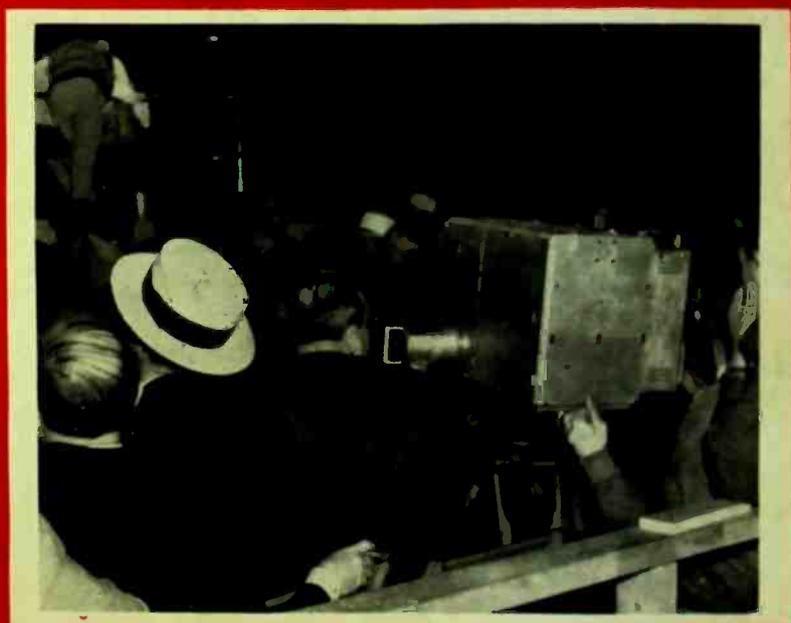


RADIO TELEVISION JOURNAL



March, 1945

Volume 58, Number 3

How Motorola Radio PLANS ITS NATIONAL ADVERTISING



NATIONAL MAGAZINES

The Motorola schedule calls for regular large space advertisements in the largest weekly magazines: Life, Liberty, Saturday Evening Post, Colliers, Newsweek and Click. This powerful mass magazine circulation is fortified by the addition of the biggest and best monthlies: Fortune, National Geographic, American Magazine, Cosmopolitan, Esquire and Popular Mechanics.

SUNDAY NEWSPAPER MAGAZINES

More than 10 million families do not read magazines of any kind . . . weekly or monthly . . . but they *do* read the Sunday Magazines distributed with their favorite newspaper. To reach this vital section of the American buying public, Motorola uses color pages in The American Weekly, world's largest circulation, and dominant color space in This Week, second only to The American Weekly in

family coverage. These two Sunday magazines reach more than 15 million families.

NATIONAL ROAD SIGNS

More than 20 million automobiles are still traveling the highways of America and after the war this total will rise to more than 30 million. The Motorola all steel highway signs in their familiar yellow and black color combinations are known from coast to coast on every major highway in America. To this dominant outdoor campaign Motorola has added a schedule of painted bulletins on the main thoroughfare of our largest cities.

DAILY NEWSPAPERS

To reach the American public with spot news and new merchandise Motorola has regularly used leading newspapers which serve the retail buying areas in the nationwide Motorola distributor network.

Motorola National Advertising blankets the nation and soon after Victory in Europe will tell the American public about the NEW Motorola Radios for Home and Car.

SOON TO BE READY FOR DELIVERY!

GALVIN MFG. CORPORATION • CHICAGO 51



Motorola Radio

F-M & A-M HOME RADIO • AUTO RADIO • AUTOMATIC PHONOGRAPH • TELEVISION • F-M POLICE RADIO • RADAR • MILITARY RADIO



LIKE THE "HANDIE TALKIE" THIS TINY PORTABLE WAS A NOTABLE MOTOROLA RADIOD FIRST!

• Thousands know the Motorola "Playboy" as the smallest, most powerful personal portable radio on the market. It plays richly, beautifully, on planes, trains, everywhere. The new postwar Motorola "Playboy" will be a "Honey"!

tru·base

REG. U. S. PAT. OFF.



"Big Set" Tone in "Compact" Sets:
in Olympic's "tru-base" system, new electronic principles replace—within the electrical circuit—the rich bass tones . . . heretofore "lost" in all but large, costly consoles. By restoring true resonance to the bass register, "tru-base" releases "ear-balanced" realism throughout the entire tonal scale. "tru-base" will be available in modestly-priced, brilliantly styled Olympic table sets and radio-phonograph combinations. Register your interest by writing to: Olympic Radio & Television, 510 Sixth Ave., New York 11.

and only **Olympic** has tru·base



DIVISION OF HAMILTON RADIO CORPORATION



Washington Report

Retailers' Profits Must Absorb Price Increases

The increased volume of business, with less overhead, less service and "no need for salesmanship" have ballooned retailers' profits, according to Price Administrator Chester Bowles. Asserting that the distributors must help absorb price increases and not pass them on to the public, he stated that profits of department and specialty stores, before taxes, have increased 1046 per cent above the 1936-39 average.

Profit figures were presented to the Senate banking and currency committee by Mr. Bowles to confute the retailers who protest that they have been subjected to a "squeeze" under the OPA policy of forcing the distribution trades to absorb price increases granted by manufacturers. He explained that the retailers will not be required to absorb the increases until a careful study has been made of their ability to pay the difference.

FCC Allocations Assailed by NBC and CBS

A brief presented by NBC to the Federal Communications Commission expressed dissatisfaction with the FM allocations.

Although RCA-NBC believes that the Commission generally has done a constructive job, it has erred in proposing a temporary assignment for FM broadcasting in the 42-44 megacycle band until such time as it can move permanently to the 84-102 mc band. They contend that the 42-44 band is too narrow and that the 44-50 band currently used by F M will not be needed at this time for television broadcasting, as the FCC suggests. Furthermore, RCA and NBC suggest that the 102-110 mc band, which would be reserved under the proposed

FCC plan for either video or fm use after the war, should either be granted outright to video use or the reserve band should be charged to run between 84 and 90 mc, so as to separate the broad video and fm bands.

CBS also contended in a brief that only the use of wide bands in the higher frequencies can produce television pictures with twice the detail of the present television. It stated that technical difficulties inherent in present low frequencies preclude the possibility of nationwide, competitive video.

FCC Will Hold Hearings on "Clear Channel" May 9th

The FCC ordered a general public hearing starting May 9th in order to determine what changes, if any, should be made in the present policies on allocation of so-called "clear channels" in the standard radio broadcast band.

So-called "clear radio channels" have been reserved since 1928 for the use of one class 1-A stations or a limited number of 1-B stations to give radio service over a wide area with the specific purpose of providing the rural population of the United States with radio service.

Since Commission studies reveal there are still large areas within the United States which receive no radio service at all during the daytime hours and no primary radio service at night, a reexamination of present clear channel allocations is necessary.

All persons who wish to register complaints or suggestions must notify the commission before April 2nd.

The Washington Report is brought to you each month from the on-the-spot vantage point enjoyed by your Washington Editor,

B. F. HOLLEY

FM Frequency Change May Rise Price of Sets

Dr. Ray H. Manson, vice-president and general manager of the Stromberg-Carlson Company, presented on behalf of his own and various other manufacturing concerns estimates of the price increases caused by the change of frequency bands for FM.

The estimates ranged from \$4.00 to \$32.00, with a mean average of about \$16.00. Some of the individual companies approximate their price increases as follows: Stromberg-Carlson, \$10; R.R.A., \$8; Freed Radio Co., \$20; Magnavox, \$16; Emerson, \$18; Zenith, \$20; G-E, \$24; and Crosley, \$4. These are estimated retail prices, and are approximately four times the factory cost. The four to one ratio is for the "distribution spread," and includes advertising and general distributing overhead. These figures are predicated on a \$50 to \$75 Am/Fm combination. According to this, a \$50 set would be sold anywhere between \$54 and \$82, depending on the particular manufacturer's individual cost.

It was the opinion, however, of J. D. Reed, design engineer, Crosley Corp., Cincinnati, Ohio, that his firm could produce AM/FM combination receivers at the higher frequencies at a factory cost of "less than \$1 per set." Both he and David B. Smith, director of research of the Philco Corporation, stated that in time these costs would be reduced as more experience is obtained in the use of these frequencies.

395,000 FM Sets in American Homes

Evidence will be presented by the FCC that only 395,000 frequency modulation sets have been manufactured up to the present time and are now distributed in American homes. The normally accepted figure was 500,000 and as many as 700,000 was a figure accepted by many in Washington.

"RADIONICS EXCLUSIVELY"

THIS SINGLENESS OF PURPOSE IS A PRIME ZENITH POLICY— designed to help You

● This unswerving singleness of purpose—"RADIONICS EXCLUSIVELY"—is the basic reason why *you* can be sure of the demand for the coming new line of Zenith Radionic Radios.

Today Zenith is producing radionic equipment *only* for the armed forces or for rehabilitation. Yet Zenith has *never* lost sight of the obligation owed to its distributors and retail dealers.

That is one of the chief reasons why we have been able to hold our engineering and production organization intact . . . why we have not fanned out into unrelated home appliance fields like refrigerators and washing machines.

We have chosen, instead, to adhere strictly to a policy of *concentrating* all our skill and resources upon "RADIONICS EXCLUSIVELY"!

The most valuable radio franchise in the country

Naturally, through our war efforts as one of *America's leading producers for our armed forces* of Radionic Equipment Exclusively, we have discovered new techniques and production efficiencies, many of which will be adapted to civilian manu-

facture. This invaluable specialized experience—combined with our refusal to diversify into non-radionic fields—assures a franchise unparalleled in profit potential and preserves your right to choose the leaders!

Keep your eye on Zenith!

So keep in touch with your Zenith distributor. He is being kept fully informed of all factory developments

Keep Your Eye on **ZENITH** for the Best in Radio!

REG. U. S. PAT. OFF.
LONG DISTANCE RADIO
REG. U. S. PAT. OFF.

RADIONIC PRODUCTS EXCLUSIVELY—
WORLD'S LEADING MANUFACTURER

RADIO · FM · TELEVISION · RADAR · SHORT WAVE · RADIO · PHONOGRAPHS · HEARING AIDS

Editorially Speaking

MAL PARKS

Editor

Alex H. Kolbe

Publisher

IT is pretty generally conceded that one of the main types of competition which will be faced by radio dealers in the postwar era are the numerous and growing chains of *factory-owned stores* such as Goodyear, Firestone, the projected Pure Oil retail outlets, etc.

IN all the discussions concerning the threat to retailers offered by these chains, I have yet to see anyone put his finger on the glaring inequities on which the operation of these stores is based.

LET me explain it this way. No right-minded retailer will quarrel with the basic premise on which the average retail chain operation is based. Apart from the antipathy which some independents maintain toward all chain operators, the truth of the matter is that such chains as Western Auto, the Pep Boys, Davega and others are *retailers* . . . and their only difference to independent retailers is in the size and scope of their operation.

BUT, this is not the case where these factory-owned chains of retail outlets are concerned. First of all, they are organized for the sole purpose of selling more of the factory's products. In order to do this it may be necessary for these chains to sell other products such as radios, record players, television sets and even radio servicing *at a loss* in order to gain store traffic and more sales volume for their own outlets.

NOW, at any time this is an unfair competitive situation. But in wartime, it is doubly so, and here is the reason why.

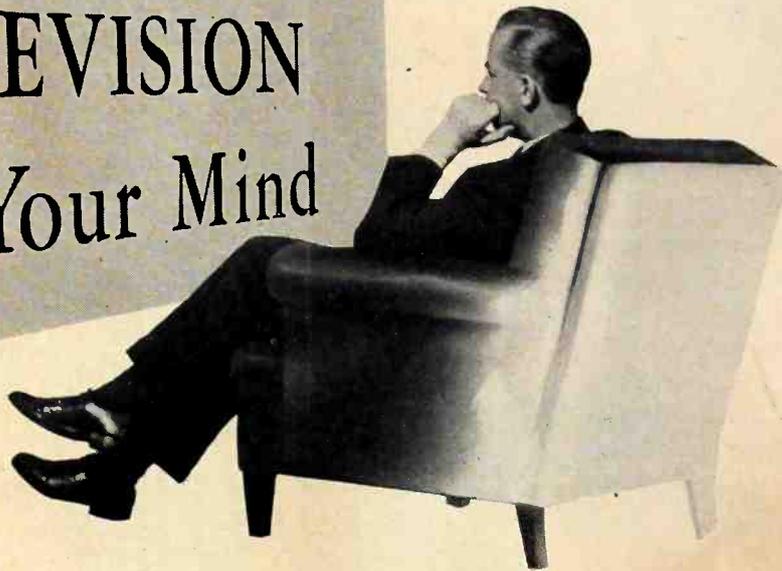
THESE large factories are now operating at full capacity on government contracts. I venture to say that every one of them is subject to the excess profits tax, which in most cases, is 90 per cent or more of their gross income.

