacuum tubes are covered by L-44. Wireless record players are also covered. This order says also that "persons who merely assemble or convert sets which have been produced by someone else are not bound by the restrictions of L-44."

Another new WPB order will soon stop the production of practically all musical instruments. Those containing more than 10 per cent of critical materials are affected. Most instruments are to be finally stopped June 30; pianos and organs July 31.

V

QUALITY STANDARDS

TAKEN IN STRIDE



Army and Navy Officers' visit to Tung-Sol's plants launched a campaign to utilize **TIME • MATERIALS • MACHINES** with utmost efficiency in order to produce lamps and radio tubes **IN THE QUANTITY • OF THE QUALITY • AT THE TIME** our armed forces need them to win a complete and speedy Victory.

TUNG-SOL LAMP WORKS inc.

FACTORIES: NEWARK, N. J.

SALES OFFICES — ATLANTA • CHICAGO • DALLAS • DENVER • DETROIT • LOS ANGELES • NEW YORK

RADIO RETAILING Combined with RADIO TODAY, June, 1942

33

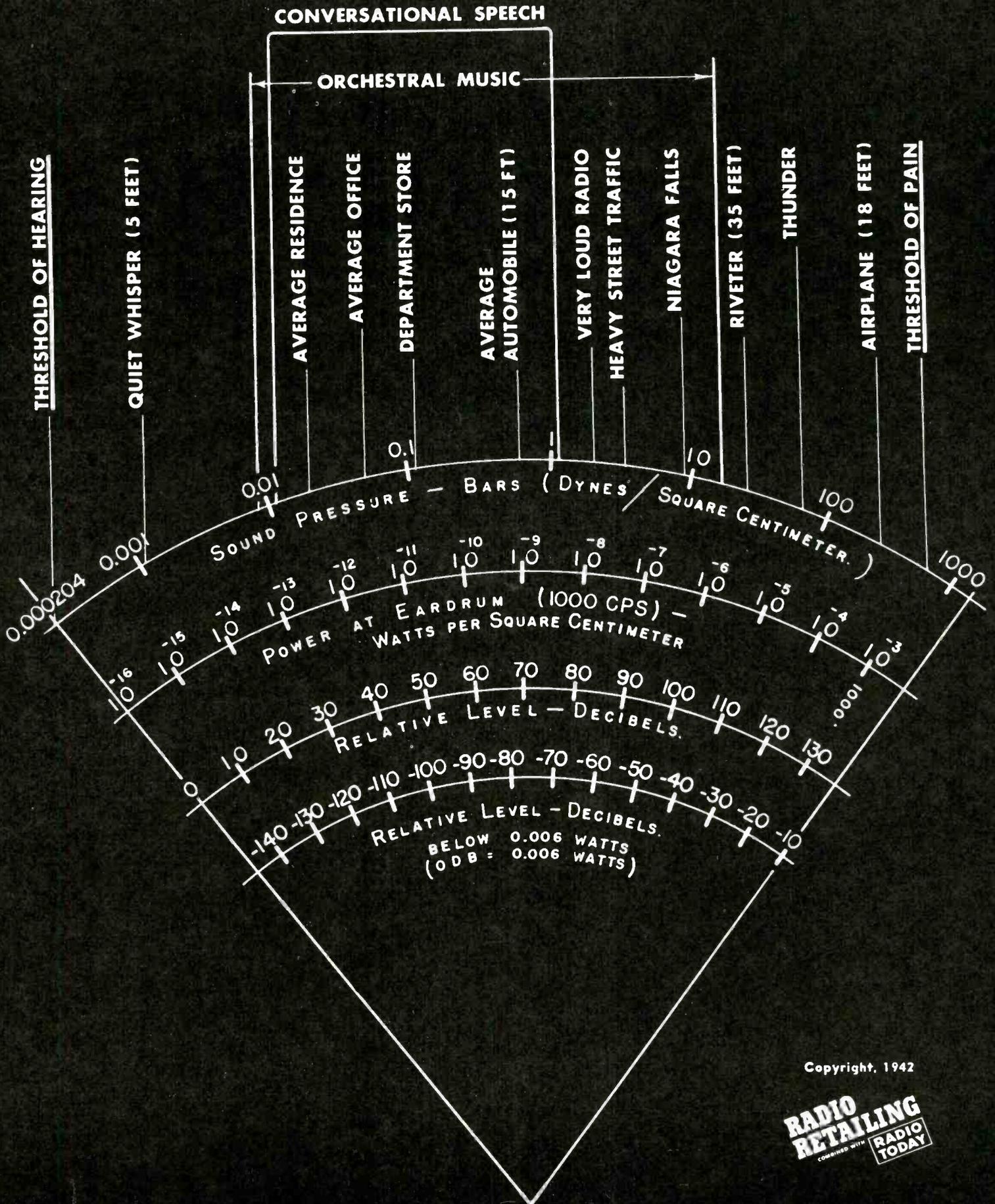
Substitute Tubes

Suggested Types for Use in Replacing
Numbers Dropped by WPB

Tube Types No Longer Mfg.	Remaining and Replacing Types	Tube Types No Longer Mfg.	Remaining and Replacing Types	Tube Types No Longer Mfg.	Remaining and Replacing Types	Tube Types No Longer Mfg.	Remaining and Replacing Types	Tube Types No Longer Mfg.	Remaining and Replacing Types
00A		4A6G	1J6G	6L7		7R7			34
0Z3	OZ4 *A	5T4	5U4G	6L7G			7V7		35-51
	OZ4G		5V4G				7Y4		35A5
01A	30 *B	5W4	5W4GTG	6M8GT	6AB5/6N5		10		35L6G
01AA	"	5W4G	"	6N6	6N6G	WD11	1G4GT *J		35S/51S
	1A4P	5X3	"	6N6MG	"	WD12	"		35Y4
1A5G	1A5GTG		5X4G	6N7G	6N7	WX12	"		35Z3LT
	1A6	5Y3G	5Y3GT/G		6N7GTG	12A	30 *B		35Z4GT
1A7G	1A7GT		5Y4		6P5GTG	12A5			35Z5G
1B4	1B4T		5Y4G	6P5G	6P7		12A7		35Z6G
1B4P	1B4T		5Z3	6P7G	6Q6	12A8G	12A8GT		36
1B4P/951	1B4T	5Z4G	5Z4	6Q6G	6T7G	12B7	14A7/12B7		37
	1B5/255	5Z4MG	"		6Q7		12B8GT		38
	1B7GT		6A3	6Q7MG	6Q7G		12C8		39
1B8GT	3A8GT *F	6A4	6G6G *J		6Q7GT	12E5GT	12J5GT *E	40	
1C5G	1C5GTG	6A4/LA	6G6G *J	6R6G	6K7 *F		12F5GT		41
		6A5G	6A3 *A		6R7		12H6		42
		6A6X	6A6		6R7G		12J5GT		43
		6A7S	6A7	6S6GT	6R7GT	12J7G	12J7GT	45A	44
		6A8MG	6A8		6S7 *F	12K7G	12K7GT		45
			6A8G		6S7	12K8GT	12K8		45Z3
1D7G	1A6 *A	6AB5	6AB5/6N5	6S7G	6S7G	12Q7G	12Q7GT		45Z5GT
	1D8GT	6AB6G	6N6G		6SA7	12SA7G	12SA7GTG		46
1E4G	1G4GT *E	6AC5G	6AC5GT	6SE7GT	6SA7GTG		12SA7GTG		47
1E5G	1B4T *A	6AC6G	6N6G		6SC7		12SC7		
1E5GP	1B4T *A	6AC6GT	6N6G		6SC7GT		12SF5		
1E5GT		6AD5G	6SF5 *F		6SD7GT		12SF5GT		50
1E7G	1F5G *F	6AD6G	6AF6G		7L7 *A		12SF7		
	1F4		6AD7G		6SF5		12SG7		
	1F5G	6AE5G	37 *J		6SF5GT		12SJ7GT		50C6G
	1F6	6AE5GT	37 *J		6S7		12SK7		50A5 *M
1F7GH	1F7G	6AE6G			6S7GT	12SK7G	12SK7GTG		50L6G
1F7GV		6AE7GT			6SK7GT		12SN7GT		50Y6G
1G4G	1G4GT	6AF5G	37 *A		6SN7GT		12SQ7GT		50Z6G
1G5GT/G	1G5G	6AF6GT	6AF6G		6SQ7GT		12SR7		50Z7G
1G6G	1G6GTG		6AG7		6SR7		12Z3		51
1G6GT		6AL6G	6L6 *F		6S57				52
			6B5	6T5	6U5/6G5	12Z5			53
1H5G	1H4G		6B6G	6T7G/6Q6G	6T7G	14			55S
	1H5GT		6B7S		6U5/6G5	14A4	12J5GT *A		56
1J5G	1F5G *E		6B8GT	6U5	6U7G	14A7	14A5		56AS
	1J6G			6V6G	6V6	14B6	14A7/12B7		57AS
	1LA4			6V6GX	6V6GTG	14B8	12SQ7 *A		57S
	1LA6			6V7G	6R7 *E	14C5	14Q7 *L		58AS
	1LB4			6W5G	6X5GT	14C5	14A5 *P		58S
1LB6	1LA6 *F			6W6GT	6Y6G *E	14E6	14C7		64
1LC5	1LN5 *H				6W7G	14E7	12SR7 *A		65
	1LC6				6X5GT	14F7	12C8 *A		68
	1LD5				6X5GT		12SC7 *A		69
	1LE3				6X5GT		14H7		70
	1LH4				6Y3G		14J7		70A7GT
	1LN5				6Y5	6Z4/84 *A	12SN7GT *J		70L6GT
1N5G	1N5GT				6Y5GT		14Q7		70L7GT
1N6G					6Y55				71A
1N6GT					6Y5V				75
1P5G	1P5GT				6Y6G		14Z3		75S
1P6G	1P6G				6N7 *P				76
1Q5G	1Q5GTG								77
	1R5								78
	1S4								79
	1S5								80
	1SA6GT								81
	1SB6GT								82
	1T4								83
	1T5GT								83V
	1V								84/6Z4
2A3H	2A3								85
	2A4G								85A5
	2A5								89
	2A6								95
	2A7								V99
2A7S	2A7								X99
2B6									117L7GT
2B7	2A6 *A								117M7GT
2B7S	"								
2E5									117N7GT
2G5									117P7GT
2S/45									117Z6G
2W3	OZ4 *A								117Z6GC
2W3GT	"								182B/482B
2Y2	2X2/879								183/483
2Z2	OZ4 *A								401
2Z2/G84	"								485
	3A8GT								950
	3B5GT								1232
3C5GT	1C5GTG *I								1852
3LE4	3K56GT *J								1853
3Q5G	3Q5GTG								VR90
	3S4								VR150
4A1									XXD
									XXL
									XXFM

LOUDNESS OF SOUNDS

Relative intensity of common sounds
in decibels, pressure and power.



Copyright, 1942

RADIO RETAILING
COMBINED WITH **RADIO TODAY**

DRY ELECTROLYTICS

POLYMET ALL PURPOSE TUBULAR ELECTROLYTIC CONDENSERS
 These condensers are designed to solve all servicemen problems for filter and bypass requirements. In most cases one or two of these condensers will be the equivalent of a combination block, thus eliminating the necessity of carrying special blocks in stock.



PAPER CONDENSERS

POLYMET TUBULAR TYPE BY-PASS AND FILTER PAPER CONDENSERS
 These condensers are now most widely used by many radio set manufacturers and makers of small electrical apparatus. Their proven ability has given long service under the most trying conditions. If you are used to the best condensers try POLYMET.

SINCE 1921

Polymet condensers bring you the most in quality for the lowest possible prices. Use them anywhere without tear. They will replace much larger electrolytics, providing you the proper capacity and voltage. Simplicity of mounting is accomplished by suspending the units by their leads, making the installation as easy as possible.

CAPACITY MF.	VOLTAGE	Diam.	Length
10	50 V.	1 1/8"	2"
50	50 V.	1 1/8"	2"
100	50 V.	1 1/8"	2"
200	50 V.	1 1/8"	2"
10+10 C.N.	200 V.	1 1/8"	2"
8	200 V.	5/8"	2"
16	200 V.	5/8"	2"
20	200 V.	5/8"	2"
24	200 V.	5/8"	2"
30	200 V.	5/8"	2"
40	200 V.	5/8"	2"
8+8 C.N.	475 V.	5/8"	2 1/4"
8	475 V.	5/8"	2 1/4"
16	475 V.	5/8"	2 3/8"
8+8 C.N.	475 V.	3/4"	2 3/8"

POLYMET DUAL COMBINATION BLOCKS

CAPACITY MF.	VOLTAGE	Diam.	Length
20+20 C.N.	200 V. (3 Leads)	7/8"	2 1/2"
20+20 S.S.	200 V. (4 Leads)	7/8"	2 1/2"
30+20 C.N.	200 V. (3 Leads)	7/8"	2 1/2"
40+30 C.N.	200 V. (3 Leads)	7/8"	2 1/2"
50+30 C.N.	200 V. (3 Leads)	7/8"	2 1/2"
8+8 S.S.	475 V. (4 Leads)	7/8"	2 1/2"

Polymet paper condensers are first choice when space, cost and long service are required. Their heavy duty type construction plus adequate insulation and sealing make them ideal for tough service jobs. Two of these units fastened together with tape make an ideal replacement, for hard-to-get dual paper blocks.

CAPACITY MF.	VOLTAGE	Diam.	Length
.002	500 V.	3/8"	1 1/8"
.005	500 V.	3/8"	1 1/8"
.01	500 V.	3/8"	1 1/8"
.02	500 V.	3/8"	1 1/8"
.05	500 V.	3/8"	1 1/8"
.1	500 V.	3/8"	1 1/8"
.1700 VOLT BUFFER CONDENSERS			
	1700 V.	1 1/8"	1 1/2"
	1700 V.	1 1/8"	1 1/2"
	1700 V.	1 1/8"	1 1/2"

POLYMET "FLAT" DRY ELECTROLYTICS
 Ultra compact units that fit in the smallest spaces. Wax impregnated cases 3/8" x 1 1/8" x 3" approx. Tabs at each end take 6/32 screws. Can be bolted together to form multiple units.