JUST consider what this means. It means that these chains can operate on the parent company's tax base. It means that they can pay unconscionable prices for hard-to-get items and sell them below ceiling because any loss they take comes out of the government's tax stake in the company's earnings. I believe that this condition shows the need for an investigation on the part of Congress which will, for once and for all, define the basis on which this type retail outlet shall be taxed.

AND, I think it is also high time for us to petition our Congressmen and Senators for legislation which would protect all retailers from the unfair advantages enjoyed by factory-owned chains of stores. If nothing else, it can differentiate between *legitimate* retailing and the *unfair* competition represented by factory-owned chains who can use tax money to undersell their competitors, lease high-priced locations, grab hard-to-get merchandise and sell at a loss . . . all on the basis of "what's the difference, the government's paying 90 per cent of it anyway!"

Mal Parks

If You Have TELEVISION On Your Mind



Many enterprising dealers will make a bankful of money out of television — and have a barrel of fun doing it. Right now, alert dealers are awaiting DuMont's television blueprints of merchandising policy, cost and profit data.

DuMont has experience . . . gained through 14 years in the forefront of electronic progress . . . gained through the manufacture, distribution and servicing of prewar DuMont Television Receivers. On April 30, 1939, DuMont advertised the first television sets placed on the American Market. Today, DuMont national advertising is continuing to create millions of postwar customers for television sets . . . customers

who will demand the very finest sight-and-sound reception quality—obtainable in DuMont-engineered receivers!

It is important that you plan your television future with DuMont and be ready to anticipate your peacetime customers' demand for the sharpest, clearest picture reception available. DuMont will have the answers ready *on time*. DuMont quality in any style or size of postwar cabinet will be tops!

Write or telephone . . . Consumer Products Division, Allen B. DuMont Laboratories, Inc., 515 Madison Avenue, New York 22, N. Y. to be listed to receive this valuable information as it is released.

Copyright 1945, Allen B. DuMont Laboratories, Inc.



ALLEN B. DUMONT LABORATORIES, INC., GENERAL OFFICES, 2 MAIN AVE., PASSAIC, N. J.
TELEVISION STUDIOS AND STATION WABD, 515 MADISON AVENUE, NEW YORK 22, N. Y.

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ALEX H. KOLBE

Publisher



This Month's Cover . . .

This month's cover portrays an on-the-spot event being televised and illustrates some of the points brought out in the provocative article "Is Television A Bust?" which you will find beginning on page 42 of this issue.

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Number
3



DON'T MISS THE BOAT

Get Sparton's exclusive franchise story today

THE most talked of radio merchandising plan, *S.C.M.P. is available to *only one* dealer in a territory. To make sure you don't miss the boat—we suggest you get full particulars *now*.

Many of America's foremost radio retailers tied-up to *S.C.M.P. back in 1939. They proved conclusively that here was one way of retailing radios in volume at a profit.

*S.C.M.P. will be continued without fundamental change when Victory is won.

Since 1926, Sparton, known throughout the world as "Radio's Richest Voice," has contributed many firsts to the radio industry.

The same engineering and craftsmanship that contributed to Sparton's superiority in the early days—augmented by new plant and research facilities—is your guarantee of continued leadership.

Dealer appointments are now being made. If you are not familiar with the many exclusive features of the *S.C.M.P., send for a copy of the Sparton plan book today!

Radio and Appliance Division—Plant 5

THE SPARKS-WITHINGTON CO. • JACKSON, MICH.

***S.C.M.P.**

Sparton Co-operative Merchandising Plan. An exclusive method of profitably retailing radios and home appliances that has been and is being advertised regularly to consumers in leading magazines as the Sparton Way.

ONLY ONE DEALER IN EACH CITY AND TOWN

Check These Profit-Increasing Features

- One exclusive dealer in each area
- Direct factory-to-dealer shipment
- Landed dealer cost prices
- Low consumer prices
- National advertising
- Factory prepared and distributed promotion helps
- Seasonal promotions
- Uniform retail prices
- Products styled by outstanding designers



Travel with Trav-Ler



Dimming Sisters
"National Barn
Dance", NBC



LISTEN TO HARMONY that practically "carries you away"! Every exciting note is captured so faithfully by postwar Trav-Ler Radios that *listening* is like *traveling* from living room to studio. Trav-Ler is making plans to travel fast in both AM and FM Radios, with startling innovations in reception and design—at prices to accelerate buying. Future-minded dealers and jobbers are invited to write.



RADIOS

Karenola

RECORD PLAYERS

TRAV-LER KARENOLA RADIO & TELEVISION CORPORATION, 1034 W. Van Buren St., Chicago 7, Ill.

25 Years Ago in The Journal

Interesting Items Culled from the March, 1920 Issue of the JOURNAL

THIS month's Journal carries a full-page advertisement by the Pathe Phonograph Company, listing the latest hit records. Last minute dance hits include such popular favorites as "Bye-lo" combined with "Let the Rest of the World Go By," and "Swanee" teamed with "Why Don't You Drive My Blues Away?" The ad shows a black and white sketch of a large record, with upright figures of Latin American, Hawaiian and classical ballet artists performing on its shiny surface. Included in the group is an American concert violinist, a woman dressed in the current fad of a short evening dress with a large picture hat.

* * *

The recent Music Show in New York was not a complete success, since it failed to reveal the best features of the phonograph to the city's discriminating population. As our reporter reminds us, the "reputation of the phonograph is still not wholly made as a musical instrument to a large number of most desirable possible purchasers, those who represent the conservative cultured group who can buy the best." In order to impress these potential customers with the value of the phonograph, less noise must be allowed at future shows, and demonstration of separate machines should be handled individually in private booths. Only under such conditions can the phonograph be displayed to proper advantage.

* * *

In all probability, public opinion about the 1920 presidential campaign will be influenced as much by the phonograph as by the newspapers! This startling development is due to the activities of "The Nation's Forum," an organization developed during the first year of the war to start the recording of public addresses. Recorded speeches by President Wilson, Senator Cabot Lodge, Governor Calvin Coolidge and Senator Warren G. Harding will soon be available for use in public meetings and schools, and record dealers are expected to profit enormously from this extended use of the talking-machine.

* * *

The General Phonograph Company's new policy of charging a dollar for ten inch double disc records has proved a great success. The extra few cents has been readily accepted by the public, and a dollar seems to be the proper price for a good record.

Two of our leading companies, the Columbia Graphophone Company and the Emerson Phonograph Company, have purchased new locations to house their expanding facilities. Columbia has taken over the Columbia Trust Company building at 34th Street and Fifth Avenue, New York, and plans are being made for the addition of nine floors to the present edifice. Emerson will move some time in March to its new home at 206 Fifth Avenue, New York, and all departments of the company will now be under one roof.

* * *

"I am contemplating starting a phonograph store, but I do not think at the beginning the locality chosen will support me, and pay rent on my store on phonographs alone. What would you suggest as the best side line?" asks one new dealer of Mr. H. E. Speare. Speare's Answer recommends a good stock of cameras, film, vacuum cleaners and periodicals. He also suggests some seasonable items to combat the summer lull in phonograph and record trade.

* * *

Mr. Henderson takes issue this month with the multitude of useless accessories now clogging the market. He feels good accessories will sell easily, but many supposedly helpful gadgets cost the unsuspecting dealer \$3.00 to rid themselves of an article worth 50 cents. As he puts it, the flood of useless stock now jamming the dealers' shops "would lead someone to suspect that accessory houses believe dealers represent the highest form of suspended animation." He is wholeheartedly in favor of valuable accessories, however, and believes there should be more of these on the market.

* * *

Pathe Freres Phonograph Company took advantage of the recent Music Show in New York City to hold a three day sales conference. The meeting opened with a welcome by President E. A. Widmann, followed by a discussion of general sales arguments presented by Walter Eckhardt, president of the Interstate Phonograph Company of Philadelphia. The entire session included talks on wholesaling, dealer cooperation, technical advice, and servicing. On the last day, all the delegates were taken over to the Brooklyn factories of Pathe to examine record and cabinet plants.

Ready for
Bigger
things...



PLUG IN ELECTROLYTICS

• There's more to those Aerovox plug-in electrolytics than just another type. Actually, those plug-ins facilitate the checking, replacement and servicing of capacitors in continuous use and in vital equipment. They are truly symbolic of the ELECTRONIC AGE now dawning.

Yes, Aerovox invites you to get ready for BIGGER things. Your scope is being increased many fold. Soon you'll be called upon to build as well as service countless electronic devices in addition to more and better radios, phonograph combinations, and, of course, television. And Aerovox is all set to help you not only with the necessary capacitors, but with practical information as well. Bank on Aerovox!

• Free Subscription . . .

Ask your local Aerovox jobber about a free subscription to the monthly *Aerovox Research Worker*. It will help you get ready for the Electronic Age. Order your immediate servicing requirements from him now.



INDIVIDUALLY TESTED

AEROVOX CORP., NEW BEDFORD, MASS., U. S. A.

In Canada: AEROVOX CANADA LTD., HAMILTON, ONT.

Export: 13 E. 40 St., New York 16, N. Y. Cable: 'ARLAB'

The Shape of Things to Come . . .

Radio Sewing Machine for Postwar Homes

An entirely new invention will completely eliminate the needle and thread of the present day sewing machine. The machine will work on modern thermoplastics, synthetic materials which are finding wide applications in the making of raincoats now, and will be used in the future for draperies, etc. The material to be "stitched" is fed across a table top through a field of radio current. The struggle of the waves to pass through molecules of the plastics sets up heat which causes the parts to fuse into a tight bond in place of the old-fashioned seam.

Built in Fire Extinguishers

Fool proof fire extinguishers will be built into the walls, doors and window frames of your postwar stores. Painted with a pigment containing calcium carbonate and a resin, high temperatures will cause the pigment to break down and release a cloud of carbon dioxide gas—one of the most effective fire fighters known.

Personal Radio Communication Seen Possible

Through the use of tiny radio tubes, smaller than acorns to power midget transmitters and receivers that will fit into a pocket a complete personal radio telephone is insured. Constant communication between two people is thus insured, no matter where they may be.

Entire Walls for Television Screens

Homes and apartments with television walls are one of the many forward looking plans for the future. When your set is plugged in the entire wall will become a television screen. While this is not an immediate plan, it does demonstrate the future developments possible for television sets.

Luminescent Draperies to Provide Colorful Lighting

Drapery fabrics or even whole walls will be treated so that when in contact with radio waves they will give off a colorful glow to supplement other lighting equipment.

For Your Personal Convenience

Cars of the future may be equipped with side wheels that coordinate with automatic jacks, permitting the driver to raise car, lower side wheels and park sideways . . . self-whipping cream in cans which, as soon as it is exposed to air, transforms itself to a light froth . . . ocean fresh fish for the inhabitants of inland states through special control bags in fiber boxes to keep fish in perfect condition for long distance shipping.

Photoelectric Cell To Measure Cloud Height

Still another use has been found for the photoelectric cell—that of measuring cloud heights. A powerful searchlight is used with the lamp projecting its beam exactly vertical. A photoelectric cell is located behind a lens system so that it "sees" only the spot of light on the cloud.

The angle of the photocell unit will vary with the height of the cloud if the distance between the light source and this unit remains constant. Knowing the base line and the angle, the altitude of the triangle or the height of the cloud quickly can be calculated.

Glass Ovens for Postwar Stoves

Ovens made completely of glass which is impervious to heat are being developed for incorporation in postwar stove models. This will enable the housewife to see at all times just how the cooking process is progressing.

Radio Dehydrators for Home Food Processing

The complicated and tedious methods now used for home canning may well be eliminated in the postwar era when Mrs. Housewife uses thermic radio dehydrators. Usually foods to be dehydrated are first heated to neutralize the action of enzymes which contribute to oxidation and decay. The processing by radio eliminates this step and leave the foods with more natural flavor and color. A similar invention will kill bacteria and keep meat and dairy products fresh in the refrigerator over long periods.

New Lawn Mower Developed

The lawn mower of the future will be started, steered and stopped by radio waves in the same manner that beams guide planes. This will enable the suburbanites of the future to sit comfortably on the porch and watch this new invention take over a tedious and burdensome task.

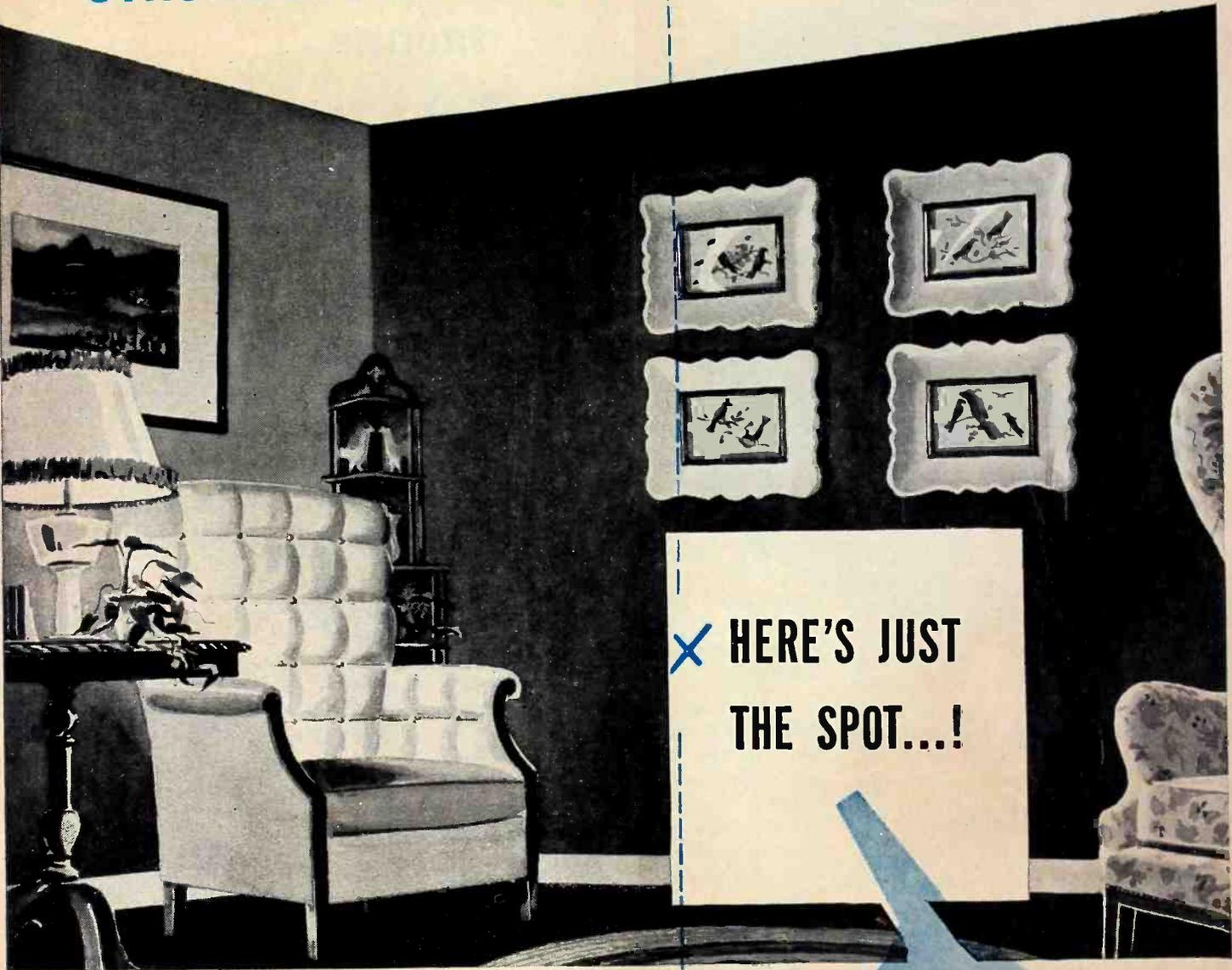
Radio Clocks Pre-select Cooking Hours

Radio clocks will be provided for the postwar stoves which will enable the housewife to start dinner at whatever hour she desires. The dial is set, and the cooking process will start automatically whether she is there or not.

Portable Electric Lamps

In American homes tomorrow housewives may again be carrying lamps from room to room as their great grandmothers did. The new lamps will be in the form of glass bulbs containing phosphorus that will light up when bombarded by radio waves. No wall plugs or connecting cords will be needed.

“make it a
STROMBERG-CARLSON”

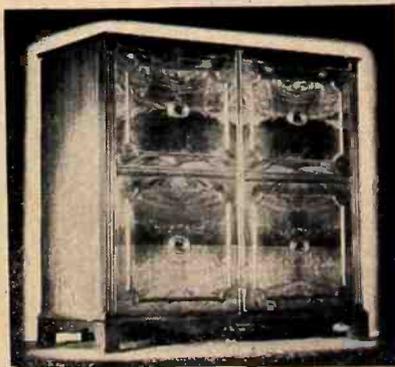


for the main radio
in your home

Many of our friends in the trade are telling us that our current advertising expresses soundly the basic superiorities of Stromberg-Carlson products. This idea that the *main radio* in a home should be as fine a radio as its purchaser can buy—a *Stromberg-Carlson*—is being carried to the public by over 475,000,000 impressions in thirteen leading national magazines.

Experienced radio merchants feel they can profitably tie their own post-war merchandising plans to this theme. For they rate Stromberg-Carlson as: the *important* radio line; the radio line that will make real *profits*; the radio line with assured and growing *public acceptance*.

You, too, will want to organize your own post-war selling program around this widely accepted Stromberg-Carlson sales theme. You'll find the Stromberg-Carlson "*main radio*" a profit maker—whether in an outstanding table model, console, or radio-phonograph combination. Write for the name and address of your distributor, who will be happy to supply additional information about Stromberg-Carlson.



STROMBERG-CARLSON

ROCHESTER 3, NEW YORK
RADIOS... TELEVISION...
TELEPHONES AND
SOUND EQUIPMENT



SERVICE TODAY

means

SALES TOMORROW

A courteous, efficient service department can often be the keynote of success for radio dealers, and today especially, this factor looms large in the eyes of dealers and customers alike. With wartime shortages becoming daily more acute, many dealers find they have little to sell except service. Only a few of their patrons today are able to purchase new radio sets, but all of them possess old sets which are in increasing need of repairs. Many of the servicing jobs required on such sets are comparatively simple, but are absolutely necessary to insure the smooth performance of over-worked, carelessly used sets. By stressing the importance of such minor repairs, and by a sincere desire to help such customers, dealers stand to profit immensely in the postwar period. Once radios begin to re-appear on the market, patrons will naturally turn to those dealers who served them best during the present lean season, and will buy their new sets from these stores.

Several methods have been utilized recently to stress this servicing idea. Some of these ideas center on facilities outside the actual shop such as advertising, while others give hints for special service departments within the stores. In regard to the most effective methods for use outside the shop, one enterprising dealer inserted an advertisement in his local paper stressing the long period ahead of us before new radio sets will be manufactured. He placed a huge question mark at the top of the ad, and ran his copy along these lines:

"The sixty-four dollar question—When will I be able to purchase a postwar radio set?"

"The answer: Frankly, we don't know. We do know though that it will still take many months after the close of the war before radios will appear on our shelves. For that reason, conserve your present sets wisely and well. Let us check over your old sets at the first sign of trouble. Painstaking service will make your present sets last for the duration and then some." This ad brought the desired results: many people who vaguely realized that their sets needed attention were stimulated to take concrete action, and many others who had never previously patronized this particular dealer now found their way to his doors.

Another dealer started an entire series of ads keyed to the service idea. The first ad to appear carried a picture of the shop's service department with the caption: "For the duration, this is the heart of our establishment. We cannot show you new radios but we can show you the finest repair service in the community." A second adver-

tisement showed a photograph of servicemen and women from the town. The copy accompanying this ad featured the common desire of men on furlough to pack as much enjoyment as possible into their few days of respite from army or navy routine. It stated: "When your boys are home on leave, they will be sincerely appreciative of all the comforts of home. A jam session on the radio will mean more to them than a thousand speeches of welcome, and they deserve a radio in perfect condition. Let us keep your radios in tip-top shape for the day when Johnny comes marching home again for a few precious days of rest and relaxation." This series continued over a period of months and brought the service question vividly before the public mind.

Another method closely tied in with advertising is the use of public lectures on the practical values of keeping radios and similar electric appliances in excellent condition. The local electric utility company will often cooperate in this plan of operation, and will offer its facilities for this purpose. Members of the dealer's repair force can give lectures on the advantages of fully serviced radios about every month before interested housewives. Such sessions should last but half an hour, with ample time permitted for a discussion period. In this way many women can learn more about the mechanism of their radios, and thus gain an added interest in its performance. The electrical company will usually be glad to offer its services in this regard, since they too are anxious to keep radios and all household appliances in operative condition during the war.

Other dealers have centered most of their attention on matters within their own shops, and have devised various methods of making their service departments an outstanding, attractive feature of the store. One shop initiated a "Store Service Club" open to all its customers. Members were permitted to make use of this club six times during the year, and their radios would be serviced on a 48 hour basis. (In the case of major repairs the time period would have to be extended.) Club members received preferential treatment over other shop patrons, and in

says

Merchandising Editor

JIMMY KENT

return for this privilege they agreed to deliver and pick up any merchandise which they desired to have repaired. If agreeable, they could also bring in radios which operated satisfactorily at the time for a routine check-up. This service, priced at \$1.00, could catch any small defects before they grew to serious proportions. This system worked out beneficially to all concerned, since radios were repaired quickly at a time when the trouble could be easily and economically handled. Furthermore, such a set-up would keep patrons coming into the store at regular intervals and teach them the valuable lesson of keeping their radio sets in constant repair.

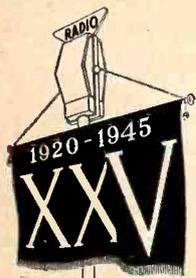
Another promotional idea in this field has been the establishment of a rental department in the radio dealer's shop. The dealer in question realized that some families are deprived of radio entertainment and news service while their sets are being repaired, and decided to allocate certain of his sets to be rented out to such families. Of course such rental service would have to be limited to only bona fide customers who could be trusted to treat the rented set with care. A small rental could easily be charged for these sets, which in all probability would cheerfully be paid by customers taking advantage of the system. Of course the chief object of the scheme would be to build good will rather than to realize any special profit. If patrons could be sure of having a radio to take the place of one being repaired they would be much more willing to have faulty sets serviced. This set-up would place the dealer in a favorable light, since such forward-looking enterprises show a real concern on the part of the dealer for his customers' welfare.

Your Boy
may need the
RED CROSS
Give • Today!

SIDE BY SIDE FROM THE BEGINNING...



SIDE BY SIDE IN THE YEARS AHEAD...



The history of broadcasting and the history of RCA are recorded on pages side by side. RCA



pioneered and put into practical use many of the outstanding developments in radio science as a service to the public, first for thousands, then for millions. For today, both are pledged to Victory...for tomorrow, to make radio broadcasting an even greater service for all mankind.



RCA Victor



RADIO CORPORATION OF AMERICA • RCA VICTOR DIVISION • CAMDEN, N. J.

In Canada, RCA VICTOR COMPANY LIMITED, Montreal



BOND GEDDES
Exec. V. P.

R. M. A.



NEWS



R. C. COSGROVE
President

R.M.A. News is published monthly for the purpose of developing better understanding between Mfrs. and Dealers.

The annual RMA meetings were cancelled by the Association's Board of Directors at its meeting February 21 in New York City, to cooperate in the government program. Instead there will be an RMA "convention by mail," through proxies, and the only meetings next June at the Stevens Hotel will be of the Association's Board of Directors and the executive committees of its five Divisions, with new Directors elected by mail proxies.

President R. C. Cosgrove presided at the RMA Directors' meeting at the Roosevelt Hotel, New York, and the RMA Board authorized several new membership services and projects. Because of the ODT travel-restriction policy, the RMA Board meeting was held instead of the cancelled annual "Mid-Winter" conference at New York, and the only other meeting was of the Set Division executive committee, of which Director E. A. Nichalos of Fort Wayne, Indiana, is chairman. The committee recommended and the Board approved a program for further cooperation with the National Association of Broadcasters in the observance this year of the 25th anniversary of broadcasting, under the Advertising Committee of which John S. Garceau of Fort Wayne is chairman.