CAPACITY MF.	VOLTAGE	THICK	WIDE	LONG
10	50 V.	3/32"	1 1/8"	3"
50	50 V.	3/32"	1 1/8"	3"
100	50 V.	3/32"	1 1/8"	3"
8	200 V.	3/32"	1 1/8"	3"
16	200 V.	3/32"	1 1/8"	3"
24	200 V.	3/32"	1 1/8"	3"
40	200 V.	3/32"	1 1/8"	3"
8	475 V.	3/32"	1 1/8"	3"
16	475 V.	3/32"	1 1/8"	3"

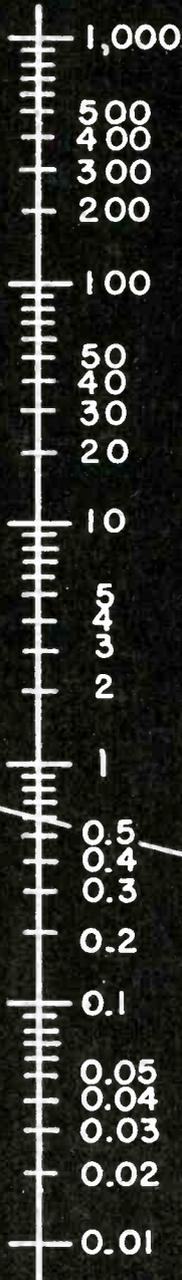
699 EAST 135TH STREET
POLYMET CONDENSER COMPANY
 NEW YORK, N. Y.

Resistor Calculator For Milliammeters

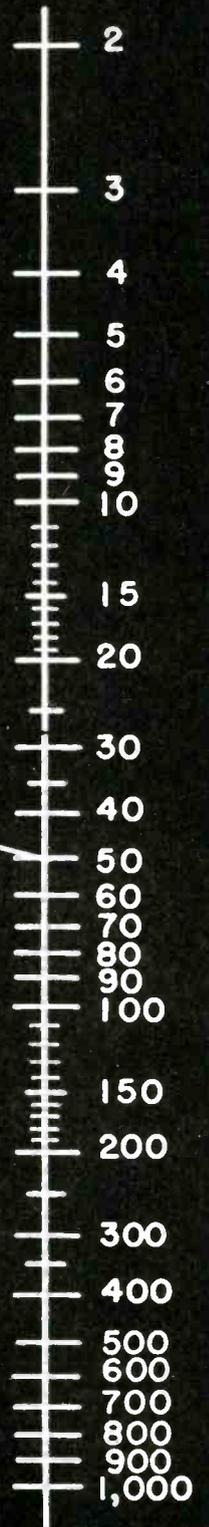
RM OHMS
METER RESISTANCE



Rs OHMS
SHUNT RESISTANCE



M
SCALE
MULTIPLIER

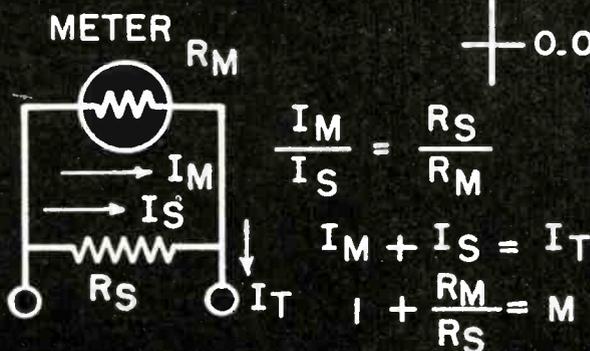


How To Use This Chart

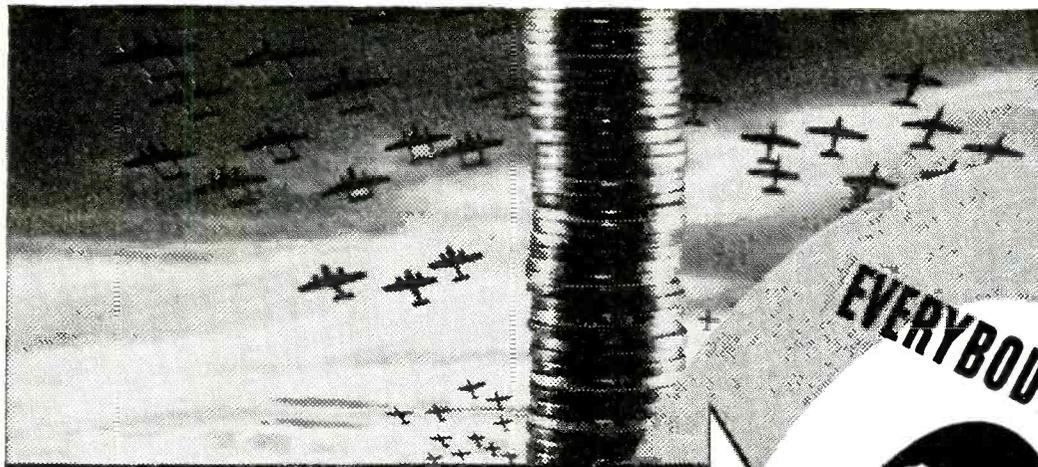
Draw straight line from value of internal resistance of meter (on left-hand scale) to desired scale multiplier value on right-hand scale. Line will cross center scale at value of resistance to be put in parallel with meter.

Example: 0-1 ma. meter with 30 ohms internal resistance to be converted into 0-50 ma. instrument. Dashed line shown connecting these two points indicates on center scale a shunt resistance of 0.6 ohms.

Small values of resistance can be approximated by using short lengths of copper wire. Select wire size to carry current and obtain resistance per foot from wire tables.



RADIO
RETAILING
RADIO
TODAY



New Target for Industry:
**More Dollars Per Man Per Month in the
 PAY-ROLL WAR SAVINGS PLAN**



TO WIN THIS WAR, more and more billions are needed and needed fast—AT LEAST A BILLION DOLLARS A MONTH IN WAR BOND SALES ALONE!

This means a *minimum* of 10 percent of the gross pay roll invested in War Bonds in every plant, office, firm, and factory in the land.

Best and quickest way to raise this money—and at the same time to “brake” inflation—is by stepping up the Pay-Roll War Savings Plan, having every company offer every worker the chance to buy MORE BONDS.

Truly, in this War of Survival, VICTORY BEGINS AT THE PAY WINDOW.

If your firm has already installed the

Pay-Roll War Savings Plan, *now is the time—*

1. To secure wider employee participation.
2. To encourage employees to increase the amount of their allotments for Bonds, to an average of at least 10 percent of earnings—because “token” payments will not win this war any more than “token” resistance will keep the enemy from our shores, our homes.

If your firm has not already installed the Pay-Roll War Savings Plan, *now is the time to do so.* For full details, plus samples of result-getting literature and promotional helps, write, wire, or phone: War Savings Staff, Section E, Treasury Department, 709 Twelfth Street NW., Washington, D. C.



U. S. War Savings Bonds

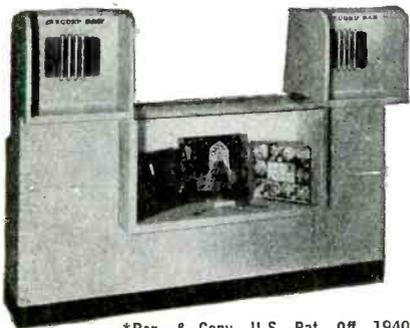
This space is a contribution to America's all-out war program by

RADIO RETAILING-TODAY

For the Duration
No More
Can Be Made

SMALL
REMAINING STOCK
GET
YOURS
NOW

BITTER RECORD BAR*



*Reg. & Copy. U.S. Pat. Off. 1940

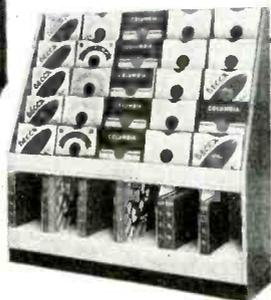
Save time, save space, build volume with Record Bar. Compact, roomy, it places within arm's length everything needed for the record sale. High fidelity amplifier, feather-light pick-up, & sapphire needle assure best reproduction.



BITTER RECORD RACK #100

Attractive, compact, roomy. Holds 500 10", 500 12" records and 75 albums. 2' 10 1/2" long, 7' 2" high, 15" deep. Same design and standard finish (walnut finished birch) as Album Rack No. 110 for use together.

BITTER SELF-SERVICE UNIT



For rapid turnover of popular priced stock. Holds 300 records on slanting face, 16 albums on upright face (not pictured). Stocks 500 records or 75 albums in lower section. 58" high. Occupies but 5' of floor space in center aisle or wall position.

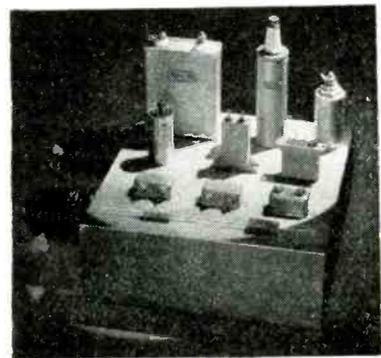
FREE BOOKLET—WRITE NOW!

A. BITTER CONSTRUCTION CORP.

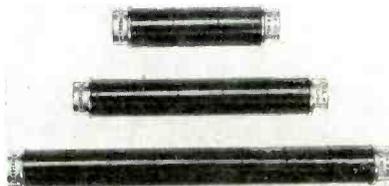
27-01 Bridge Plaza North
Brewster Bldg., Long Island City, N.Y.

New Products

PORT-O-RECORD LINE of portable phonograph record cases includes 2 sizes to hold 10 or 12 in. records and also vary to hold 25 and 50 records. Deluxe case holds 100 records. All wood, strongly built with dove-tailed edges and corners, they are covered with simulated leather, and have leather handles. 10 models range in price from \$3.49 to \$6.98. Smith Benny Sales, 11 W. 42 St., New York, N.Y.—RRT.



G-C STATION CALL LETTER TABS arranged into the most popular state groups. Necessary only to buy what is needed. Available in 4 styles—large horizontal or circle, small horizontal or circle, large vertical, small vertical—for all requirements. Brown sheet, ivory letters. Regular type, 25c per package, translucent type, 40c per package. General Cement Co., Rockford, Ill.—RRT.



WESTINGHOUSE SECTIONAL RESISTOR—individual, hermetically sealed units wire wound around a ceramic spool, with values of from 0.25 to one megohm, rated current of 1 MA. Dimensions are 1 3/8 in. x 1 1/4 in. diameter per section. Adjacent sections are wound in opposite directions to obtain non-inductive resistance. Ends are tapped with a 10-32 thread and connected electrically and mechanically by a screw stud. Available in 7.5, 15 and 30-kv. sizes. Westinghouse Meter Division, Newark, N. J.—RRT.

COLUMBIA MICROPHONES include a super cardioid model C41D finished in polished or satin chrome, and a straight velocity model V41D similar in appearance and finished in gun-metal or chrome. Super cardioid is high quality mike with -58 db output. Available impedances, 30 to 500 ohms. Price \$75. Velocity V41D has output of -60 db. Supplied with 20-foot cable. Price \$45. Columbia Ampli-Vox Co., Middletown, N. Y.—RRT.

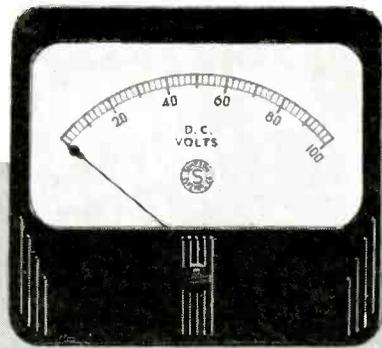
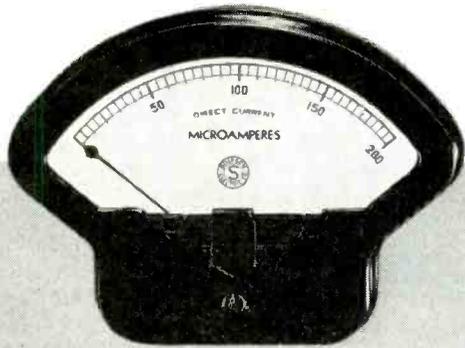
DUNCO LAMINATED FRAME RELAY, CX3318, designed to handle circuits carrying milliamperes at microvolts in radio applications, has sliding contacts. Constructed to withstand extreme vibration. 3 3/8 in. high x 2 in. wide and 2 1/4 in. deep, weighs 9 1/2 oz. Double pole, double throw contacts. Coils are for operation on AC only and are shielded from the contacts. Struthers-Dunn, Inc., 1335 Cherry St., Philadelphia, Pa.—RRT.

SOLAR TYPE XJ high voltage filter capacitors provide wide range of capacities in DC voltage ratings from 6,000 to 25,000. Heavy gage steel containers are welded oil tight and hot tinned. Wet process porcelain Insulators. Vacuum treated mineral oil Impregnant assures low leakage current and negligible capacity change over a wide range of operating temperatures. Illustration shows contrast in size between XJ and smaller capacitors on it. Solar Mfg. Corp., 586 Ave. A, Bayonne, N. J.—RRT.

INDUSTRIAL DECADE CAPACITOR type DK offers a choice of any capacity value from .01 to 11.1 mfd. in .01 mfd. steps. 1 per cent accuracy makes it especially suitable for bridge measurements, filter design & experimental tuned circuits. Walnut cabinet with hinged cover and snap lock. 3 models available: 11.1 total in .01 mfd. steps; 1.11 mfd. in .001 steps; and 1.11 in .001 steps with mica dielectric throughout. Industrial Instruments, Inc., 156 Culver Ave., Jersey City, N. J.—RRT.