Establishment jointly by RMA and the National Electrical Manufacturers Association of a new agency, the Joint Electronic Tube Engineering Council (JETEC), for the standardization of tubes, was approved by the RMA Board of Directors. The NEMA Board also has approved the new tube agency which will handle standardization of all electronic tubes, transmitting, receiving, industrial and non-industrial. Present tube standards will not be changed.

The JETEC agency will have a policy committee consisting of Dr. W. R. G. Baker, Director of the RMA Engineering Department, and President A. C. Streamer of NEMA. It will operate through the RMA Data Bureau, of which L. C. F. Horle is manager. There

will be a JETEC Engineering Council, with four members, two each from RMA and NEMA, which will issue tube standards after approval by the respective RMA and NEMA general standards committees. The four members of the Council are: O. W. Pike, General Electric Company, Chairman; J. R. Steen, Sylvania Electric Products, Inc.; A. Senauke, Amperex Electronic Corporation, and D. D. Knowles, Westinghouse Electric & Mfg. Co.



Former Radio Editor Joins RMA Staff

Appointment is announced of James D. Secrest, for many years radio editor of the Washington "Post," as Director of Publications of RMA. He succeeds James D. Douthat, who has resigned to join the local staff of the National Association of Manufacturers. Mr. Douthat has been on the RMA headquarters staff for the last year.

Mr. Secrest is a graduate of Duke University and was in newspaper work for many years in Washington, also New York, covering Congress and government agencies including the FCC. He also was on the editorial staff of "Broadcasting" magazine. During the war he served two years in the information division of the Office of Emergency Management, through which all war agency news is cleared, and later in the Office of War Information, in which he was chief of field operations with its sixty offices under his supervision.

The RMA Board of Directors accepted an invitation from the Canadian RMA to hold Board meetings together at Montreal, April 25 and 26, to develop further cooperation between the two neighboring industry organizations. Arrangements were made for the joint meeting by President R. C. Cosgrove of RMA and President R. M. Brophy of the Canadian RMA. Prominent officials of both governments will be invited to attend the joint meetings, especially for exchange of information on military radio production.

At the RMA meeting in New York the Board of Directors and also the Set Division's executive committee considered the campaign of the Institute of Radio Engineers for a \$500,000 building fund and the matter was deferred for further information and consideration.

RMA Membership Climbs

Admission of ten new members to RMA by the Association's Board of Directors at New York on February 21 brought the RMA membership to a total of 236, the highest since the 1929 depression period. New membership applications approved included the following:

- American Coil & Engineering Co., Chicago, Illinois.
- Chicago Condenser Corporation, Chicago, Illinois.
- Electrical Reactance Corporation, Franklinville, N. Y.
- Jackson Industries, Chicago, Ill.
- Measurements Corporation, Boonton, N. J.
- Minerva Corporation of America, New York, N. Y.
- J. P. Seeburg Corporation, Chicago, Ill.
- Sherron Electronics Company, Brooklyn, N. Y.
- U. S. Television Mfg. Corp., New York, N. Y.
- The Zell Company, New York, N. Y.

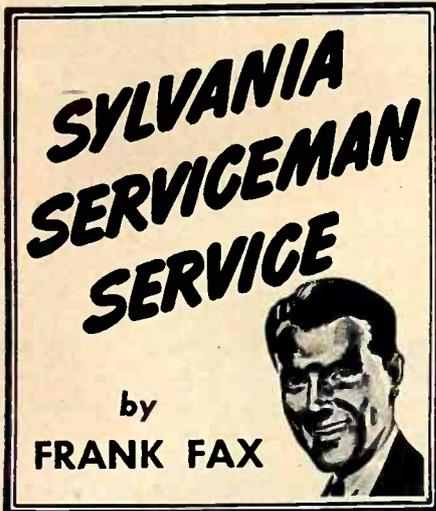
SYLVANIA NEWS

RADIO SERVICE EDITION

MARCH

Published in the Interests of Better Sight and Sound

1945



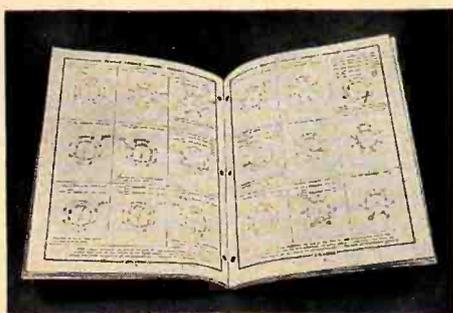
**SYLVANIA
SERVICEMAN
SERVICE**

by
FRANK FAX

Newest of Sylvania Electric's technical bulletins on Tube Substitutions is the 20 page "Aids To War-Time Servicing" that servicemen throughout the country are finding most helpful in these days of radio tube shortages.

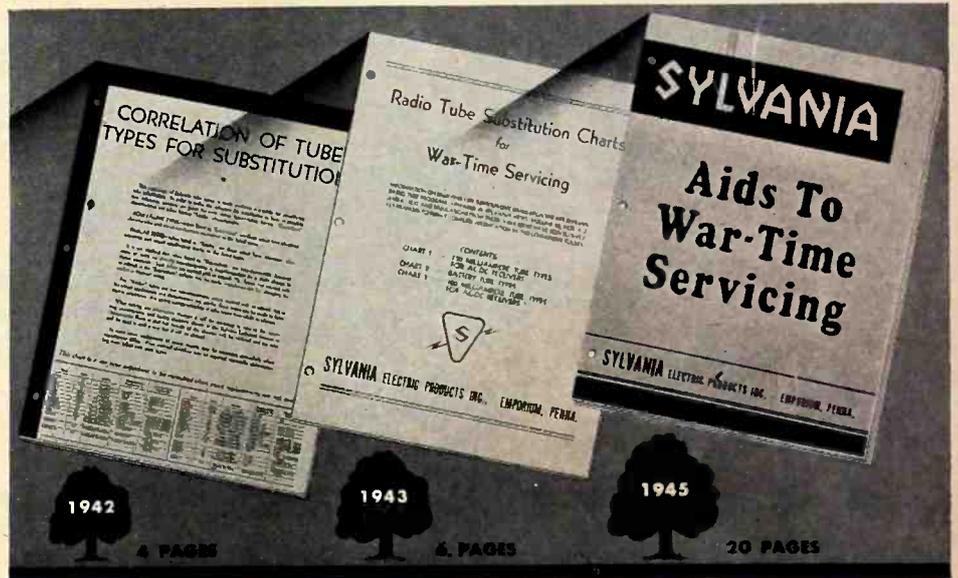
The manual is another Sylvania contribution to assist servicemen in meeting the present acute shortage of many tube types. In addition, it contains several charts of diagrams showing adaptor circuits commonly required.

This bulletin is available free on request from your Sylvania distributor, or from Sylvania Electric Products Inc., Emporium, Pa.



Sylvania Expands Service Aid with New Radio Tube Substitution Manual

Full Data Contained in New 20-page Bulletin Superseding Earlier Guides



Recognizing, early in the war, the difficulties that would result from tube shortages, Sylvania Electric immediately took steps to aid servicemen in tube substitution problems. Early in 1942, Sylvania published—and distributed free to servicemen—a 4-page bulletin, "Correlation of Tube Types for Substitution."

MORE EXTENSIVE DATA

This bulletin proved so helpful to servicemen that Sylvania continued this service in the Technical Section of Sylvania News, and then decided to re-issue the information in more comprehensive form. An enlarged, more fully developed "Radio Tube Substitution Charts for War-Time Servicing" appeared in 1943. This was a

6-page bulletin containing information based in part upon the WPB civilian radio tube program, permitting complete presentation in one convenient folder.

Now, newest and largest of these Serviceman Service charts is a 20-page manual entitled "Aids to War-Time Servicing" presenting the latest in Sylvania Tube Substitution Charts and containing 4 full-page charts of 9 diagrams each describing adaptor circuits.

CONSISTENT POLICY

Publication of this book is the latest step in Sylvania Electric's consistent policy of assisting radio servicemen to carry on their business efficiently and profitably.

SYLVANIA ELECTRIC

SYLVANIA ELECTRIC PRODUCTS INC., Emporium, Pa.

MAKERS OF RADIO TUBES; CATHODE RAY TUBES; ELECTRONIC DEVICES; FLUORESCENT LAMPS, FIXTURES, ACCESSORIES; INCANDESCENT LAMPS
RADIO-TELEVISION JOURNAL, MARCH, 1945

Our Readers Write



Dear Mr. Parks:

Won't you please forward to me any information you may have regarding the licensing of radio repair and service people, as I am interested in introducing such a bill at the Maryland General Assembly.

I have been informed that there is such an arrangement in some city in Wisconsin, which was discussed in your magazine of February 1945.

Your attention to this matter will be very much appreciated.

Very truly yours,

Emil Gathmann, Jr.

**House of Delegates,
Annapolis, Maryland**

** * * It is a matter of sincere editorial satisfaction to see that the work which your Radio Journal has been doing in this cause of better standards of Radio Servicing is beginning to bear fruit. In addition to the bill which the Honorable Emil Gathmann, Jr. is introducing in the Maryland House of Delegates, similar bills are now being proposed in many other states. A recent bulletin from the Radio Manufacturers Association listed this activity as being of supreme importance to the industry. Mr. Gathmann has kindly consented to keep us informed regarding the fate of his bill and we hope to make its introduction, etc., the subject of a timely article which readers may use in assisting their own Representatives introduce such bills in their respective states.*

Dear Mr. Parks:

It was with a great deal of interest that I read your editorial concerning setting up of associations of Radio service-dealers, in the January, 1945, issue of the "Radio Television Journal" to set aright the chaotic and unscrupulous conditions existing in the radio servicing business today.

The borough of Brooklyn is rife with such conditions today. Good radio tubes taken out of sets left for estimates and replaced by defective ones, the switching of wires on coils,

excessive overcharges, are but a few of the dishonest practices being perpetrated upon the public today, by a few so-called "experts" who have entered the servicing business during the war, to fleece the public, and then to disappear.

The legitimate service-dealer is getting an awful reputation, that can only be overcome by banding together into an organization to drive the "racketeers" out of business. The licensing of radio servicemen is one of the effective ways of doing this.

Being in contact with servicemen every day, I can say that the majority of them are in favor of organizing to protect their interests.

As a matter of fact we have a nucleus of radiomen waiting only for leadership to band them together into an association.

I know you and your editors have been in the forefront of organizing such groups. Would you, therefore, be willing to come and address such an assemblage of Brooklyn radiomen for the purpose of creating such an organization? Of course the formative work of calling such a meeting, as to time and place would have to be worked out beforehand. Given word of your cooperation I would really roll m sleeves up and go to work.

Sincerely,

R. Green.

**Green Radio Distributors,
482 Sutter Avenue,
Brooklyn 7, New York**

** * * Alert and progressive distributors such as Mr. Green have borne the brunt of the organizing work which your Journal Editors have been privileged to do for you. We have accepted Mr. Green's invitation to address his group and are ready, willing and able to "roll up our sleeves and go to work" for any similar group. Our experience has shown that the benefits from organization are so outstanding that every radio service-dealer who joins such a group or association is amply repaid, the actual cash*

value of the membership sometimes amounting to many times the small dues charged. Other groups wishing help and support in their organizing efforts have merely to call on your Radio Journal and every possible assistance will be forthcoming.

Gentlemen:

After three years of service as a Captain in the Army of the United States in this war, supervising the allocation and distribution of critical aircraft materials running into millions of dollars, my problem now is to re-enter the civilian field of endeavor most qualified by my experience and ability.

For twenty years prior to the war I successfully represented manufacturers in the merchandising and distribution of their products through the most productive channels. One client alone paid me in excess of \$100,000.00 over a ten-year period on a commission basis.

It will be greatly appreciated if you will bring to the attention of reputable manufacturers, the availability of my services, or furnish the names of likely clients so that solicitation can be made direct.

Cordially,

E. L. Burke.

**E. L. Burke & Company,
210 Transportation Building,
122 East Seventh Street,
Los Angeles 14, California.**

** * * We are more than glad to bring Captain Burke's name to the attention of manufacturers, and have already recommended him to several. We are deeply honored that he would think of us first in connection with his return to civilian life. One of things for which we are most grateful is that your Radio Journal has continued to come first in the interest of so many of our readers who have been serving their country during this war. To Captain Burke and all others go our very best wishes and our pledge to do everything we can to be of assistance to them.*

ARE YOU A TOP-NOTCH RADIO MERCHANT?