FONDA TAPE RECORDER which makes use of non-inflammable acetate film as a permanent reference recording and automatic play-back. Consists of recording and playback mechanism, amplifier and microphone housed in a light-weight carrying case. Jefferson-Travis Radio Mfg. Corp., 380 Second Ave., New York, N. Y.—RRT.



GETTING DOWN *inside* TO CASES

WHILE a good looking instrument case, such as those shown here, may be an outward indication of instrument quality, it is by no means the final evidence.

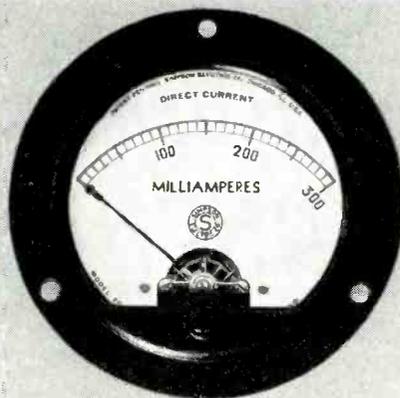
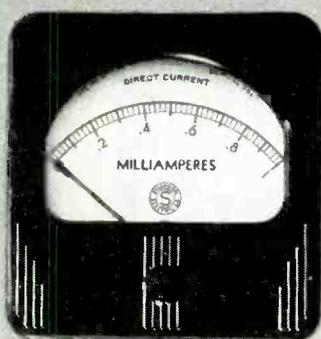
The real measure of instrument quality lies deep inside—in the instrument movement proper. This is the real "works"—where accuracy and stamina take their beginning. And right here is where you'll find the answer to the outstanding success Simpson Instruments have won in just a few years.

The Simpson movement is the basically-better full bridge type, with soft iron pole pieces. The soft iron pole pieces distribute magnetic flux more evenly—make the movement inherently more accurate to begin with.

The two bridges, at top and bottom, lock the moving assembly always in perfect alignment, for lasting accuracy. Springs are carefully selected, tempered and tested—magnets heat treated for permanence—pivots completely Simpson-made, specially processed for strength and hardness—all hand crafted into a balanced, practically frictionless, construction that achieves an extremely high torque to weight ratio.

If your requirements are essential enough to give you the right to buy instruments, they are essential enough to rate the best. Examine the works of any Simpson Instrument, critically, and you will see why, to so many discriminating buyers, best means Simpson.

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

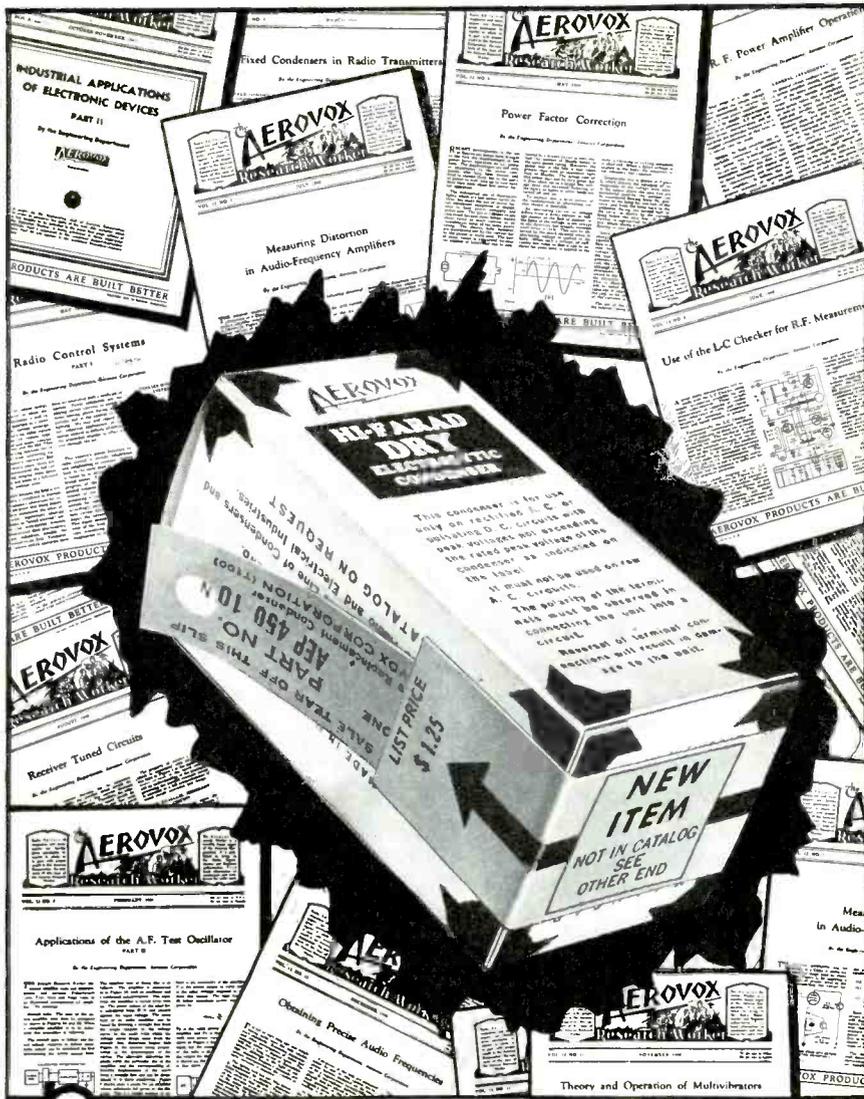


SIMPSON MODEL 260 High Sensitivity Tester

Here is a typical example of Simpson leadership. Ranges to 5000 Volts, both AC and DC, at 20,000 ohms per volt DC, and 1000 ohms per volt AC. Resistance readings from 1/2 ohm to 10 megohms. Decibel ranges from -10 to +52 DB.

Simpson

INSTRUMENTS THAT STAY ACCURATE



Backed by APPLICATION DATA . . .

● Good condensers are always the prime essential in your work. But equally important, particularly in these days of rapidly expanding and diversified scope, is good application data.

That is precisely why Aerovox has persisted in providing GOOD application data as well as GOOD condensers. For the past decade and a half, Aerovox has been issuing its monthly AEROVOX RESEARCH WORKER.

Here is an engineering bulletin with up-to-the-minute, concise, practical, always dependable ap-

plication data. In radio, electronics, industry, this publication reports timely and practical condenser usage for its many thousand engineers, designers, manufacturers, service and maintenance men, communication men, experimenters and other readers.

If you are not already receiving this engineering bulletin, ask any Aerovox jobber to endorse your subscription. It's absolutely FREE—no strings whatsoever—to anyone engaged in practical radio, electronic or allied pursuits. Or write us direct.

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RMA Hears Batt on Production

The Radio Manufacturers Association's first wartime convention was held June 9 at Hotel Stevens, Chicago. With committee groups meeting morning and afternoon, the main get-together was the noon luncheon for members.

President Paul Galvin presented his official report, detailing the industry's all-out war effort, and the supply problems which face radio manufacturers. Treasurer Leslie Muter outlined the financial affairs of RMA.

Speaker of the day was William L. Batt, high official of the War Production Board, who made a special trip to Chicago to tell the radio manufacturers about the important role radio is playing in the war program.

Radio Needs Increased

Mr. Batt warned his luncheon audience that the radio industry, which last year produced \$250,000,000 worth of civilian radios, is now facing the completion of contracts for Army and Navy radios totalling over \$400,000,000, and must make every effort to meet this huge output.

Rapid progress of mechanized warfare, said Mr. Batt, has greatly swelled the demand for radio apparatus. The average tank, he said, carries \$5000 worth of radio apparatus, and a single heavy bombing plane is equipped with \$50,000 worth of the most complex and delicate radio devices.

The day's meetings also included sessions of the various RMA divisions, under their chairmen: Set Division, Ray H. Manson; Tube Division, Roy Burlew; Parts and Accessory Division, H. E. Osmun; new Speaker Division, James P. Quam. Also an organization meeting of the proposed new Transmitter Division in charge of Director W. R. G. Baker.

President Galvin, vice-presidents Manson and Quam, and treasurer Muter were re-elected. New vice-presidents elected were M. F. Balcom, Emporium, Pa.; Ray F. Sparrow, Indianapolis, Ind., and G. W. Henyon, Schenectady, N. Y.

New RMA directors elected were M. F. Balcom, W. P. Hilliard, L. L. Kelsey, and J. J. Nance.

Sylvester Thompson Succumbs to Illness

Sylvester T. Thompson, vice president of Zenith Radio Corp., Chicago, died on June 8th in Oak Park, Ill., after an illness of a month. Mr. Thompson was a prominent radio industry figure for many years and was currently vice chairman of the RMA priorities committee, and a member of the South African Reciprocal Trade Committee.

Other organizations in which Mr. Thompson was active include the Institute of Radio Engineers, Radio Club of America, Society of Automotive Engineers, and the Chicago Association of Commerce.

Radio Victory Dinner at Chicago

A record crowd of several hundred radio men attended the Victory Dinner sponsored by the Sales Managers Clubs, the NRPDA, and the Representatives, at Hotel Stevens, Chicago, June 8. Jerome J. Kahn presided as toastmaster and there were addresses by:

S. N. Shure, *Chairman*, Sales Managers Club, Western Group; George D. Barbey, *President*, NRPDA; Samuel K. MacDonald, *President*, The "Reps"; Paul V. Galvin, *President*, RMA; Bond Geddes, *Executive Secretary*, RMA.

Government speakers were: Frank H. McIntosh, *Chief*, Radio Section of Communications WPB; Ray C. Ellis, *Chief*, WPB Radio and Radar Branch; W. K. Evans, *Priorities Chicago WPB Office*; Albert Waterston, *Economic Analysis Section OPA*; and George Galland, *Attorney*, OPA.

The speakers from Washington assured the radio men present that the Government wants to keep the nation's 60,000,000 radio sets working, but gave no clue as to the solution of the severe copper shortage. Ray Ellis of WPB reported that production of radio equipment is up to or ahead of plane and ship construction, although shortages of materials are holding up most radio factories. The Signal Corps is using 65 models of radio receivers, he said. Radio investment per plane averages \$50,000.

On the Victory Meeting Committee, with Chairman Kahn and Secretary Kenneth C. Prince, were W. A. Kuehl, Jerome Prince and Edward Singer representing the Sales Managers Club; S. W. Berk, Walter Braun, A. D. Davis, Sam Poncher, William Schoning and Ralph Walker for the Distributors Association, and Royal Stemm for the Representatives.

Music Show Cancelled, NAMM Members Meet

Board of Control of the National Association of Music Merchants has decided that the NAMM Annual Convention and Music Trade Show will not be held this year. The action was taken to cooperate fully with the war effort.

However, a meeting of the NAMM members, and a Board meeting, will be held at the Hotel Stevens, Chicago, August 13 and 14. Meetings in connection with other music trade associations are being planned for the week of August 10 except in the case of the Piano Manufacturers Association.

Precision Expands

Precision Apparatus Co., previously of 647 Kent Ave., Brooklyn, N. Y., is now located at 92-27 Horace Harding Boulevard, Elmhurst, L. I., New York. The new quarters are more than three times the size formerly occupied, and all executive and general offices, laboratory, manufacturing and assembly facilities are under the one roof.

WE DID IT BEFORE



THE WAR DEPARTMENT OF THE UNITED STATES OF AMERICA

RECOGNIZES IN THIS AWARD FOR DISTINGUISHED SERVICE THE LOYALTY ENERGY AND EFFICIENCY IN THE PERFORMANCE OF THE WAR WORK BY WHICH

Burgess Battery Co.

AIDED MATERIALLY IN OBTAINING VICTORY FOR THE ARMS OF THE UNITED STATES OF AMERICA IN THE WAR WITH THE IMPERIAL GERMAN GOVERNMENT AND THE IMPERIAL AND ROYAL AUSTRO-HUNGARIAN GOVERNMENT



WE ~~CAN~~ DO IT AGAIN ARE DOING



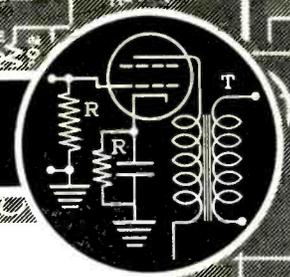
Cited by the War Department for outstanding service to our country in the last war, Burgess Battery Company is again dedicating its men and machines to supplying our armed forces the materials vital to Victory.



BURGESS BATTERIES

BURGESS BATTERY CO., FREEPORT, ILLINOIS





Servicemen Are "Carrying On!"

How to cope with necessary wartime restrictions and still maintain the 60 million radios, which keep our nation linked into a unified group, is the biggest problem ever to face the radio serviceman.

The editors of **RADIO RETAILING TODAY** have checked with large Metropolitan New York service organizations to learn what methods they are putting into practice to deal with the wartime situation.

One of the most important facts discovered was the 100% agreement that the service situation is at present far from being as bad as some indications might point. While tire, gasoline, and parts shortages are serious, they are not crushing.

Enough Supplies at Present

Parts and tubes are present in sufficient volume to give only small concern to managers of these service organizations. There is no frenzied buying to build-up massive inventories. Purchases are logical; designed to fit present and such future needs as can be carefully estimated.

Obtaining experienced servicemen was not a major problem to those interviewed. A rapid turn-over of manpower was admitted, but the vacant positions were filled and well, without much delay. None were employing or immediately planning to use women as service technicians.

Simplifying Calls and Deliveries

To save tires and gasoline, these service organizations make trips to outlying sections of the city only once or twice a week and then only if a number of calls come for the same area. A standing policy which is proving more valuable now, is that of asking customers to bring in and pick-up midget sets requiring service (usually those selling for less than \$20). Other measures put into effect have been those of reducing the warranty service period.