THE NEARER the top you are the more you'll see in this unusual opportunity.

Here's a line of home radios thoroughly postwar — with no prewar entanglements of leftover ideas or equipment. They're built by the company whose name is a byword in aviation radio — a tough and exacting field.

These instruments are designed with an eye and ear on all the advances made in radio during the war. And their construction has the precision you'd expect from hands that fashion aircraft radios.

Sets like these will attract the cream of the market. Our distributors must be the cream of radio merchants. So for that

reason our franchise has been made particularly attractive.

Lear policy aims to avoid the pitfalls of prewar radio merchandising. Dealers will have a line they can count on to be stable in models, in prices and in discounts. It will be supported by substantial advertising and sales helps.

We have purposely prepared the Lear wholesale distributor franchise to be one of the most advantageous dealership opportunities in the industry. If you are interested and feel that you can meet the qualifications, address LEAR, Incorporated, Home Radio Division, Sales, 230 E. Ohio St., Chicago 11, Illinois.

LEAR RADIO



ed. A print of this plan and the following note was given to every member of the buying and sales force.

"We are laying definite plans at the present time for the complete modernization of our store. This modernization will take place just as soon as war-time restrictions are lifted. We have consulted with _____, the planning engineer for the _____ Radio Company, and also with _____, an architectural

designer who specializes in store work. However, before we can proceed, we must decide ourselves exactly where we want our various store departments re-located.

"We have given this a lot of thought and have gone as far as we feel that we can without consulting you people who are on the firing line, since we feel that your opinions can be of inestimable value to us in avoiding mistakes.

"Therefore, I have attached a complete floor plan of the store. I am also attaching a complete

line-up of the departments as we have planned them. I would like to have you take the time to study this with great care and to analyze all the advantages and disadvantages of the changes we have outlined. Please return this note with your recommendations. We are going to spend considerable money and naturally, we want to avoid finding out after these changes are made that some of them were unwise."

The various elements that contribute to store atmosphere can probably be listed as to their value per dollar spent about as follows: Painting and decorating, general and special lighting, fixtures, displays and floor coverings.

Painting and decorating top the list for results gained by them are the best investment of all. The trend is to more color and deeper tones. White, or near white, ceilings are still a strong preference.

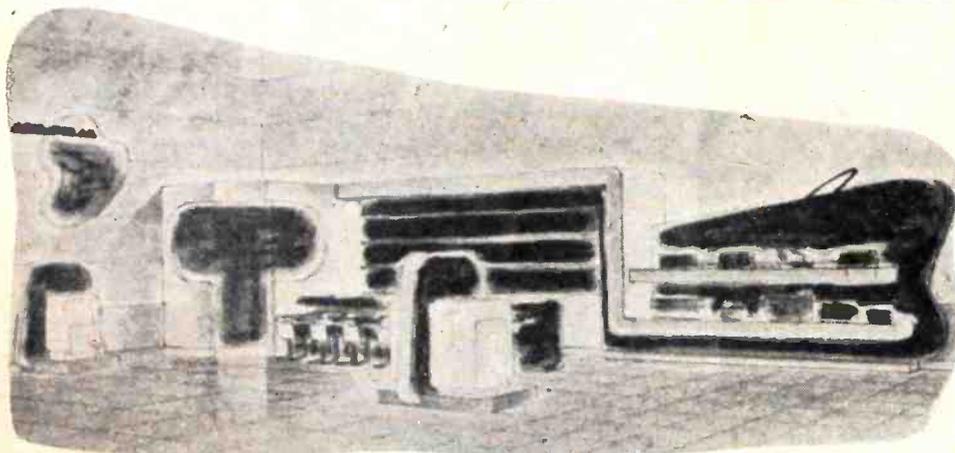
Good general lighting is more important than special lighting. However, special lighting is needed for accents and to help create interest. The fact that fluorescent lighting is not the perfect answer to store lighting problems is being increasingly recognized. A combination, however, of incandescent and fluorescent brings good results and is effective; it is becoming more widely recommended.

The area nearest the entrance to a store should have the strongest lighting. The customer will not be in for any sudden change from daylight to artificial lighting. The more any source of light is concealed from view the more effective the results; however, it is also generally true that the more concealed the lighting, the more costly the installation.

Fixtures should vary to a great extent. In a record or bedroom-type radio department they can be important. The best materials should be used and they should be designed to add to the decorative effect of the room. In a department displaying tubes and other parts, the fixtures are primarily utilitarian and should be designed accordingly.

Displays and show-windows are becoming more important each year. A marked competitiveness to out-do the other store has increased in this field. There are no set rules for good displays or show-windows. The field is still wide open for new approaches and ideas.

(Continued on page 64)



Corner record department is flanked by major appliance display islands and wall-shelf display for small radios. Note chairs in front of record counter for waiting customers.

Modernization for Postwar Radio Sales

In the postwar era selling will be highly competitive. Even today, when radios are practically unobtainable and many sets are in disrepair, customers insist on good standards. Advertisers have led the public to expect high standards. The public knows what it wants and it will not be satisfied with less. The radio dealer should start now considering how to actively sell his merchandise.

In addition, the public will again expect "service." During the past few years the word "service" has all but disappeared from the retailer's vocabulary. Help has been difficult to find and keep. The result is that the retailer has come to accept discourtesies on the part of his salespeople toward his customers that before the war would not have been tolerated by him. In the postwar era it will not be tolerated by the public.

The dealer should reappraise his store in view of customer comfort and convenience. Comfortable chairs should be placed where they will do the most good. A section at the front of the store should have an inviting group of chairs where customers can wait while their packages are being wrapped, or until a salesclerk can assist them. Demonstration booths, too,

should contain a couple of chairs or, if space is limited, well cushioned wall seats would be appropriate.

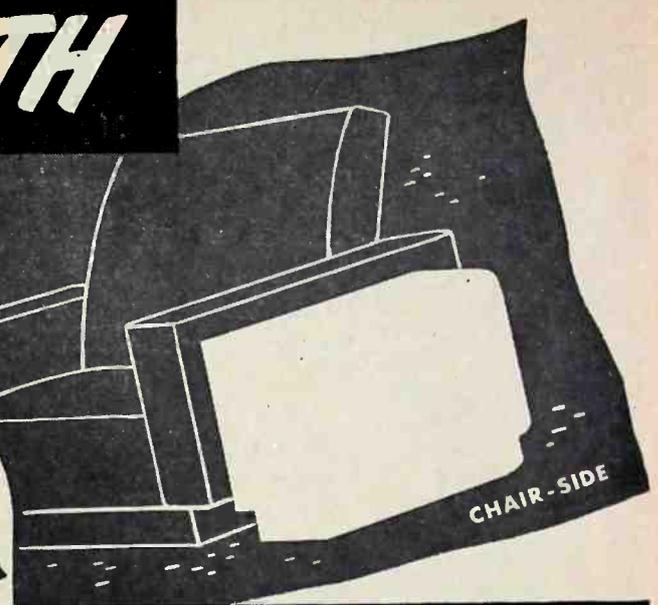
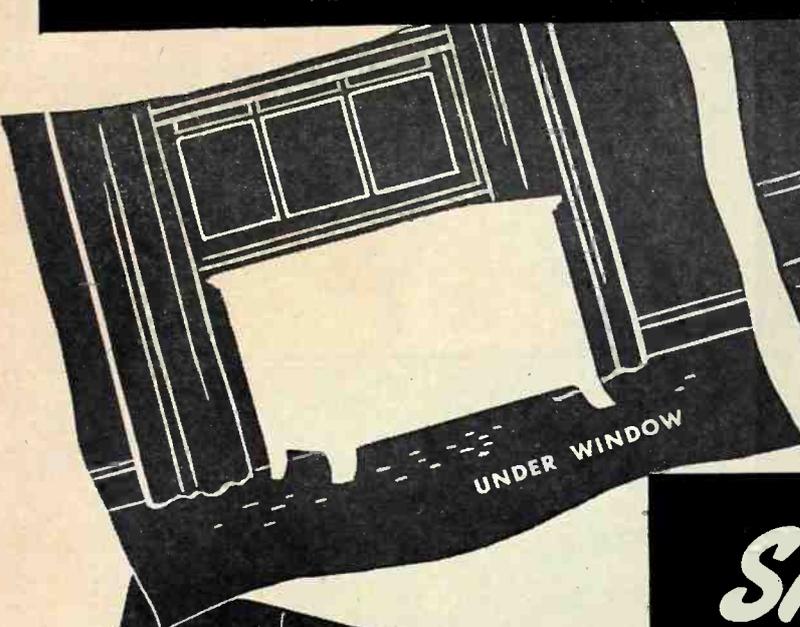
The biggest high-priced item in the postwar era will be the radio combination. These should be displayed at the front of the store. If space is available, attractive and comfortable demonstration booths should be built. If not, some form of partition should be erected to screen the customer from distraction while sets are being demonstrated.

The public should be encouraged to buy small table models only as a second or third radio for the house. They should be displayed near the larger radios, to allow an easy transition from consideration of the table model to the more substantial set.

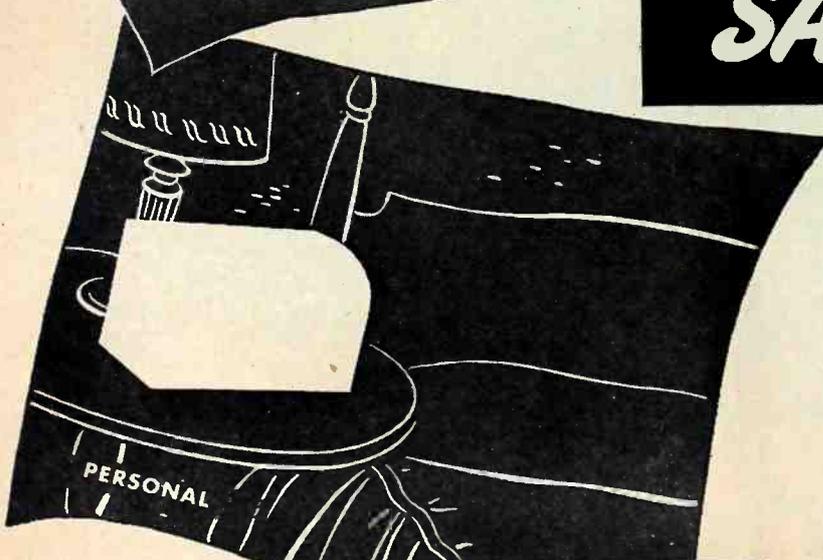
Appropriate sets should be displayed in the various model rooms. Since time payments make up the bulk of sales in furniture departments, it will be easy in the postwar era to sell a customer a good radio combination. By adding a \$100 or a \$150 combination sale to a living room sale, you only increase the monthly payments a few dollars. These are a few suggestions by Richard A. Graner, Vice President, Radio Division, Admiral Corp.

YOUR

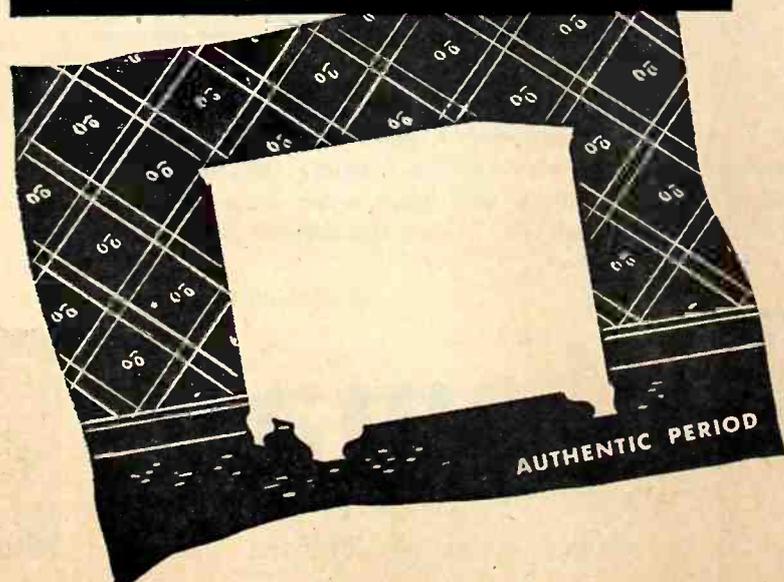
FARNSWORTH



SALES PLUS



"IDEA" CABINETS!