Servicemen are solving their problems through thoughtful planning and action.



SERVICING CIRCUITS

ter, the plate voltage of the 12SQ7 is 35 volts. Other operating voltages are marked on the diagram.

G. E. L540 Series and L580 Service Notes and Circuit

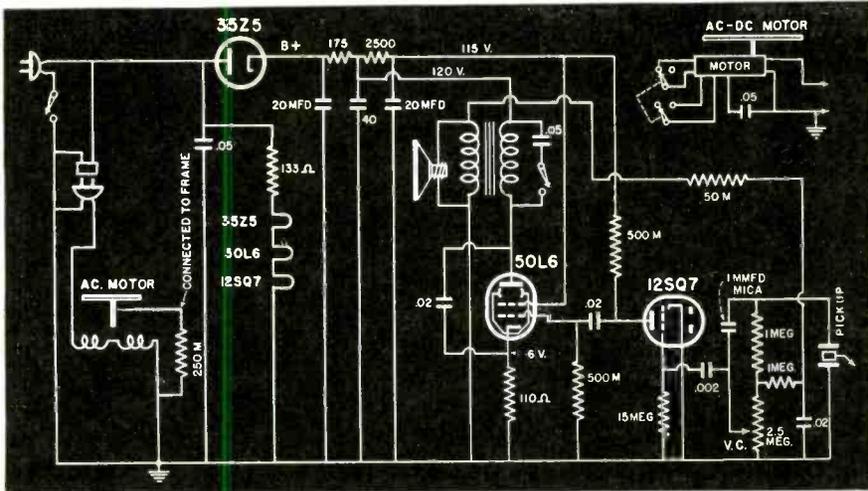
The group of AC-DC sets, L540, L541, L542, L542M, L543M, and L580 have the same chassis with the exception of the direct chassis connection to the chassis of the B— on the non-UL sets. The Underwriter's Labs. approved circuits are 541, 543, 543M, 580. The other models have the 330M resistor and 0.2 mfd. by-pass capacitor omitted from the circuit shown, and in these sets the B— is connected directly to the chassis.

Sets used on 50-60 cycle AC use the circuit as shown but with the 13 ohm resistor in series with the filaments shorted out. For 25-cycle operation this 13 ohm resistor is retained but the lead from the plate of 35Z5GT is connected through the 15-ohm resistor directly to the "hot" side of the line instead of the center tap of the tube filament.

455 KC IF

The IF transformers are aligned at 455 kc. Apply a signal through a 0.05 mfd. capacitor to converter grid and align the trimmers beginning at the diode and working progressively back toward the converter.

The RF end of the set is aligned at 1500 kc. The pointer is moved along the dial cord, with condenser fully meshed, until it is lined-up with the first dial marking. With the dial and generator set at 1500 kc., use a few turns of wire about 10 inches in diameter for a loop antenna on the signal generator. Adjust the oscillator trimmer for peak and also the antenna trimmer for peak. Use as small a signal as possible at all times.



Emerson wired record player models FY-434, FY2-434 employs audio feedback to input circuit of pick-up. See story below.

Emerson Record Player FY-434, FY2-434

These two record player models employ different motors; a straight AC motor in FY-434 and an AC/DC motor in FY2-434. The amplifier circuit of both models is the same. See diagram above.

The 35Z5 rectifier delivers 115 volts to the 12SQ7-50L6 pick-up amplifier. The input circuit of this phono amplifier employs a compensated volume control and feed-back network from the speaker circuit of the 50L6. The higher frequency components of the output are fed back into the voltage divider system connected across the crystal pick-up. A shunt tone control condenser can be switched across the primary of the output transformer to cut response to higher audio notes.

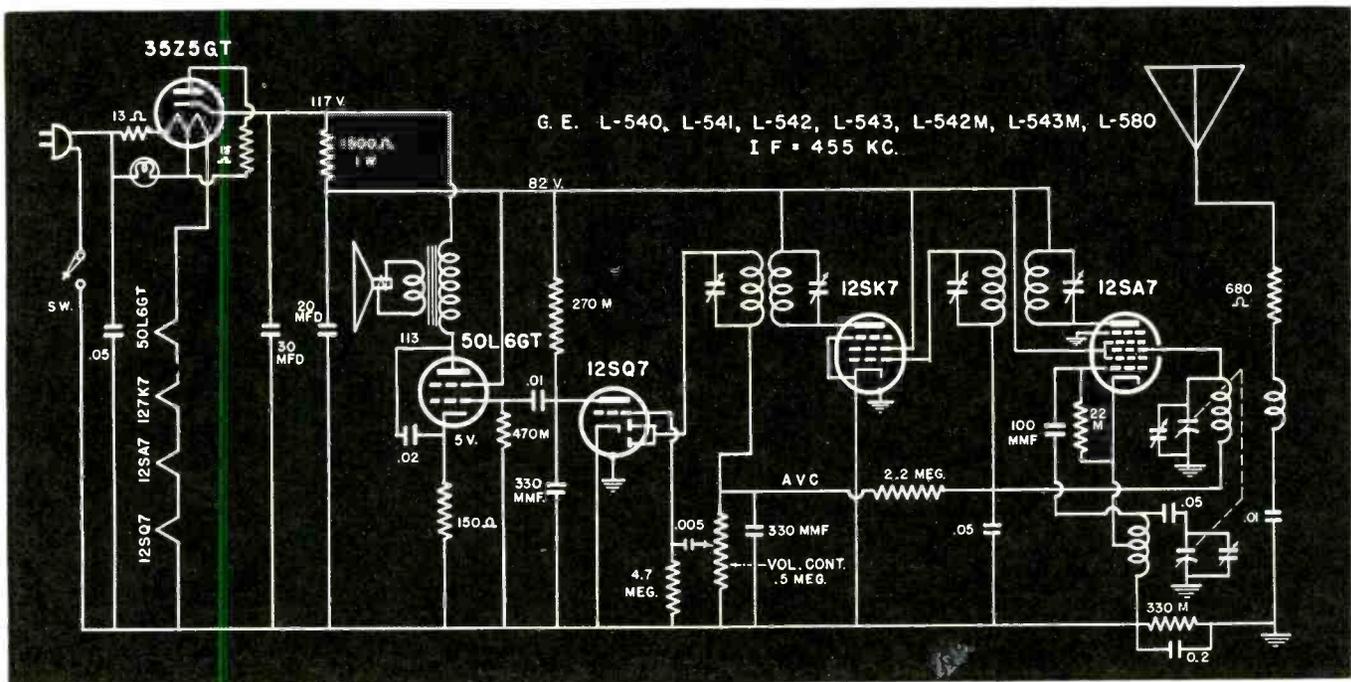
Additional degeneration to all frequencies is added in the form of an

un-bypassed cathode resistor in the 50L6 circuit.

AC/DC Motor

The main diagram shows the connections for the straight AC motor. In the upper right hand corner are the connections for the AC/DC motor. A double pole double throw switch makes the transfer of the motor windings for the two types of current. The grounding resistor of 220M ohms is omitted on the AC/DC motor and the 0.05 mfd. by-pass capacitor is added. The motor power circuit is attached to the amplifier through a polarized plug and socket. This polarized plug insures that the motor frame is grounded through the resistor or capacitor.

The power consumption is 45 watts in the FY model and 65 watts in the FY2. With a 1000 ohm per volt me-



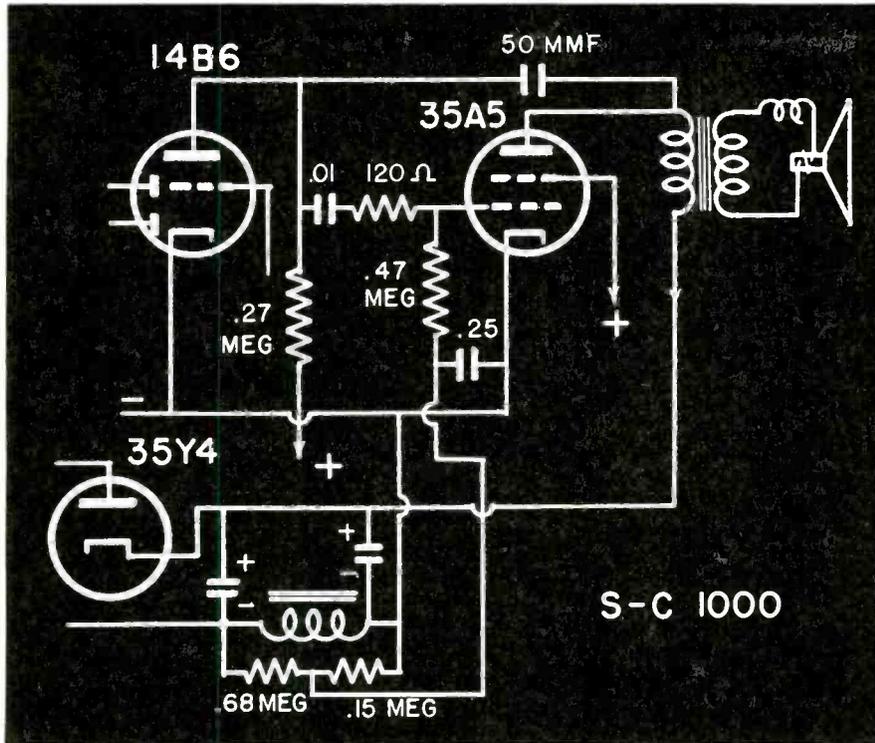


Fig. 3—Fixed bias for output tube taken from drop across filter choke in negative lead. High frequency audio voltage is fed back to grid circuit of 35A5

resistors. One end of the series load resistors is grounded while the opposite end is the take-off point for the audio voltage. The center of the two equal load resistors is connected to the cathode of the detector portion of the 7K7 and back to the primary of the transformer through the 47 mfd. capacitor. The secondary is tuned and connected to the diode plates in a normal fashion. The 7K7 is the same as the XXFM tube.

Audio Fed to AM Detector Tube

The audio voltage is taken from the equal FM load resistors and applied through the usual high frequency deemphasizer to the volume control circuit. From the volume control it is fed into the triode section of the 6SQ7 AM second detector and audio amplifier. From this amplifier it is fed back to the triode in the 7K7 which acts as a phase inverter for the 6V6GT PP output tubes. The phase inverter circuit is the divided plate-load type where half the plate load is in the cathode circuit.

The Model 40 also uses the double converter system employed on several FM GE models (see December, 1941, issue of Radio Retailing). A noise squelch circuit is used to silence the audio system during tuning between FM stations. The squelch circuit uses one of the diode plates in the 6SQ7 and picks up the noise voltage from the plate circuit of the FM 6SH7 second limiter. The amplitude modulated noise voltage develops a rectified voltage in the diode circuit and this volt-

age is used to cut-off the 6SQ7 triode. When the FM carrier is tuned in, the noise voltage is very small due to limiting action and the 6SQ7 diode does not respond to FM signals so that normal bias is restored to the 6SQ7 grid. A "squelch switch" permits the action to be controlled so that weak FM stations which have accompanying noise can be received if desired.

The volume control circuit uses bass compensation and feed back. An additional shunt type tone control is provided in the plate circuit of the 6SQ7 audio amplifier. A tone control switch in the volume control bass compensation circuit gives three degrees of control in addition to those obtained by the variable control.

The feed back circuit as shown in Fig. 2 introduces a part of the voltage developed across the voice coil, in series with the volume control. This feed-back voltage is developed across the 22-ohm resistor between the volume control and ground.

Feedback to VC Circuit

Negative feedback is used in the Stromberg Carlson 1000 AC/DC sets. The circuit shown in Fig. 3 includes a novel method of obtaining grid bias for the output tube. Since the speaker field is in the negative power lead, the current drain of the set produces a drop across the resistance of the field. Shunted across the field are two resistors which act as a voltage divider. Approximately 1/5 of the voltage across the field is used to bias the grid of the 35A5 output tube.

HF Feedback

A 50 mmfd. capacitor is connected between the plate of the 35A5 and the plate of the 14B6 audio driver. Since the plate and grid voltages are 180 degrees out of phase, negative or cancelling feedback takes place. The reactance of the 50 mmfd. capacitor and 0.27 meg plate load resistor form a voltage divider for the signal between the plate of the 35A5 and ground. The percentage of the signal voltage fed back to the grid of the 35A5 depends upon the frequency of the audio signal. At 5000 cycles, the reactance of the 50 mmfd. capacitor is about 600,000 ohms. At this frequency about 1/3 of the signal voltage is fed back to the grid of the 35A5. At 10,000 cycles the voltage fed back is about 2/3. This attenuation of the highs gives an apparent boost to the bass.

Motorola Model 35-F Auto Set Circuit Notes

This set was specifically designed for '41 Ford and Mercury cars. The circuit is shown in the accompanying diagram on following page.

Fixed bias is used on this set, the voltage being obtained from a series divider in the negative power supply circuit. This fixed bias is applied to the output tube grid, the first audio grid, and a small minimum bias is applied to the AVC bus.

The circuit uses a two-position tone control of the shunt type. The speaker is electro-dynamic.

RF, IF Alignment

The following alignment instructions are in the order in which they should be performed. With the signal generator set at 262 kc. and connected to the 6SA7 grid through a 0.1 mfd. capacitor and the tuning condenser set at minimum, align the trimmers on the IF transformers beginning at the diode and working back toward the antenna.

With the same signal generator connections as before, set the dial and generator at 1600 kc. Adjust the parallel oscillator trimmer for maximum output. With the dial and generator set at 545 kc., adjust the series oscillator trimmer for maximum output.

Connect the signal generator to the set through a special dummy antenna or booster coil such as Motorola No. 24K26751 in series with a 35 mmfd. capacitor. With the set and generator tuned to 1400 kc. adjust the trimmer in the top of the RF coil can for peak output. Also adjust the trimmer on the antenna section of the tuning gang for peak output at 1400 kc. Change the set and signal generator to 600 kc. and adjust the antenna padder for maximum output. This antenna padder is located in the antenna transformer can.