AFTER the war, the Farnsworth line will once again be outstanding in "help-you-sell" ideas. Ingenious, distinctive cabinets for special needs and particular appeal—an additional feature to talk about and sell . . . as well as precision construction and superb quality in every model.

Every pre-war Farnsworth sold an idea in design, use and application. For instance, the service-free record-changer. The post-war Farnsworth line will be far greater. The finest quality in every price range—phonograph-radios, radios, and television with construction and performance features that will make history!

Don't plan your future without this line. It has features found in no other. It brings territory protection, too—restricted distribution to allow *profitable volume at established prices and proper margins.*

FARNSWORTH

Television · Radio · Phonographs

Farnsworth Television & Radio Corp., Fort Wayne 1, Indiana. Farnsworth Radio and Television Transmitters and Receivers; Aircraft Radio Equipment; Farnsworth Television Tubes; the Farnsworth Phonograph-Radio; the Capehart, the Capehart-Panamuse.

and I don't mind saying that we were scared plenty
Everything looks quiet enough in the picture but

and all through the sniping and the mortar fire
the equipment and supplies kept coming ashore.

It's beautiful to see the way a landing is
handled. Everything has to arrive at the right
time at the right place and when anything happens
the plan has to be all changed in a second. Every-
thing is tied together by communications, and
I wondered what would happen if some of
those radio sets and telephones suddenly went
blowie and loused up the whole beachhead. But
that's just what they don't do.

We were all the way across the island looking
for Japs last week, but all we saw were some
natives. Somebody said they were headhunters but
they sure looked peaceable. The water buffalo is
their Model T and they use it for everything--
truck, tractor and family car. We also saw
a lot of parrots, flying squirrels, monkeys and deer.
The islands are all volcanic and across the bay
to the east there is a beautiful cone-shaped vol-
cano that looks like the pictures of Fujiyama.

Yesterday we had an earthquake while we were
having chow. It startled us but no harm was done.



We're

**learning a lot
in the**

PHILIPPINES

The fellows who are taking and holding our front lines in the Pacific are learning their geography, zoology and botany first hand — right from the books of nature. They'll be better citizens and fathers as the result of their experiences.

We at Automatic who are supplying them with radio equipment are learning too. We are daily increasing our knowledge of electronics by the good, hard lessons of experience.

As a result of what we are learning today, the sets that you will buy from us when the war is won will be better sets — better by years because of this high-pressure testing in action.

You know that Automatic made good sets before the war and you can be sure that we will make better sets than ever when the war is over. Talk to Automatic before you make up your mind.



Automatic

RADIO MANUFACTURING CO., Inc.
122 Brookline Avenue. Boston, Mass.





A BRIEF ANALYSIS OF RADIO'S BACKGROUND

●
**Here are facts and
figures which can act
as a refresher for your
own postwar planning.**

●

*The above picture shows an
early 1922 model radio.*

DURING the first phase of home radio reception, component parts were manufactured and sold and were assembled into receiving sets by the user. It was soon recognized, however, that few were competent to do this. By 1922 completely manufactured receiving sets were placed on the market. Despite the use of batteries as the source of power, with their attendant inconvenience and requirement for replenishment by charging or by replacement, important strides were made in the sales of receiving sets.

In 1926 the development of power units or AC tubes, which could be operated on household electrical circuits, provided a strong impetus to further sales. In the next year the development of one-dial or single-tuning control stimulated even wider ac-

ceptance. Concurrently, marked improvements were also made in the selectivity, sensitivity, and fidelity of home receiving sets, which combined to furnish increased satisfaction in their general performance and operation. In 1929 the introduction of screen grid tubes still further increased the attainable sensitivity of receiving sets. Dynamic loud-speakers also appeared in this year, and greatly enhanced the naturalness with which sound was reproduced.

Perhaps more importantly, the screen grid tube and the dynamic loud-speaker made it possible to produce small radio receiving sets or mid-gut sets suitable for secondary use in the home, in the automobile, and in portable models. These developments also contributed to substantial reduc-

(Continued on next page)

(Continued from previous page)

tion in the retail price of radio receiving sets and hence induced larger sales in number of units than had previously been possible.

Naturally, as the size of the audience increased so did the publicity value of sponsored programs, and the two, mov-

ing hand in hand, resulted in the pre-war stature of the radio industry. The essential statistics as to the increase in the production of radio receiving sets of all types from the beginning in 1922 through 1942 are set forth in the following tabulation:

Annual Production and Distribution of Broadcast Receivers in the United States, 1922-1942

Year	Total Receivers Manufactured (Units)	Estimated Sales in Units					Miscellaneous	Total
		Primary Use	Secondary Use	Auto-mobile Receivers	Portable Receivers	Export		
1922	100	100						100
1923	190	190						250
1924	1,400	1,400						1,500
1925	2,346	2,346						2,000
1926	1,750	1,750					69	1,750
1927	1,978	1,978					76	1,350
1928	3,187	3,127					96	3,281
1929	4,697	4,497					201	4,435
1930	3,838	3,561			32		245	3,793
1931	3,594	3,177	150		96		471	3,312
1932	2,444	1,610	420		123		291	2,477
1933	4,168	2,060	900		699		510	3,082
1934	4,479	2,214	800		753		612	3,304
1935	6,026	3,112	438		1,170		607	4,375
1936	8,249	4,130	1,392		1,412		636	6,746
1937	8,065	4,000	1,610		1,353		622	7,631
1938	7,107	4,000	1,550		800		450	5,823
1939	9,020	3,400	3,100		1,200	500	520	9,000
1940	11,855	3,880	2,801		1,800	1,219	604	10,900
1941	13,660				2,597	1,569		11,100
1942	4,307				341	573		3,550

Note: Statistical data on the radio industry show wide divergence between various recognized sources of data. In the above tabulation, no attempt has been made to reconcile the estimates of "Sales Distribution" made by Mr. Julius Weinberger of the RCA License Laboratory with "Total Unit Sales" of radio receivers as prepared by the U. S. Department of Commerce.

Sources: Julius Weinberger, "Basic Economic Trends in the Radio Industry," Reprinted from Proceedings of the I. R. E., November, 1939, (1922-1938); U. S. Department of Commerce, *Domestic Commerce*, April 29, 1943, (1939-1942).

In addition to radio receiving sets, tubes are used for radio transmission and for industrial control apparatus, including rectifier tubes. There are also light-sensitive tubes and cells, and

X-ray tubes. An estimate of the relative value of output on a wholesale basis for the year 1939, classified in this manner, appears below:

Analysis of Electronic Tubes produced in the United States during 1939

(000 omitted on dollars)

Products by Type	Value of Products	Percentage of Total
Radio receiving tubes	\$32,947	82.0%
Radio transmitting tubes	2,628	6.5
Industrial control tubes and rectifiers	2,317	5.8
X-ray tubes	2,113	5.3
Light-sensitive tubes and cells	170	.4
	\$40,175	100.0%

Source: U. S. Census of Manufacturers, 1939.

The foregoing data hardly require comment. They certainly reflect an incredible growth, and also indicate the importance of the so-called midget and automobile radios from the time of their introduction. There are also included in the statistics for 1940 and 1941 approximately 1,700 television receiving sets and 500,000 to 600,000 frequency-modulation receiving sets.

The period from 1920 to 1941, therefore, was one in which the electronic industry was predominantly engaged in facilitating personal and family recreation and diversion. Since the major volume was transacted with the individual consumer, it is not surprising that effective merchandising was a more important factor in determining the competitive status and earning power of companies in the electronic industry than was either production or technical research.

The development of radio prior to the war was both rapid and effective. Perhaps no other art or technology has seen such drastic changes and obsolescence currently induced while the industry itself was expanding so rapidly. Despite the succession of radical changes and the repeated impacts of obsolescence, generally speaking, the corporations engaged in this industry, either on a specialized basis or in association with the manufacture of other electrical devices, had managed to adjust successfully to these rapid shifts and demands and have emerged in good financial condition. A few corporations were eliminated and others voluntarily withdrew from the business.

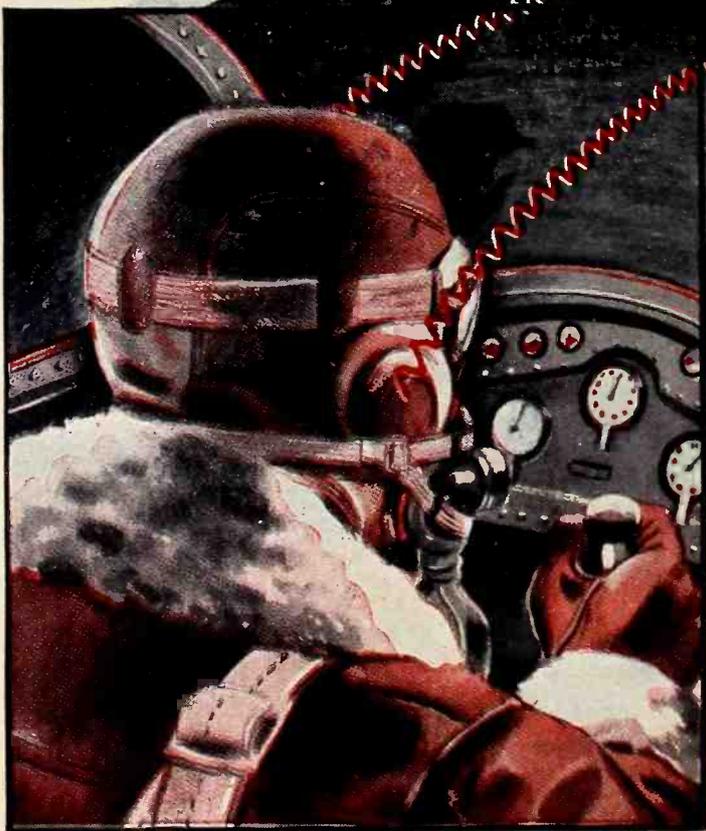
In the spring of 1942 governmental restrictions were introduced, and in June of that year all production of radio equipment for civilian use was stopped and the industry converted to production for war purposes.

Prior to this curtailment and conversion, and corollary to the great increase in the output of radio receiving sets of all types, was the production of transmitting equipment for broadcasting stations and of communicating systems for aircraft, direction-finders, and beacons; comparable equipment for aid in ship navigation was also developed and produced.

Beyond all this, many other applications of electronic equipment and devices had been developed and met widely extending use. Among these were voice-amplifiers, public-address systems, current-rectifiers, high-frequency induction heating, resistance welding, and medical and therapeutic equipment.

(Continued on page 64)

IT LEADS HIM HOME *By the Ears!*



HE'S THAT KID who used to beg you for the car. But now he's 90 miles from nowhere, "barrelling" home to his carrier. He's coming in on a beam the Japs can't jam. It's the Navy, taking care of its own, leading a lad home by the ears.

★ ★ ★

THE AMAZING homing beacon for aircraft carriers has saved countless Navy fliers. And Stewart-Warner has been privileged to play a part in this great Navy life saver. The story makes interesting reading.



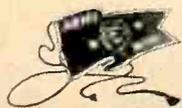
A certain vital part was being made by hand. Production was slow—*too slow*. Then Stewart-Warner engineering ingenuity devised a way to mass produce the important part with machine tools. Production jumped immediately.

Today, all carrier based airplanes are now equipped to come home on a "jam-proof" beam.

It's another example of radio "savvy" that characterizes Stewart-Warner engineering. It forecasts the extraordinary things to come in Stewart-Warner radios of tomorrow. So—put this down on your list of things to plan for—"look to Stewart-Warner for the class of the radio field after the war is won."

RADIO DIVISION OF
STEWART-WARNER CORPORATION

CHICAGO 14, ILLINOIS



include items for future delivery to which you have not taken title. Include any item to which you have title even though in transit or not on hand.

3—See that the method used clearly reflects income. If you over-cost inventory, profits will be higher, if you under-cost inventory, profits will be lower—on paper—but the income tax will vary in real money.

4—You cannot change from one method to another without consent of the Commissioner of Internal Revenue.

5—Take inventory as often as possible. Annual inventories in these fast-moving days, and in the postwar tomorrow, when prices, at one time or another, may fluctuate widely, are hardly likely to show true profit or supply adequate information for cost control. From now on, quarterly or semi-annual inventories are recommended.