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No wonder. The “MYE” tells you what part makes the best replacement and exactly how each part should be installed. In one compact listing, on one page, you’ll find the information you need to make a speedy, satisfactory repair for *any* model of *any* make of receiver. Your jobs will “stay put” when you apply this useful knowledge... circuit references, original part numbers, recommended replacements for volume controls, condensers, vibrators.

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Are you intimately acquainted with your Microphone? Shure Brothers have prepared an interesting four color booklet, called "Long Live Your Microphone". There are sixteen pages of valuable information about Crystal, Dynamic and Carbon Microphones. "Pointers" on Feedback, Cable, Plugs, Service and other practical matters. This data is based on statistics gathered in the Shure Service Department.

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Bulletin 173R

SHURE BROTHERS
Designers and Manufacturers of
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Send for this FREE Booklet!



Radio Books by English Author Published in USA

Three texts, The Superhet Manual, Wireless Coils and Transformers, and Short-Wave Manual, edited by F. J. Camm of the English radio magazine, Practical Wireless, have just been issued by The Chemical Publishing Co., Inc., 234 King St., Brooklyn, N. Y.

The Superhet Manual covers the fundamentals of radio and vacuum tubes and their application to superhet receivers. The general design of supers is shown through a number of typical circuits. Noise suppression, variable selectivity, and tone control systems are discussed. A chapter on servicing with the cathode ray oscilloscope is included. The price of this book is \$2.50.

The Short-Wave Manual deals with the design of short-wave sets, coils, antennas, band-spread systems, etc. Circuits for the home constructor range from one-tube to nine-tube sets. This book is priced at \$2.50.

Wireless Coils and Transformers describes the various types of RF and IF coils used in English radios. Construction data is given for experimenters who wish to build their own coils. An appendix of wire tables and coil formulas is included in this \$2.50 book.

Monster Oscillograph Described for Club

Featured speaker at the last meeting of the Radio Club of America, held at Havemeyer Hall, Columbia Univer-

sity in New York City, was Dr. Thomas T. Goldsmith, research director of the Allen B. Du Mont Laboratories, Inc. His paper was on "A Description of a 20-inch Cathode-Ray Oscillograph" which gave detailed data on the giant oscillograph recently developed by the Du Mont labs.

Book Review

Radiotron Designer's Handbook

Price \$1 postpaid.

Commercial Engineering Dept.,
RCA Mfg. Co., Harrison, N. J.

Receiver circuit design problems are covered in the eight chapters of this 365-page book. Audio frequencies, radio frequencies, rectification, receiver components, tests and measurements, tube characteristics, general theory, and sundry data are included in this text of modern circuits and tubes. The design of audio systems, tone controls, feedback circuits is well covered and illustrated. RF-IF amplifiers, oscillators and mixers are treated in separate chapters, and characteristic curves and mathematical relations in the various circuits presented make it valuable to radio engineers, amateurs, servicemen and experimenters. The chapters on tube and receiver testing will be of special value to servicemen.

The book is 6 x 9 inches with black stiff covers and silver lettering.

AUTOMOBILE BATTERY GROUND CHART

YEAR	1934	1935	1936	1937	1938	1939	1940	1941	1942
Auburn	Pos.								
Buick	Neg.								
Cadillac	Pos.	Pos.	Pos.	Neg.	Pos.	Pos.	Pos.	Pos.	Pos.
Chevrolet	Neg.								
Chrysler	Pos.								
Cord	Pos.								
DeSoto	Pos.								
Dodge	Pos.								
Duesenberg	Neg.	Neg.	Neg.	Pos.	Pos.	Pos.	Pos.	Pos.	Pos.
Ford	Pos.								
Franklin	Pos.								
Graham	Pos.								
Hudson	Pos.								
Hupmobile	Pos.								
Lafayette	Pos.								
LaSalle	Pos.	Pos.	Pos.	Neg.	Pos.	Pos.	Pos.	Pos.	Pos.
Lincoln	Neg.								
Lincoln Zephyr	Pos.								
Mercury	Pos.								
Nash*	Pos.								
Oldsmobile	Neg.								
Packard	Pos.								
Pierce-Arrow	Pos.								
Plymouth	Pos.								
Pontiac	Neg.								
Studebaker	Pos.								
Terraplane	Pos.								
Willys	Pos.	Neg.							

*Some special custom-built models have negative grounded.

Chart showing terminal of battery connected to car frame.
From P. R. Mallory & Co. 1942 Vibrator Replacement Guide.



New Philco V.P.



Robert F. Herr, for the past 5 years the manager of the parts and service division of Philco Corp., has been named by the firm as vice president in charge of service. He has been with Philco for 25 years and is the founder of RMS.

**"Keep 'Em Playing"
Petition to Congressmen**

A plan for petitioning Congressmen to take action that will keep radio sets in repair, has been launched by Standard Transformer Corp., 1500 N. Halsted St., Chicago. The campaign says "Radio Keeps the Public Informed. Keep 'Em Playing."

Two sizes of red-white-and-blue shields carrying the above words are provided free to dealers and jobbers, the smaller one for individual signatures the larger one for window display ("If you agree, won't you please come in and sign a petition") and having space for 25 signatures. Both types of petitions are to be returned to Standard by July 15.

Dealers can get the materials either from jobbers or from Standard direct.

**Yachtsmen Needed by
U. S. Naval Reserve**

Radio men who have experience as fishermen, yachtsmen, or operators of small boats are needed in Class M-2, U. S. Naval Reserve. Their duties will be mainly to man sub-chasers, patrol boats, mine layers, mine sweepers, etc., and they will be enlisted in one of 48 ratings in M-2 commensurate with their experience and training.

This opportunity is for men between 17 and 50, and they are urged to apply immediately at their nearest Navy recruiting station.

★

"Ken Rad on Parade," a new booklet keyed in with the national defense program, shows the display material in military settings available to dealers.



Chicago Radio Parts Show, June, 1941

...but this year we're working!

Remember us? We're the Solar crew that had the privilege of greeting you at the Show last year.

But not this summer! All of our efforts (which, with due modesty, we believe are considerable) are being expended toward one vital objective—the rapid and successful conclusion of the war.

So—to our highly valued manufacturing, jobbing and service clientele—we must take this means of sending our "Best Regards"—and our assurance that we're all in there pitching FOR YOU!

- | | | |
|-----------------------------|------------------------------|---------------------------------|
| IRV AARON
Milwaukee | WICK HARTER
Bayonne | JIM SCHOONMAKER
Dallas |
| NICK ALLEN
Boston | LOU JACKMAN
Cleveland | BILL SEEMAN
Buffalo |
| SYD BAUM
New York | SAM JEFFRIES
Philadelphia | GEORGE SHEFLER
Phoenix |
| RON BOWEN
Salt Lake City | BUCK JONES
Cleveland | FRED SOMERS, Sr.
Kansas City |
| HENRY BURWELL
Atlanta | EVERT KERANEN
Chicago | FRED SOMERS, Jr.
Kansas City |
| JIM CARTWRIGHT
Memphis | HARRY LASURE
Los Angeles | CHARLES SPEAKER
Washington |
| JIM CORNELL
Bayonne | HENRY MARTIN
Cleveland | AL PROSDOCIMI
Bayonne |
| ART DETSCH
Portland | ROSS MERCHANT
Detroit | BOB RIDDLE
Bayonne |
| LES DeVOE
Indianapolis | JOHN OLSEN
Pittsburgh | SY WOLIN
Bayonne |
| ROY ESCHNER
Chicago | | LOU WOOD
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Write for Literature

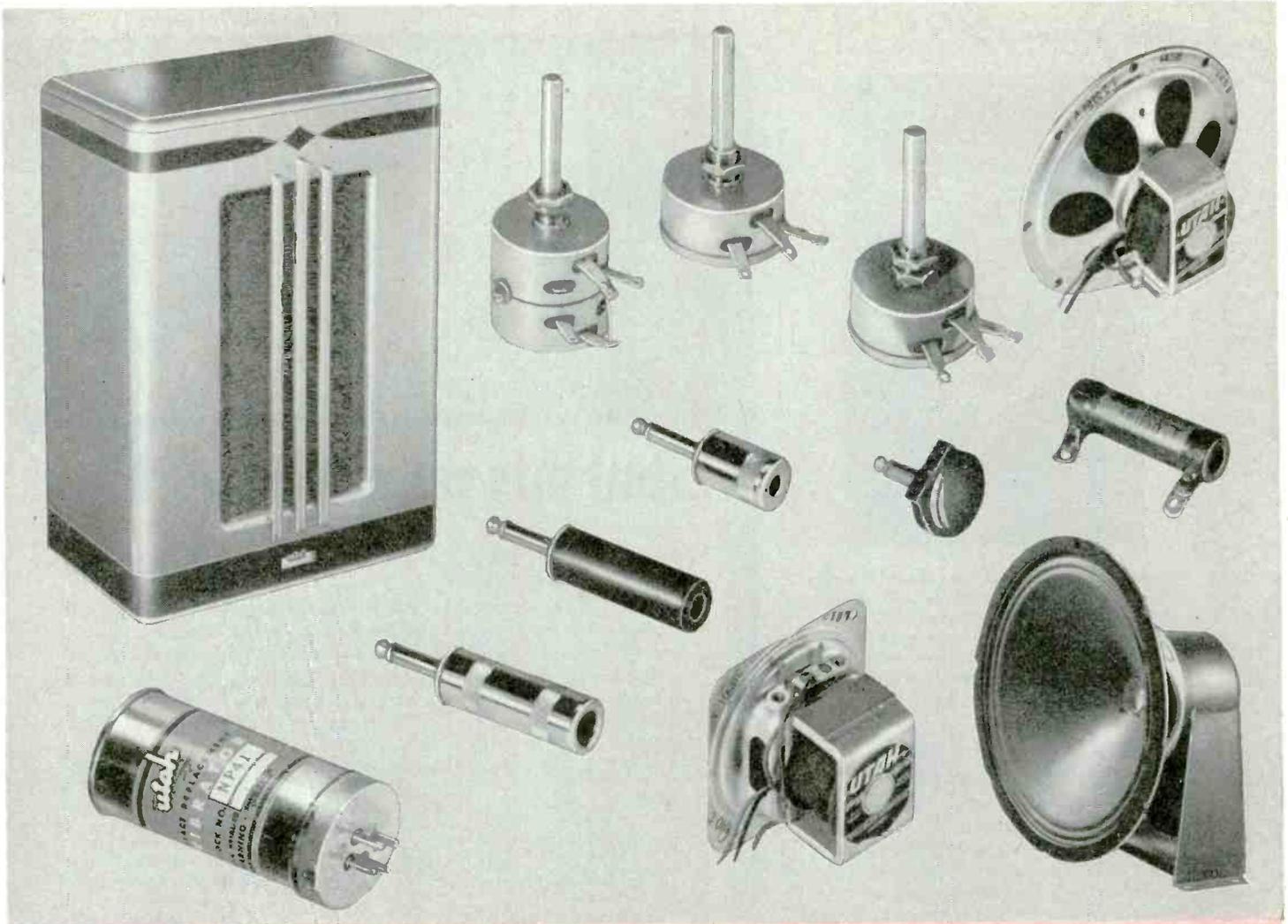
SOLAR MANUFACTURING CORPORATION, BAYONNE, N. J.

**STANCOR
TRANSFORMERS**

USED BY MOST SERVICEMEN . . . MOST!



**STANDARD TRANSFORMER
CORPORATION**
1500 NORTH HALSTED STREET . . . CHICAGO



Utah Engineering Skill Is For Today

ON THE war front and on the home "listening front" Utah's skill and knowledge stand ready to keep the air waves open. Utah has had years of experience in making speakers, vibrators, transformers, resistors and many other key radio parts. Today, Utah technicians and ace production men are actively engaged in supporting the war effort.

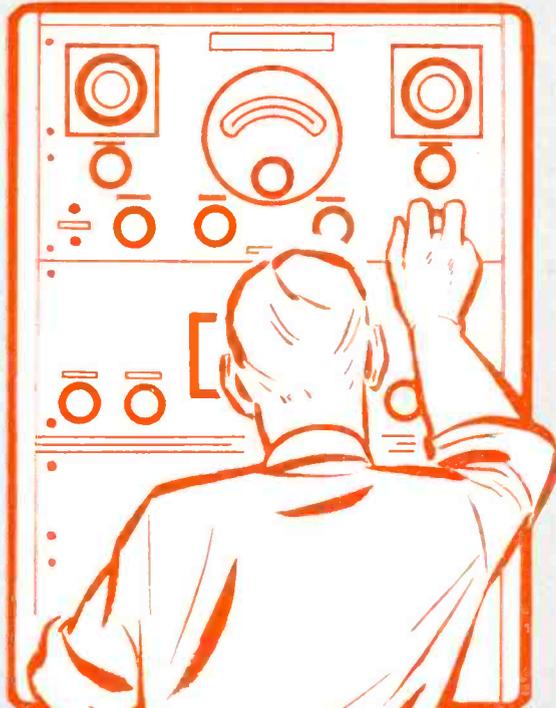
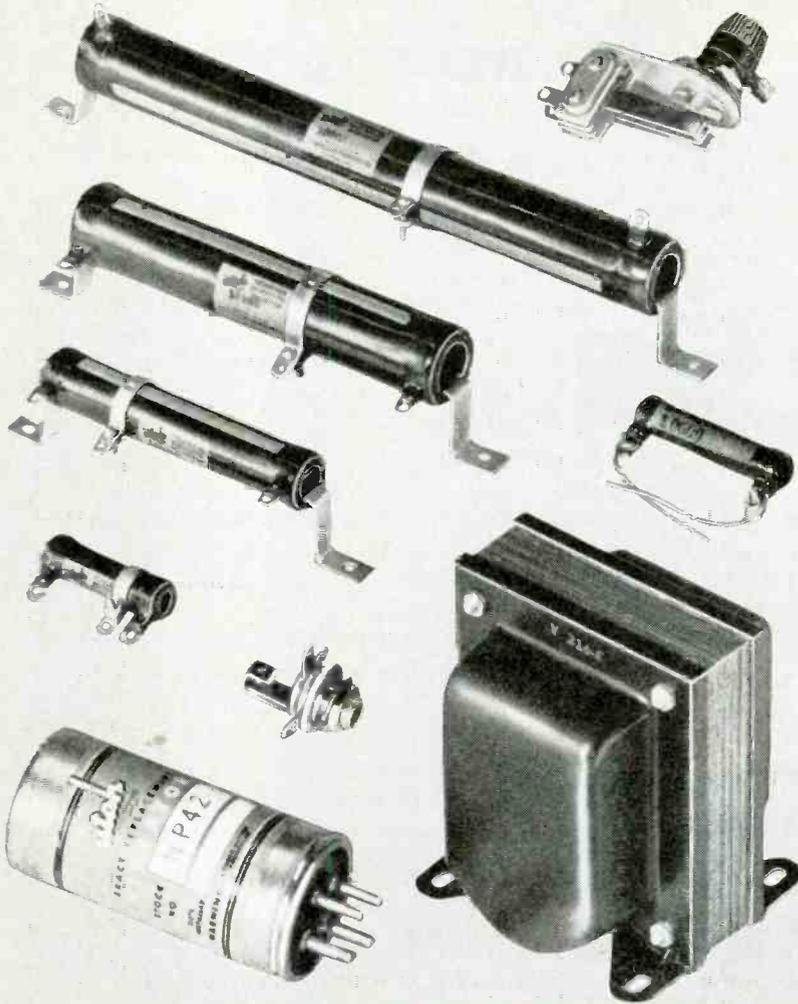
In the Utah laboratories, engineers are con-

stantly at work to help meet the demands of the Victory program and provide the solution to the important problems of civilian communication. Here, Utah's ingenuity and ability to meet changing requirements are meeting the test. New products are being developed; substitutes are being found to replace products in which materials important to Victory are used—substitutes that are equal in performance and reliability to products they are replacing.

Utah's advanced production facilities are main-



SPEAKERS • VIBRATORS



on the Alert and Tomorrow

taining quality and dependability—so long associated with Utah products—and at the same time producing them with the speed necessary to Victory.

Today, Utah engineering and production stand together to meet emergency needs—with their eyes also on tomorrow. Utah Radio Products Company, 810 Orleans Street, Chicago, Illinois. Canadian Office: 560 King Street, W., Toronto. In Argentina: UCOA Radio Products Company, SRL, Buenos Aires. Cable Address: UTARADIO, Chicago.

TRANSFORMERS • UTAH-CARTER PARTS



KEEP THE BALL Rolling



● A shortage of certain materials used in the manufacture of microphone and pickup cartridges, has resulted from war industry demands. Such cartridges are essential to the maintenance of present radio, phonograph and sound equipment. To continue to supply these cartridges for replacement purposes requires the cooperation of service men, dealers and jobbers, who are now requested to neither sell nor replace such cartridges without receiving in exchange an old cartridge of similar type. This permits the reclamation of certain usable parts and will enable Astatic to "keep the ball rolling."

ASTATIC

THE ASTATIC CORPORATION

YOUNGSTOWN, OHIO

Licensed Under Brush Development Co. Patents

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PRESTO NOISE RECORDINGS TRAIN WAR WORKERS QUICKLY

Noises tell an important story to factory workers who test and adjust airplane engines, tanks, trucks and the countless other machines that make up our war equipment.

Seasoned workers know the mixture of sounds that means "all's well"; the tiny variations in sound that mean faulty adjustments or assembly.

What these men have discovered through years of experience is now taught new workers within a few weeks. They learn to locate trouble by listening to Presto records of the noises made by machines in the course of adjustment.

It takes a high grade recorder to



reproduce these noises naturally. The Presto Recorder is doing it daily in war plants, helping to speed employee training. On request, a demonstration of the Presto Recorder at your plant.

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

RECORD NEWS

Record Salvage Job

(Continued from page 20)

This will give the record man a chance to promote the merchandise he now wants to move out, and to get more people interested in the "timely" stuff of the day, such as record-saving accessories, portable record storage cases, recording blanks and patriotic discs.

The important thing is to get started now on whatever methods and stunts are best adapted to your type of community. A vigorous record-collecting program will go a long way toward improving the outlook of everyone in the business.

Decca Records Only "Slightly Reduced"

Announcements from Decca Records, Inc., in connection with the production of records following the WPB shellac restriction order, say that their 35c and 50c discs are still being made and sold, and "will continue on the market in slightly reduced quantities."

Forthcoming records, Decca states, will be of better quality because more production time can be spent on fewer records. The firm estimates that about 90 per cent of materials in old records can be reclaimed, and with the addition of allowable new materials, good quality will result.

Decca suggests immediate steps by the trade, in collecting old records, and proposes that retailers set up a system of paying 2½c per old record to their customers. The company has also issued a wall poster for dealers, offering to pay 10c in War Savings Stamps for every four old discs.

Supply of Record Bars Limited

It has been announced by A. Bitter Construction Corp., 27-01 Bridge Plaza North, Long Island City, N. Y., that a limited number of "Record Bars" are still in stock for immediate delivery, although recent WPB orders have curtailed the production of the units. Manufacture of the wooden cabinets for the Bars is not affected by the orders, but the high quality reproducers used in the unit are hard to get.

Supplies of the other Bitter lines are normal, including the "Self-Service Record-Album Unit" which is specially designed to move popular-priced stock and displays 300 records on its slant-



ing surface and 16 albums on the upright face. This compact unit takes only 5 ft. of floor space and may be placed either in center aisle or wall position.

Victor Ready With Scrap Record Plan

In a statement on the new trend of record manufacture rising out of the shellac shortages, RCA Mfg. Co., Inc., declared that "it now becomes necessary that we acquire as many old records as possible in order to assure a flow of raw material to our plants." RCA has therefore started a plan by which shipments to distributors depend upon the number of old records turned in.

The company urges 100 per cent cooperation between dealers, jobbers and manufacturers in this matter and says that "by means of scrap collection, we hope to continue to enjoy records, yet, at the same time, free the essential virgin shellac for other uses."

Streamers to Tell Public About Care of Records

In line with the sharply increased interest in record accessories that will help fans take better care of their discs, the Recoton Corp., 21-40 49th Ave., Long Island City, N. Y., has issued a new set of window streamers emphasizing how Recoton phonediscs will help out. There are three sizes; colors are red, white and blue. Dealers may get them free from distributors.

Available also direct from Recoton is a new series of newspaper mats as an additional sales help. The mats are free, and will interest retailers who want to place small space, low cost ads in local newspapers.

Music for Our Fighting Men

Records for Our Fighting Men, Inc., is the new non-profit organization formed by recording artists to get record libraries into camps, posts and overseas bases of all armed services. The records will be bought from proceeds of a nationwide drive for scrap records.

Columbia Recording Corp., according to an announcement by its president, Edward Wallerstein, has offered to buy all the scrap the new group will collect, and has agreed to sell new records to ROFM at factory cost.

Banks Co. Expands

Laboratory and factory of Bank's Mfg. Co., specialists in intercommunicating equipment, have been consolidated for greater efficiency at 1105 W. Lawrence Ave., Chicago.

SOMETHING NEW TO "KEEP 'EM BUYING!"

"...4-star profit opportunity!" — says a large retailer. This new WALCO merchandise meets a lively demand — promises a steady year-round flow of business to pile up handsome profits. Now you can fill every call for quality playback and cutting needles with WALCO — the line to push this year.



FRONT COUNTER SPECIAL FOR MUSIC LOVERS — WALCO launches a new popular-type needle in a sensational book-and-needle deal that music lovers everywhere will snap up quickly. The new 4,000-play WALCO IRIDIUM NEEDLE (regular list price \$1.50) can be offered in combination with David Hall's best seller THE RECORD BOOK and latest RECORD BOOK SUPPLEMENT (regular list price \$4.50) — all three at the bargain list price of \$4.95! Free sales helps galore insure an immediate surge of inquiries, orders, new customers. Act fast on this latest WALCO profit-booster. Call your jobber today and start cashing in tomorrow.



NEW 4,000-PLAY WALCO IRIDIUM NEEDLE — Tipped with a precious-metal alloy, this new WALCO IRIDIUM NEEDLE has three standout features the public is demanding—longer service, true reproduction characteristics, better record protection. The amazingly durable point has a unique self-polishing feature that eliminates abrasive record-wear. Comes, attractively packaged, in self-selling refillable counter dispenser of handsome design. List price \$1.50. Call your jobber today for literature and discounts.



NEW WALCO FLOATING JEWEL LIFETIME STYLUS — Finest of all playback needles—at any price—the new WALCO FLOATING JEWEL, with spring-mounted sapphire and plastic damping element, is the last word in needle and record protection, full-range lifelike reproduction, and freedom from surface noise. Now available for all phonographs, the WALCO FLOATING JEWEL is a standout profit-opportunity for dealers everywhere. Factory-sealed in handsome plastic package and featured in modern-design counter display. List price \$2.00. Get literature and discounts from your jobber now.



POPULAR WALCO PLAYBACK AND CUTTING POINTS — Still the popular choice of music lovers and home recordists, WALCO Genuine Sapphire Playback Needles and Cutting Styli are steady revenue producers, along with the lower-priced WALCO Stellite and Steel cutting types. For better-pleased customers—call your jobber immediately for catalog sheets and discounts on WALCO's complete line.

Stock up now for greater-than-ever sales on WALCO's in-demand products — your 4-star profit opportunity of 1942. Write us, if necessary, for name of nearest WALCO jobber.

WALCO ELECTROVOX CO., INC.
169 MAPLEWOOD AVE. MAPLEWOOD, N. J.

Jobbers! **NOW YOU CAN GET THIS NEW LINE OF REPLACEMENT SPEAKERS**
P M Dynamic and Electro Dynamic, 3" to 12"

Vastly improved in design and performance—a size and type for perfect replacement in any set—also for replacement in Intercommunicating systems and other sound equipment.

Because of our concentration upon Army, Navy and Air Corps equipment, our replacement output is limited. But, if you act quickly, you can have PERMOFLUX Speakers for some time to come.

WRITE TODAY — Don't put it off!

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4916 West Grand Ave., Chicago, Ill.
Pioneer Manufacturers
of P M Dynamic Reproducers



Civilian aviation is part of our war effort

The "cubs" patrolling our skies and our shores — as well as the giant transports ferrying much-needed materials — must all be equipped for two-way radio communication.

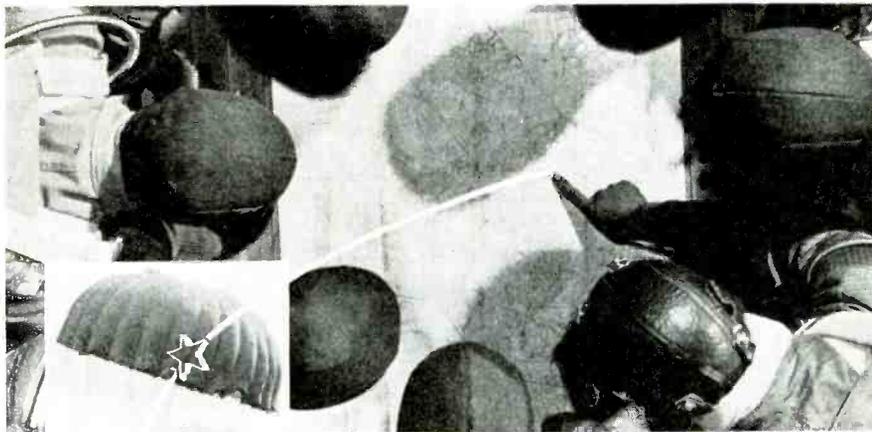
Electro-Voice MICROPHONES serving in these civilian craft — are vital units in our war production schedules.

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Following Through...

PLANNING, action, and follow-through — the military strategists' all-important steps to Victory.

The Thordarson organization employs these same principles in helping you work out your transformer problems. Experienced engineers, skilled technicians, and seasoned production experts combine to give you the transformers you want when you want them.



Official Photographs
U. S. Marine Corps

THORDARSON

ELECTRIC MFG. COMPANY
500 WEST HURON STREET, CHICAGO, ILL.

Transformer Specialists Since 1895

Despres Gets New Post with OPA

Maurice Despres of Dale Radio Co., prominent New York distributor, now has a new government post as Chief of General Appliances and Supplies Unit at the regional offices of the Office of Price Administration, with headquarters in the Empire State Building, New York City.

Mr. Despres had previously been a key radio figure in the OPA at Washington. His new work includes supervision of radio, refrigeration, appliances, cameras, musical merchandise and auto supplies in the regional area covering New York, New Jersey, Pennsylvania, Delaware, Maryland and District of Columbia.

Grimes, Gillies and Herr, Philco VP's

Election of three vice-presidents of Philco Corporation is announced by James T. Buckley, president.

David Grimes, one of the pioneers in the radio industry and chief engineer of Philco since 1939, has been made vice-president in charge of engineering; Joseph H. Gillies, works manager of the company since 1939, has been named vice-president in charge of radio production; and Robert F. Herr, manager of the company's parts and service division, has been made vice-president in charge of service.

Chief Radio Officer

Following graduation from the University of Minnesota, Grimes served in the last war as chief radio officer at Kelly Field, Texas. After the war, Grimes joined AT&T as a research engineer in telephony. In 1922 he established his own engineering organization to do research work on a consulting basis for a number of different companies. It was during this period that he invented the famous "Grimes circuit" employed by many early radio fans. From 1930, until he joined Philco in 1934, Grimes was License Engineer with RCA. With Philco, Grimes was in charge of home radio set engineering until 1939, when he became chief engineer. A considerable number of important radio and television research projects have been carried to completion under his direction.