6—Estimated inventories for the monthly profit and loss statement are just estimates, hence, the monthly net is also an estimate. Monthly statements

are prepared to keep the businessman appraised of the trends of operating ratios and profit, information of great importance, even though the profit is not computable to the dollar. You should know which way you are heading from month to month because that is the only way you can affect maximum cost control.

7—Any change of inventory valuation will change the cost of sales ratio for the period and obscure your comparative analysis from period to period unless you show the re-valuation of inventory as a separate listing on the records. It may also affect the pricing of goods for a future period if the increase or decrease in inventory valuation is substantial.

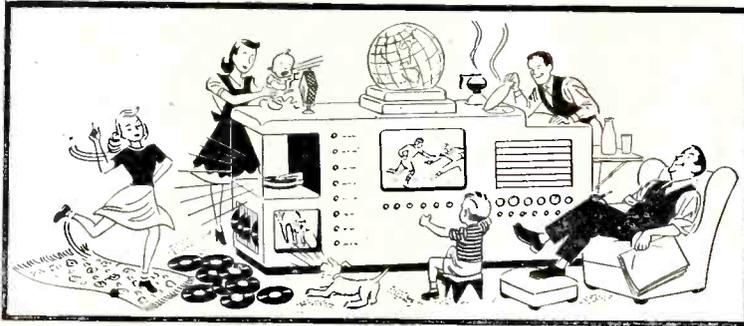
8—The only way to get an accurate inventory figure is to take a physical count of the items in stock.

9—A stock control system helps keep inventory in the groove. The lack of stock control causes many dealers to go wrong on inventory valuation. Others confuse a stock control system with a perpetual inventory and use the information on this record to calculate inventory. Wrong. The stock control system polices the movement of stock from receipts to customer. It minimizes loss and provides valuable data on stock-turn, breakage and other inventory losses, maximum and minimum quantities on hand to aid in making intelligent purchases, minimizes "outs", prevents a tie-up of excessive capital in stock on hand, etc. It is a cost control record, not an inventory.

10—Separate obsolete or shopworn items and list them at actual value. By reducing the cost of such items to real value, you get the benefit of a tax deduction and take a loss when realized, otherwise, your inventory on the profit and loss statement and balance sheet is inflated, likewise, net profit and net worth.

Of the various methods used to value inventory, cost or market, whichever is lower, is probably the most frequently employed. Market value means replacement value. Some accountants debate the fairness of this method, contending that it is inconsistent, that it writes down inventories when the market is below cost and does not write them up when the market is above cost. However, conservative accounting demands that profits be not anticipated, that a loss has actually occurred if inventory can be replaced at a lower value and the current period should stand the loss. Some accountants are always trying to find the elixir to eternal profit but there ain't no such animal. Recording the figures in a dif-

(Continued on page 32)



Here is a postwar radio-television-home-recorder-phonograph-combination as portrayed by the Minneapolis' papers' artist.

HOW MANY RADIOS WILL MINNESOTA FAMILIES BUY?

Today 94 per cent of Minnesota's 735,000 families own a radio. How many of them will want new radios after the war? What kind of radios have they decided they want? How much are they willing to pay? The correct answers to these questions in various locations all over the country would enable radio dealers to estimate accurately, and therefore profitably, their postwar sales.

According to the "Minnesota Poll," a daily feature of the "Minneapolis Star-Journal and Tribune," 286,650 of Minnesota families will want new radio sets after the war. Eighty-three thousand families want a radio with television . . . over ten per cent of all the families in this area that today own a radio. Sixty-nine thousand families want a radio-phonograph. That figure suggests a boom in the record business. Fifty-seven thousand families want a new floor model radio and forty-three thousand want a new table model radio. Eleven thousand families want an F.M. radio but that figure may be included in the figures representing new floor model and table model radios. If this is not a complete duplication, it may at least be partial. It is, however, significant that people are drawing a distinction between radio and F.M. radio. Thirty-seven thousand families want a new car radio and fourteen thousand want a new portable radio. It may safely be assumed that in many instances the families who registered intention of buying these types of radios are also planning to buy the more substantial types of radio for home use.

These figures do not include the six per cent of families who do not own a radio at the present time,

some of whom may in the postwar era be potential customers.

Of these families residing in cities (area of over 2,500 population) sixteen per cent expected to pay less than \$50 for their postwar radio. Forty-five per cent were willing to pay between \$50 and \$100. As many as 27 per cent anticipated paying between \$100 and \$200 and an added twelve per cent expected to pay over \$200. According to this survey thirty-nine per cent of the families expect to pay over \$100 for their postwar radio.

Of those families residing in towns (areas of 2,500 or less population) there are still thirty-three per cent of the families expecting to pay over \$100 for their postwar radio, of which eight per cent expected to pay over \$200. Forty per cent expected to pay between \$50 and \$100 and twenty-seven per cent expected to pay less than \$50.

In farm areas nearly half the families expected to pay between \$50 and \$100 and twenty-five per cent planned on buying radios in the less than \$50 bracket. Twenty-two per cent expected to pay between \$100 and \$200 and four per cent expected to pay over \$200.

In studying these figures the radio dealer may assume that possibly a large percentage of families intending to pay less than \$50 are expecting to buy a portable or car radio. Furthermore, he should allow for the fact that these percentages do not make allowances for families who are planning to buy more than one radio, one of which would very likely be of the portable variety and one of which would more likely be of the console, or at any rate heavier table model type.

Get this Display!

**Sell Customers
on Your Service—
Today and Tomorrow**

How about putting this beautiful salesgirl to work for you?

Let her sell your customers the idea . . . quality tubes mean quality service. Identify yourself with the progress and future implicit in the fact that RCA developed and introduced more tubes on the joint Army-Navy Preferred List of vacuum tubes than any other manufacturer . . .

Let people know you are actively in business and are there to stay! Get your Preferred Type Display from your RCA distributor . . . today.

PREFERRED TYPES

RCA

*PREFERRED BY THE SERVICES
PREFERRED IN OUR SERVICE WORK**

Preferred Type TUBES

*RCA DEVELOPED AND INTRODUCED MORE TUBES ON THE JOINT ARMY-NAVY PREFERRED LIST OF VACUUM TUBES THAN ANY OTHER MANUFACTURER

Attractive full-color, 48" x 28" display case! (shown here in black and white)

**The Fountain-Head of Modern
Tube Development is RCA**



RADIO CORPORATION OF AMERICA

RCA VICTOR DIVISION • CAMDEN, N. J.

**LEADS THE WAY . . . In Radiob . . . Television . . . Tubes . . .
Phonographs . . . Records . . . Electronics**

55-6636-39

different way, as is done under the different depreciation and inventory methods, get the same result in the long run, so use the simplest method suitable to your business and recognized as good accounting practice. Cost or market, whichever is lower, we believe most suitable to the radio retailer and a source of fewer headaches. It is one of the methods prescribed by the Bureau of Internal Revenue. During a period of rising prices, cost is the inventory valuation, in a period of decreasing prices, market or current bid price for the merchandise prevailing at the date of inventory. Cost is the invoice price, less trade or other discounts, plus incoming transportation and other charges incurred in acquiring the goods.

Under this method, inventories are valued at cost to defer profits until sales, at market prices, to record a loss when recognized. If there is a loss, it will eventually out, so get rid of it as soon as possible. To carry over an inventory value higher than actual value means that you pay more tax for a current year because your profits are higher on paper, that you decrease your margin for the following year, reducing the net for that year. In many cases, the net and tax for both years may amount to about the same thing either way, unless the tax rate changes, but your books do not reflect what really happened unless you so show it, and this makes it very hard to get a good background perspective for comparative analysis from period to period, which is an important tool of cost control.

One reason why accountants write and talk much about the inconsistency and inadequacy of one or the other methods of handling depreciation and inventory is that both of these operating elements are governed by external as well as internal factors, the former beyond control, hence, some assume that a businessman should not be penalized for such losses, but should utilize ways and means to neutralize results. Business is part of our economic system, hence, the businessman must take things as they come, including artificial regulations, his books should mirror such movement as it occurs, as well as his managerial efficiency, and, in the long run, his ups will usually offset his downs. No method of recording can by-pass economic conditions and their influence on operating results. A businessman can only minimize their negative effect with intelligent action based upon a dependable accounting system.

Another method of valuing inven-

tory used by retailers, is based on retail values. Inventory is valued at the selling price, then the mark-up or margin is deducted to arrive at cost. Where goods carry different spreads, you should use the right percentage of mark-up or margin taken on the different lines. Dealers stocking many style changes sometimes use this system to good advantage, but, in our opinion, the radio retailer will

Postwar Competition will be Tough

Five important guideposts for postwar business planning were listed by Willard S. French, president of Brooke, Smith, French & Dorrance, an advertising agency speaking before the Chicago Federated Advertising Club. These are:

1. National income reaching new peacetime levels soon after the war.
2. A deep-seated (public) conviction that the cost of distribution is too high.
3. Startling, rapid changes in distribution methods.
4. Violent fluctuations in the geography of buying power.
5. A wider spread of national income among more and more people.

"It is reasonable to believe that early in the post-war period we shall find ourselves engaged in the toughest fight in the history of business for the greatest stakes in the history of business," he said.

He pointed out that American business immediately after World War I was over-optimistic and launched many products on the market. Then came a long, slow period of development and education, followed by a period of intense competition that resulted in a high business mortality and profits for those who survived.

find this method not as accurate and more involved than cost or market, whichever is lower.

The Internal Revenue Code states that depreciation does not apply to inventories but inventories may depreciate and become obsolete just the same and this deduction is allowed in a different way than on fixed assets. Any part of an inventory unsalable at normal prices because of damage, obsolescence, imperfections, shop wear, changes of style, odd or broken lots

or used items taken in exchange, may be valued at selling prices less direct cost of disposition. To equalize loss on inventory from year to year, some dealers scan their experience figures for loss on obsolete stock, waste, spoilage, etc., and set up a reserve for this expense, although this is not deductible on the tax return because it is an average yearly figure. The Treasury Department wants the actual loss as shown through the inventory records.

In normal times, the radio retailers need worry little about obsolescence on his merchandise but today it may be a different story for those selling lines that may grow obsolete to make up for the inability to get prewar goods. Many items on the market are substitutes for prewar lines. Many prewar items may be replaced with improved postwar units and dealers selling merchandise falling into this category should bear obsolescence in mind as we bridge the war and postwar period because it is heavily spawned at times like these. Many dealers are deeply concerned over this problem because they feel that when the genuine prewar items or new postwar units come to market, consumers won't accept the wartime goods or will want price reductions. Some dealers are hedging against this loss through forced obsolescence of inventory by means of a postwar reserve, which brings the financial picture into better focus, although not deductible on the income tax return. On some war lines, the market value in the postwar period may be below cost. The dealer who lists them on his inventory sheet at cost will show an inflated profit for the period and pay more tax. So, don't forget to keep this angle of your inventory problem in mind and do what you can to minimize inventory losses through obsolescence.

Remember that accounting, unlike mathematics, is not an exact science. Probably 90 per cent of the transactions are computable with mathematical accuracy, such as mortgage interest, office expense and salaries, but certain transactions, such as depreciation, estimated tax expense for a forthcoming year and inventory, are not computable to the penny. Value is partly ascertained through judgment and good judgment depends upon a knowledge of fundamentals. In this article, we have discussed the main factors touching inventory valuation in order to enable you to handle this important problem accurately because it is of prime importance in costing and analyzing operations and in preparing your tax return.

THE END

Your Future
with
PHILCO

The Highest Average Unit Sale in the Industry!

Yes, year after year, Philco maintained a unit sale that was 40% higher than the average of the radio industry!

IF THERE is any one factor in the long and unbroken history of Philco leadership that has the greatest significance to the radio dealer, *it is this!*

Year after year, not only leadership in *units* and leadership in total *dollars* . . . but consistently the *highest average unit sale* in the industry. One year it hit as high as 59%. And over the years, the average has held at *40% higher than the industry.*

Why do we say that's important to you, the radio dealer? Because it

represents not only a record *but a policy.* It signifies a method of merchandising that produces *more dollars per sale.* And every radio dealer knows . . . that means more profit, *more dollars in the till!*

That's a fundamental of Philco merchandising. And because Philco enjoyed a higher average sale, dealers who concentrated on Philco also enjoyed a higher average sale. It's the logical result of leadership in every price bracket of the radio business.