Gillies became associated with Philco in 1929, the year after the company entered radio. After five years as factory engineer, he was placed in charge of the production development department in 1934, and was made assistant works manager in 1938. He became works manager in 1939.

Herr, during the 25 years he has been with Philco, has done much to advance the cause of radio service for the consumer. After Philco entered the receiving set business and the need for capable service men to keep sets in



repair became evident, Herr organized Radio Manufacturers Service to train service men in 1934. This organization now has some 25,000 members. With the intense need of the armed forces for radio technicians, R.M.S. has supplied more than 7,000 trained radio service men as candidates for the Signal Corps and Navy in recent months. From 1933 to 1937, Herr was service manager for Philco, and for the past five years he has served as manager of the parts and service division.

Deines to New Ad Post with GE

Harry J. Deines, who has been for the past two years the manager of advertising and sales promotion for the receiver division of General Electric's radio and television department, has now been appointed advertising manager for the entire radio, television and electronics department of the company. He also becomes a member of the General Electric advertising committee.

Mr. Deines, who has lately distinguished himself in directing morale-building programs in connection with GE's gigantic war production effort, has been with the firm since 1930. His headquarters are at Bridgeport, Conn.

Book-and-Needle Bargain for Music Lovers

A combination book-and-needle deal is now offered by Electrovox Co., Maplewood, N. J., to introduce the new Walco 4,000-play iridium phonograph needle. Electrovox has a special arrangement with the publishers of *The Record Book*, by David Hall, by which the new needle and the book (and supplement) may be sold at a special price of \$4.95. The three items have a regular rated value of \$6; the new iridium job lists regularly at \$1.50, and the book at \$4.50.

Along with the combination deal comes a variety of free sales aids, including "letters, 4-page announcements and circulars for dealers to mail, window streamers and counter displays, self-selling refillable needle dispensers, counter literature, etc."

Fidelitone Gets WPB Extension

The new copper restriction order issued by WPB, which goes into effect June 15, would prohibit the manufacture of Fidelitone phonograph needles in their present form, according to a statement by Permo Products Corp., 6415 Ravenswood Ave., Chicago. However, since Permo's stocks on hand were of such a nature as to be of little or no value to war production, the company applied for permission to continue manufacturing. WPB has just granted the extension for a limited time.

"WHATEVER IT IS," SAID PILEZER TWIGG, "I DON'T WANT ANY"

Blithely ignoring the "No Admittance" sign over the door, the young man with the sample case barged into the back room of the Acme Radio Emporium where Serviceman Pilezer Twigg was busy on an ailing radio.

"If you're selling something," warned Pilezer grimly, "don't bother me. I'm busy."

"My dear sir," said the man with the sample case, "I'm not selling something. I'm practically giving it away."

"Whatever it is," snorted Pilezer, "I still don't want any."

"How can you say that when you don't even know what it is? Look!"

Pilezer couldn't help but look. Thrust just in front of his nose was a gadget that looked like a cross between a widget and a hoozit.

"We call it the Little Marvel," continued the salesman glibly, "and to call it a marvel is putting it mildly. It's a combination mousetrap, shaving mug, can opener, tooth brush, shoe brush and clothes wringer, etc. Also, it will rock the baby, let the cat out and mix cakes. We absolutely guarantee that just one Little Marvel will do at least 10% of all the work around the house. Think what a dozen will do!"

"Even if it was good," growled Pilezer, "I still wouldn't want it."

"But, my dear man, you are passing up the opportunity of a lifetime."

Suddenly, the young man with the sample case found himself flat on his back with Pilezer ensconced on his chest.

"Listen," said Pilezer grimly, "I told you I didn't want any. Understand?"

"Uh-huh."

"Besides," continued Pilezer, "you should talk to me about handy devices. Did you ever hear of



the famous Sprague Atoms?"

"Nuh-no."

"Well, they're midget dry electrolytic condensers. Your Little Marvel is a piker beside them. They'll do more jobs than you can shake a stick at—and do 'em right. For instance, that radio on the bench calls for a three-section replacement condenser that you can't get today from the factory. How am I going to get that set fixed up and delivered this afternoon? Would your Little Marvel do it?"

"Nuh-no."

"Well, Sprague Atoms will. I can take two 8 mfd. 350 V. Atoms and a 25 mfd. 25 V. Atom, strap 'em together and the job will be done. The Atoms will actually be smaller. They'll cost less and do the job better."

"But that's only the beginning," Pilezer went on. "With only a small stock of Atoms I can handle just about every condenser replacement job I ever get. Atoms are made in just about all capacities, all voltages, singles and duals. They're easier to install, cheaper, small enough to fit in anywhere, big enough to last longer and perform better than most old-style condensers that they replace. They're moisture-proof. They'll stand a whale of a surge voltage. They have exceptionally low power factor. They'll even stand up on a lot of jobs where only wet electrolytics were formerly used. Would your Little Marvel do all of that?"

"Gosh," gasped the salesman. "Not being in the radio business, I don't know what I'd do with them, but if Atoms are that good, maybe I ought to have some, anyway. How about selling me one—or—maybe even a dozen?"

"Now you're talking," said Pilezer, allowing him to get to his feet. "Those are the first really sensible words you've spoken today."

SPRAGUE PRODUCTS CO. North Adams, Mass.

GOOD CONDENSERS — EXPERTLY ENGINEERED — COMPETENTLY PRODUCED

Always Something New for the Radio Parts Jobber

JFD

The Mark of Sound Values in Accessories and Supplies

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2

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Address _____
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R. R. & T. — June, '42

Be Right with OHMITE
RHEOSTATS · RESISTORS · TAP SWITCHES

Auto Radio "Operation" in Hartford



A slick auto set is checked by one of the "doctors" at the Radio Hospital, Hartford, Conn. Nurse records symptoms as customer looks on.

St. Louis Dealer Lets Buyers Browse for the Combinations

Though it might not be good sense in merchandising of other appliances, it pays to let a radio-phonograph combination prospect wait for several minutes or even a half hour before approaching him, according to Ralph Crancher, president of the South Side Radio & Furniture Co., a "neighborhood" radio dealer at 3630 South Grand Ave., St. Louis.

Mr. Crancher, who carries three major lines of combinations, and displays 20 models at all times in a 50x50 foot showroom in his modern new building, sold 32 combination radio-phonographs in a single day during a

recent month, 30 on another day, and averaged ten sets at around \$125 each for twenty consecutive days during the holiday months. This astounding volume, more than half of which was cash, was handled by only four salesmen—the same four men who during 1941 sold more than half a million dollars' worth of major appliances, furniture and radio products, the three divisions of this unusual store.

Automatic Sales

"We have a standing policy in our radio department of letting the combination customer 'browse' for quite a

You Can Get A Priority On Time!

Bogen industrial sound systems save countless hours of precious time. Any man—anywhere in your plant—can be located in a second. An important message can be sent to all the workers while production continues at top speed. Air raid and fire alarms can be issued automatically—instantly.

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663 Broadway, New York City



while before approaching him," Mr. Crancher explained. "This isn't impolite as it sounds, or any hardship on the customer—it simply gives him a chance to go over the models we have on display, all of which are connected for his easy experimenting, and to make at least some sort of selection before we approach him. We developed this plan after we found that a man spending half an hour demonstrating this and that combination set actually slowed up a sale—particularly when we had a dozen prospects in the combination department at once. If the customer is left to his own devices, switching sets on and off and examining the record player left open for his inspection, he will always settle upon the model which most appeals to him. More than that, he usually will be more eager to talk price and final sale than the customer who has been 'guided' all the way."

They Sell Themselves

To illustrate, Mr. Crancher indicated the weekend day on which 32 combinations were sold. "Even with a sale every few minutes, we couldn't get to all our customers then," he explained. "And consequently most of them waited as much as an hour before a salesman could get free to talk to each in turn. We found by the time we approached such customers, most were ready to buy the model they had already selected, and all that remained was explaining credit terms or writing up the order."

Customers at Ease

Another advantage of this plan, Mr. Crancher emphasized, is that every customer contemplating purchase of a higher-price item such as the combination is invariably "on the defensive" if a salesman meets him inside the door and goes at once into selling conversation. "When the customer is given the chance to do his own looking and make his own conclusions, he's better satisfied that he's making a good buy," it was explained. "We put price tags plainly on view on each set, and the customer can soon enough decide which he can afford and which he can't. Then the customer can sell himself!"

I'M MEETING MY RESPONSIBILITIES



ARE YOU?

There was a time when a serviceman would have been justified in turning down some of the jobs that are now being brought to him in increasing volume. Today, however, it is your duty and responsibility as an American Serviceman to "keep 'em playing" regardless of the age or condition of the set—regardless of how overworked you may be.

True, there are only a certain number of hours a day that a man can work—SO you MUST work more efficiently. One sure, easy way to do that is to use your Rider Manuals before you get started on EACH job. Stop wasting time trying to guess-out the servicing facts that are readily available in Rider Manuals. And, be sure you have all thirteen volumes for many of the sets you will get will be six, eight, or even ten years old.

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IN AIRPLANE INSTRUMENTS "Keep Them Flying"



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NATIONAL UNION
YOU FIND BETTER
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Quality
TUBES



BATTERIES



CONDENSERS

also Transmitting tubes, panel lamps, cathode ray tubes, exciter lamps, sound equipment, photo electric cells, sound accessories, dry batteries, flash light bulbs.

NATIONAL UNION invites . . .

All radio service dealers to enjoy the benefits of the N. U. Shop Equipment Plan. The latest in tube testers and test equipment are available to you . . .

More than 60,000 completed deals prove the success of this plan. Investigate now.

Ask Your N. U. Distributor or Write



NATIONAL UNION
RADIO Corp.
57 STATE ST., NEWARK, N. J.

Cooperative Minimum Inspection Charge Helps Illinois Shops

An average loss of \$4 per day in potential income and time in four leading radio service shops of Cairo, Illinois, have proven to be eliminated completely by the establishment of a 75 cent minimum inspection charge, according to Ben Emrein, of Michelson's Radio Store.

Like many radio service dealers, Mr. Emrein had considered the minimum charge for several years; but it was not until some months ago in 1941, that the charge was actually put into practice. At that time, Mr. Emrein kept a count of customers visiting his store—finding that an average of seven customers per day asked for inspection, and from that number three represented "dead weight" in failing to order repairs. Mr. Emrein took these facts to the three other shops in town, and found the ratio approximately the same.

All Cooperate

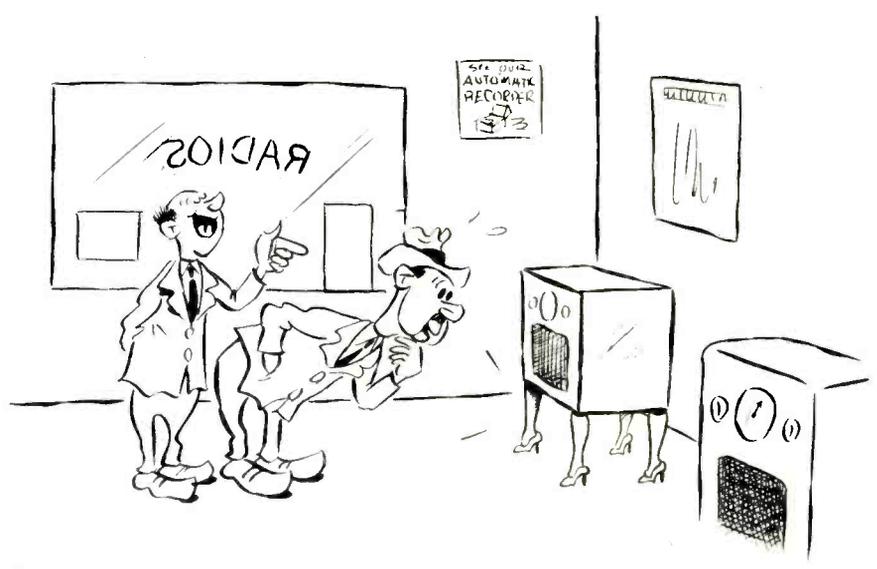
Result was a cooperative plan whereby all Cairo radio merchants have agreed to buy a handsomely framed 3 x 2 ft. sign on which is lettered "minimum inspection charge of 75c on all radios." These signs, done in red and white, are posted conspicuously in every radio shop—so that the customer who changes his mind at

one shop finds the same sign at any other. All dealers have agreed to maintain them at all times.

"Shoppers" Discouraged

"We have discovered a lot of benefits we hadn't expected," Mr. Emrein stated. "First, every customer now represents at least a minor profit or pays for our time. Second—and highly important—we have discouraged one type of customer who 'shops' radio service like a housewife visiting department stores. I am convinced that it actually becomes a hobby with many radio owners to go from shop to shop just talking it over with the repair man. Such people do not take up our time deliberately; but do so because they are sincerely interested in radio. Did you ever meet anyone not interested in radio theory? This particularly concerns the 'tinkerer' type who tries to fix his radio at home himself before bringing it in. The new system makes the shopper-type think twice, consequently, our time is being spent in doing profitable work."

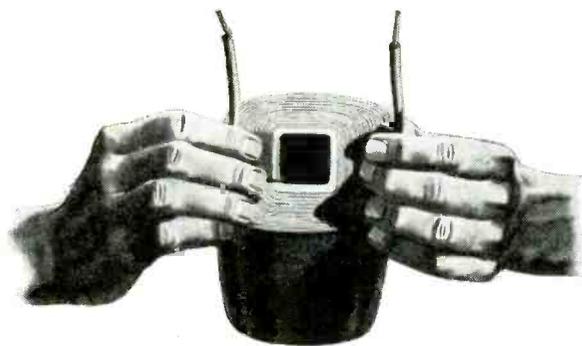
In six months of the 75 cent minimum, Mr. Emrein has had only one complaint—and this was solved by pointing out to the customer that he expected to be paid for his own work, and the Radio Shop likewise.



"It's our special model for bachelors"



If your coil department
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Order your Cutting and Play-back Needles from our affiliate, General Phonograph Mfg. Co., Inc., Putnam, Conn.



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Slim, tapered bits give maximum leverage in screw slots. Square shanks permit application of a wrench for more leverage. Extra large shock and hammer-proof Ambery handles, deep fluted for sure grip. Service men say Vaco's "Tops."

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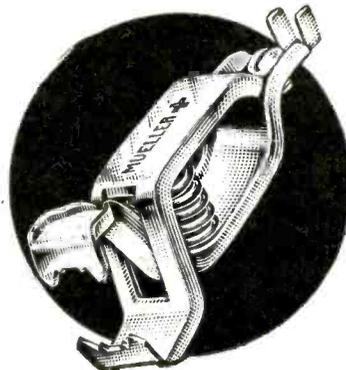
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**1 out of every 2
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**9 out of every 10
Are for essential Defense Needs**

So even clips are important, too, and Mueller Clips are playing their small part well.

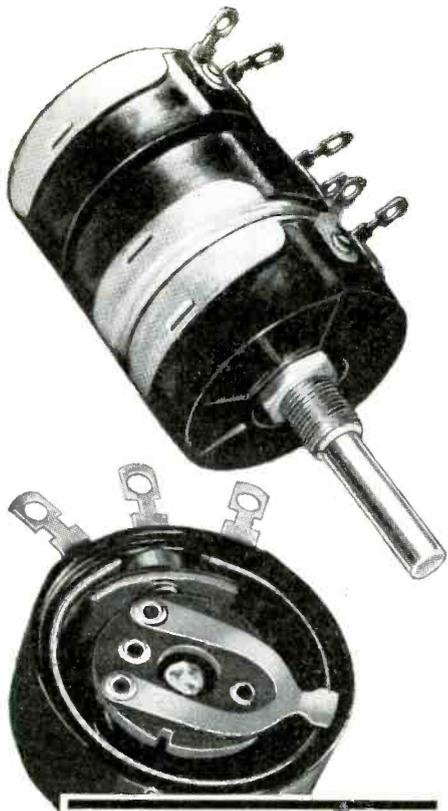
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Mueller Electric Co.

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WIRE-WOUND Controls

★ Pry off the dust-proof protective metal cap of a Clarostat wire-wound control, and here's what you see:

Precise winding on bakelite strip; positive, smooth, wear-proof contact; perfected lubricant; steel shaft accurately fitted in brass bushing. Obviously many years of fool-proof service. And even without prying off that dust-proof cap, just try turning that Clarostat control. That smooth, easy, velvety rotation identifies a Clarostat control beyond a doubt. Don't take our word for it: Try it yourself!

Available as L-pads, T-pads, mixers, faders, etc. Standard and exact-duplicate types. Refer to Clarostat listings.

★ Ask Our Jobber . . .

Just ask him for Clarostat wire-wound or composition element controls. Ask for latest literature. Or write us direct.



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Aerovox Celebrates 20th Anniversary

Aerovox Corp. has celebrated its twentieth anniversary with a big banquet at New Bedford, Mass., an event which climaxed a 3-day mobilization of the firm's entire sales staff from all parts of the nation. Citations and tokens were presented to S. I. Cole, Aerovox president, and other key officials, at the banquet. New Bedford's Mayor Glynn and other dignitaries were guests.

Aerovox field men had enjoyed three days of meetings, conferences and inspection trips through the plant before the dinner event. Planned only as a get-together, the employees took it over and made the presentations to the officials. The Aerovox Ten-Year Club was formed and gold buttons presented to employees who have been with the firm that long. First button went to Bill Hitt of San Francisco, who started 19 years ago.

Mr. Cole reviewed the progress of the company since its modest beginnings as a maker of tuners, amplifiers, knobs, crystal detectors, etc. for early radio. He cited several notable condenser improvements for which Aerovox is credited, and outlined the company's war efforts as well as future opportunities.

RCA Scrap Drive Nets "Mountain of Metal"

Another important contribution to the Victory effort has been made at one of the plants of the RCA Mfg. Co., in the collection of scrap metal. According to an announcement by the Industrial Salvage Section of the Manufacturers' Committee of the local county, the plant salvaged 763 tons of the metal for war use during the first quarter of 1942. This is enough to build a Navy mine layer, or to build twenty-two 30-ton tanks for the Army plus three "peep" cars.

Last March, RCA had launched a highly effective collection drive, with the use of lively posters headed "Get in the Scrap." Each worker was reminded by his foreman of the importance of saving all bits of steel, aluminum, brass, bronze, copper, lead, nickel, tin, zinc, mica, etc.

Permo Exec to the Colors

Sherman Pate, who has been for more than 5 years sales manager of Permo Products Corp., makers of long life phonograph needles, has joined the Army. Mr. Pate will be away from his duties only for the duration.

Vice-president of Permo, E. C. "Gene" Steffens, will be general sales manager during Mr. Pate's absence. W. F. "Bill" Hemminger will act as sales manager of the Fidelitone needle division. These appointments were announced by Permo president Arthur J. Olsen.



FREE
New
RADIO PUNCH
Folder

Tells How To Cut Holes In Radio Chassis

Get the facts about the handy Greenlee Radio Punch in this new folder. Tells how to save hours when cutting holes for sockets, plugs, connectors, etc., in radio chassis. No tedious drilling, reaming or filing is necessary. A cap screw is inserted in a small drilled hole, and the punch is easily forced into the die by a few turns of the screw with an ordinary wrench. Ten punches are available for cutting $\frac{3}{16}$, $\frac{7}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{2}$, $1\frac{3}{4}$, $1\frac{7}{8}$, 1 $\frac{3}{4}$, 1 $\frac{1}{2}$, and $2\frac{1}{4}$ -inch holes. Write today for your copy of the new Greenlee S-119 Radio Punch Folder.



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1906 Columbia Ave., ROCKFORD, ILL.



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250 volts.
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While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this index.

Two Sylvania Execs Get Promotions



R. P. (Bob) Almy

It has been announced by C. W. Shaw, general sales manager of the radio tube division of Hygrade Sylvania Corp., that R. P. (Bob) Almy is the company's new manager of renewal tube sales. Mr. Shaw also revealed the



A. R. Oliver

appointment of A. R. Oliver as field sales manager of the renewal tube sales division.

Both executives have a wide sales experience in the radio tube field and are well known among parts jobbers and servicemen. Mr. Almy will headquarter at Emporium, Pa., and Mr. Oliver will operate out of Chicago.

Audiograph Moves to Bigger Indiana Plant

A new location at Liberty and Pennsylvania Avenues, Plymouth, Ind., has been occupied by John Meck Industries, sound manufacturers previously of Chicago. This firm makes Audiograph sound systems and "Electro-Siren" air raid alarms; it has greatly increased business and thus needs the expanded facilities at Plymouth.



RAPID DEVELOPMENTS in LOUD SPEAKER DESIGN are necessary due to UNCLE SAM'S WAR NEEDS

University Reflex speakers are being pressed into new and unusual application every day.

Many of these include specific features designed in combination with the Jobbers and the Army or Navy engineers. We are listing a few of these below to enable the Jobber to keep up to date.

1. Announcing systems for stratosphere test tanks, where 4/5 of the air is pumped out and the temperature goes down to 50 degrees below and everything is frozen.

2. Portable "Megaphones" for emergency announcing on both land and sea, which call for light weight yet extremely high efficiency.

3. Directional speakers for point to point communication.

4. Intercommunication systems on large tanks. Speakers must be capable of unfailing operation in all climates and conditions including sand storms, etc.

5. Combination announcing and music systems for defense factories, with elimination of low frequency speakers for announcements, etc.

6. High power loud speakers for Army use.

7. Special low power High Efficiency Marine type intercommunicator speakers.

From the smallest to the largest every UNIVERSITY REFLEX SPEAKER has been specially designed to overcome every known type of difficulty or adverse condition.

Our engineering department is ready to handle your special war development work on a 24 hour schedule.

NOTE CHANGE ADDRESS BELOW!!!

Offices and factory have been moved to new and larger quarters.

UNIVERSITY LABORATORIES
225 Varick Street, New York City



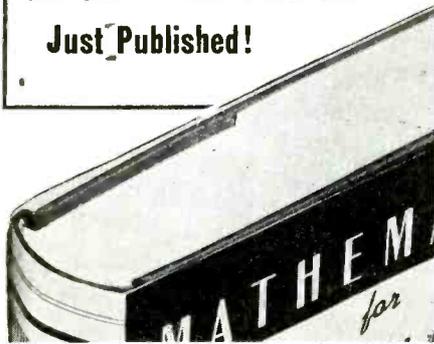
NOW... you can secure the mathematical background you need

for the solving of everyday electrical and radio problems

Radiomen and electricians know that the language and the habit of mathematics are essential to them for real grasp of, and progress in their chosen field. They know that mathematics is a tool for them that they are helpless without.

Now out of the U. S. Navy Radio Materiel School at the Naval Research Laboratory comes a complete home-study textbook that is so thorough, so careful in its explanations, so detailed in its examples that any reader "who can perform arithmetical computations rapidly and accurately is capable of mastering the principles laid down in this text."

Just Published!



MATHEMATICS FOR ELECTRICIANS AND RADIOMEN

By NELSON M. COOKE

Chief Radio Electrician, U. S. Navy Member, Institute of Radio Engineers

604 pages, 6 x 9, \$4.00

This book teaches you mathematics from elementary algebra through quadratic equations, logarithms, trigonometry, plane vectors and elementary vector algebra with direct applications to electrical and radio problems. It teaches you how to apply this mathematical knowledge in the solutions of radio and circuit problems. In other words, it gives you the grasp of mathematics you need and then shows you how to use your knowledge.

Keep these 3 points in mind

- gives you 600 illustrative problems worked out in detail;
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- based on more than 8 years' experience teaching mathematics to U. S. Navy electricians and radio operators.

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Send me Cooke's Mathematics for Electricians and Radiomen for 10 days' examination on approval. In 10 days I will send you \$4.00 plus few cents postage, or return book postpaid. (We pay postage if remittance accompanies order.)

Name.....
 Address.....
 City and State.....
 Position.....
 Company..... R.R. 6-42

Stromberg War Production Drive Cited

In its latest "report" bulletin on recommended War Production Drive activities in factories throughout the country, the War Production Board has cited Stromberg-Carlson in two articles. Stanley H. Manson, the Stromberg sales promotion manager, heads up the company's war drive. The WPB report goes to 25,000 manufacturers, and periodically summarizes the most effective "morale building" drives then in use.

Stromberg was one of the first firms to set up a Joint Labor-Management Production Drive Committee and five Sub-Committees, at WPB's request. The five latter groups include those on (1) Contests and Events, (2) Publicity, (3) Transportation, (4) Production Progress, and (5) Public Address. This organization adopted the suggestions in WPB's first official Plan Book, added many ideas of its own, and has been very effective in efforts "to impress all workers with the important part they are playing in the war effort."

Refrigerator Training Week Due This Month

National Refrigerator Training Week has been announced by General Electric for June 22 to 27, when service training schools for eligible GE dealers and their retail staffs will be conducted in 86 cities. Plans are announced by W. C. Noll, the product service manager for GE's appliance and merchandise department. The Week starts GE's long-range training program.

Dealers at the meetings will see sound slide films, charts, etc., and will hear lectures and demonstrations. Special literature is provided.

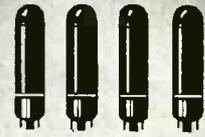
A new manual called "Salute to Service" is available from GE jobbers, which explains how dealers may become authorized GE service centers, and display the official decalcomania.

University Labs in Expansion

University Laboratories, formerly located at 195 Chrystie St., New York City, have occupied new factory and office space at 225 Varick St., New York. The new quarters have twice the space of the old site and will permit quick delivery of University's wartime materials.

Spokane Radio Expands to New Site

Spokane Radio Co., Spokane, Wash., now occupies a new home at 1130 Sprague Ave., that city. The firm has been in business 15 years and thus celebrates its anniversary "with both manufacturing and wholesale divisions combined in a new establishment out-fitted better than ever."



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of Amperite Regulators replace over 400 types of AC-DC Ballast Tubes now in use.

Amperites are real REGULATORS... have patented Automatic Starting Resistor which prevents initial surge and saves pilot lights... Ask Your Jobber.

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The Outstanding Tube Tester Value
Checks all type tubes including Loctals, Bantam Jr., 1.4 volt Miniatures, Gaseous Rectifier, Ballast, High Voltage Series, etc. Filament Voltages from 1.1 to 110 volts. Direct Reading GOOD-BAD Meter Scale. Professional-appearing case with accessory compartment large enough for carrying Model 739 AC-DC Pocket Volt-Ohm-Milliammeter, thereby giving the serviceman complete testing facilities for calls in the field. . . . Model 432-A with compartment, Dealer Net Price . . . \$20.73. Model 432-A in case less compartment . . . \$19.65. Model 739, Dealer Net Price . . . \$10.89

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Against the background of millions of radios built for American homes, RCA now is building radio apparatus to strengthen the world-wide life-lines of American communications ashore, afloat and aloft. Radio has gone to war!

Almost the entire development of radio as we know it took place during the two decades between the last war and this one. During that time, RCA Laboratories worked unceasingly to perfect existing devices and to invent new ones. Out of this research came the finest civilian radio equipment the world has ever



seen...and the finest *military* radio equipment! For the RCA Manufacturing Company is today on a war footing.

Some day when peace returns, against this dual background of manufacturing experience in peace and war, RCA will turn from military to civilian radio—and gear its production to build new radio and television sets for the home—

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Go to Work!



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