After Victory, Philco engineering and merchandising will be devoted again to the *policy* of giving Philco dealers higher volume *plus* a higher dollar margin.

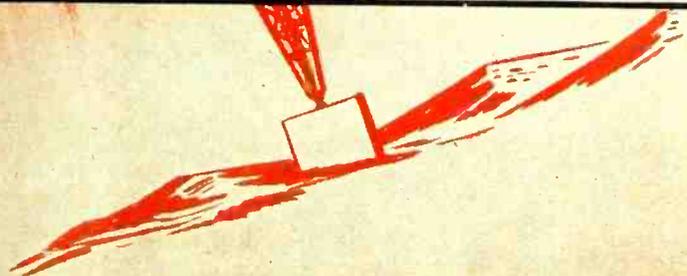
After Victory, Look to
PHILCO for Leadership!

**TUNE YOUR FUTURE
TO THIS STRONG SIGNAL!**

Radio's first name is

Westin

PUT THE STRENGTH OF THIS FAMOUS NAME BEHIND YOUR RADIO



ghouse

Have you seen the new Westinghouse Radio Dealer Plan?

★ Until victory is won, our entire radio resources will continue to be devoted to the enormous job of producing military radio and radar for our armed forces.

It is not too early, however, for you and ourselves to begin thinking about the home radio and television receivers in which you will invest money—and your future.

Consider these important questions *before you decide* on the lines you will sell.

Does the manufacturer's management know the radio business—your business?

Does the manufacturer have a record of resourceful engineering which will continuously supply you with new, dependable and highly salable radio features?

Does the company have dependable wholesale distribution—organized and ready to help you sell?

Does the company have a sales policy that protects your opportunities to make money?

Does the company have the resources and promotional flexibility to move in and help you meet local competition when the going gets tough?

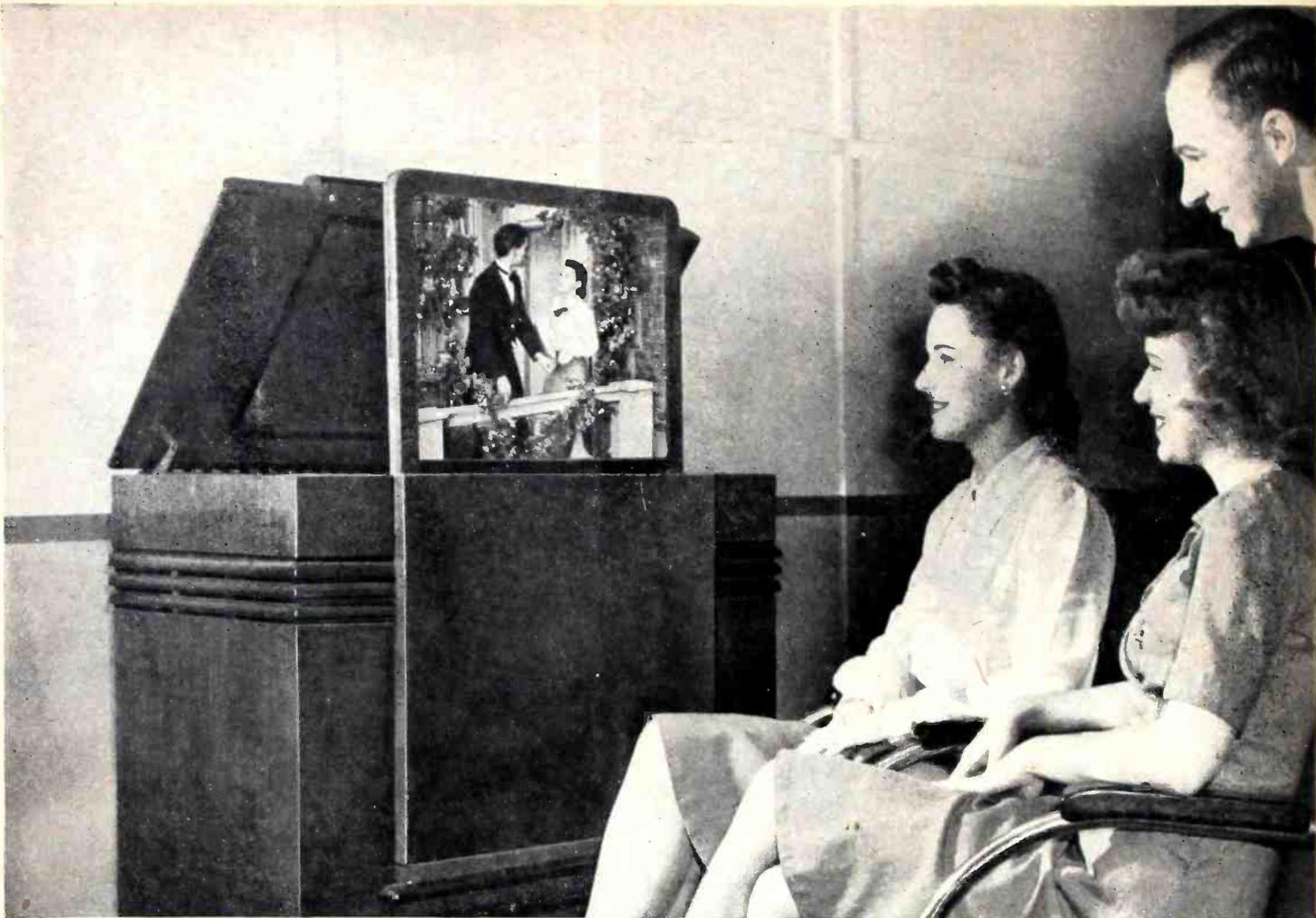
These and other questions vital to the future of your business are answered in the new Westinghouse Radio Dealer Plan. Call your Westinghouse radio and appliance distributor today, or write *Home Radio Division*, Westinghouse Electric & Manufacturing Company, Sunbury, Pennsylvania.

HERE ARE A FEW SAMPLE PAGES

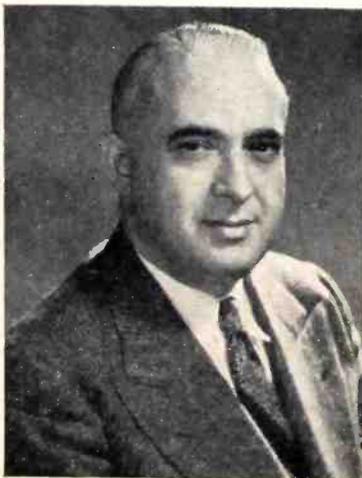


BUSINESS Westinghouse
RADIO TELEVISION

TUNE IN: John Charles Thomas—Sunday 2:30 EWT—NBC.
Ted Malone—Monday, Tuesday, Wednesday—8:00 P. M. EWT—Blue Network.



TELEVISION'S FUTURE DEPENDS ON DISTRIBUTION



CHARLES ROBBINS, Vice President
in charge of Sales
Emerson Radio and Phonograph
Corporation

says

Mr. Charles Robbins

in

this vitally interesting article

written exclusively for

Radio Television Journal

In a panel discussion during the recent Television Broadcasters Conference, I made the prediction that the radio industry would reach a three billion dollar volume—but emphasized that the attainment of this unprecedented volume required teamwork and

the joint cooperation of all segments of our business—each contributing its very best to the cause of the industry's interest as a whole. The opportunity we face in radio, F. M., television and the electronic field for commercial and personal aggrandizement virtually staggers the imagination. However, it is only through an unselfish joining of hands that we shall be able to attain for radio its logical position as one of the greatest businesses in history.

The productive and inventive genius of the American radio industry already is well known and firmly established. Posterity will mark well the war production miracle. But when assembly

(Continued on page 38)

Sentinel

REPORTS

with an Eye to your Future

First is the business of Victory . . . then, as war demands relax, we will be free to announce postwar plans, now in preparation . . . and to reveal to you topnotch Sentinel designs that are ready for production when V-Day arrives.

To establish and hold a sales beachhead for its army of dealers

in tomorrow's markets—Sentinel continues to advertise nationally . . . Magazines of large circulation . . . Radio on nation-wide programs.

You can depend on SENTINEL for quick deliveries (matched by ready consumer acceptance)

. . . a sound, constructive plan for sure profits for you

Sentinel RADIO

QUALITY RADIO SINCE 1920

SENTINEL RADIO CORPORATION, 2020 Ridge Avenue, Evanston, Illinois



LISTEN...
TO SENTINEL'S
NATION-WIDE
RADIO PROGRAM
John W. Vandercook every
Saturday afternoon, 5:30
to 5:45 E.W.T., over NBC
analyzes the news for
Sentinel Radio. See your
newspaper ads for the local
time and station.

lines are once more turned to civilian pursuits and commence their greatly expanded production, will we be able to meet the supreme test of moving the new products to the consuming public? Will we find our distributive machinery adequately oiled and sufficiently high-g geared to effectively complete the cycle—so that employment can be maintained at a high level with opportunity for work for our returning servicemen and demobilized war workers; so that the radio industry can contribute its share to a gross national income of \$150,000,000,000?

Perhaps it is time to give some serious thinking to distribution and sales. Obviously, unless products are sold, our production wheels will be rendered motionless. Since this article is concerned with the merchandising of television, perhaps a few thoughts and ideas on the subject will prove helpful, or at least provocative of further deliberation with respect not only to our opportunity but to our responsibilities.

Manufacturers, in designing post-war television receivers, should seek to give the most television for the least amount of money. For television to be the success our hopes are dictating, it is obvious there must first be developed a variety of receivers that will fit the pocketbook of everyone—because it is to mass buying in concentrated markets that we will have to look for a self-sustaining and growing industry.

Once television receivers are brought within the buying reach of great numbers, advertisers, assured of an adequate proportioned audience, will finance programs that will parallel those provided by sound radio and motion pictures in entertainment and educational values.

Experimentation and development should continue unabated and motivated by an insatiable desire to give the American public not only high quality, but practical television — a larger and clearer image that can mean a theatre in every home.

Manufacturers should employ every means at their disposal to channel full information about the merchandise to the dealers and their salespeople. Catalogs, sales manuals and bulletins should be clearly, accurately and concisely written and profusely illustrated.

Advertising should be slanted to produce store traffic and the dealer made to understand that primarily the manufacturer is interested in building prestige and acceptance, and not in the "footballing" of his merchandise. The dealer should be urged to tie in with his own efforts whenever the manufacturers' advertising campaign appears in order to obtain maximum results.

Dealers, of course, who come face to face with the buying public should make it convenient and easy for customers to buy. Television merchandising calls for settings in keeping with the value and function of the instrument and should provision its ultimately great possibilities. While it was

Trade-Ins A Postwar Sales Threat

More than five out of every 10 persons who will replace old sets with new ones when radios come back on the market, expect to make trade-ins on them.

Don G. Mitchell, vice-president of Sylvania Electric Products, Inc., disclosed at a distribution clinic held by the National Association of Manufacturers that one of his company's large outlets maintained that trading in old radios never had meant anything in its store and never would. But market researchers asked the customers and found that two-thirds of all the people who buy a radio will be replacing an old set, and that more than 50 per cent of those will expect the dealer to take in the old one.

Radio, appliance and furniture stores and others who had not figured on a sales program, capital and repair and display facilities for handling perhaps half as many old sets as new ones, may have an unpleasant awakening, he said.

possible to move in a showroom from one radio set to another, or to move the set itself, a television demonstration will be more or less fixed, even more ceremonious.

The prospect will require being put into a mood more in keeping with the physical environment that surrounds television reception in the home. This will call for more attention to interior decoration at the sales point—a more homelike quality or atmosphere—some attention to comfort — easy chairs, handy cigarette tray, shaded lights and as little distraction as possible. These will all bring about a softer, more restrained approach to selling and showmanship to match salesmanship.

The dealer will do well to keep himself fully informed on all phases of the business and never fail to present a true and accurate picture of the receiver itself and the exact service to be expected, and to maintain an adequately trained sales force and an efficient and highly trained technical force.

Consumers are assured that, despite some possible shortcomings at the start, the new television sets will be far more efficient than were sound receivers when first presented. However, at the start expectations may be greater than performance. This calls for experience, frankness and complete honesty in dealing with prospects.

Television sets are not over-the-counter items—no wrapping up, taking home and plugging in. They are more expensive, complex, and require greater care in handling than radio. Satisfactory operation in the home will depend entirely on correct installation and the time spent in explaining the principles of operation to the new owner.

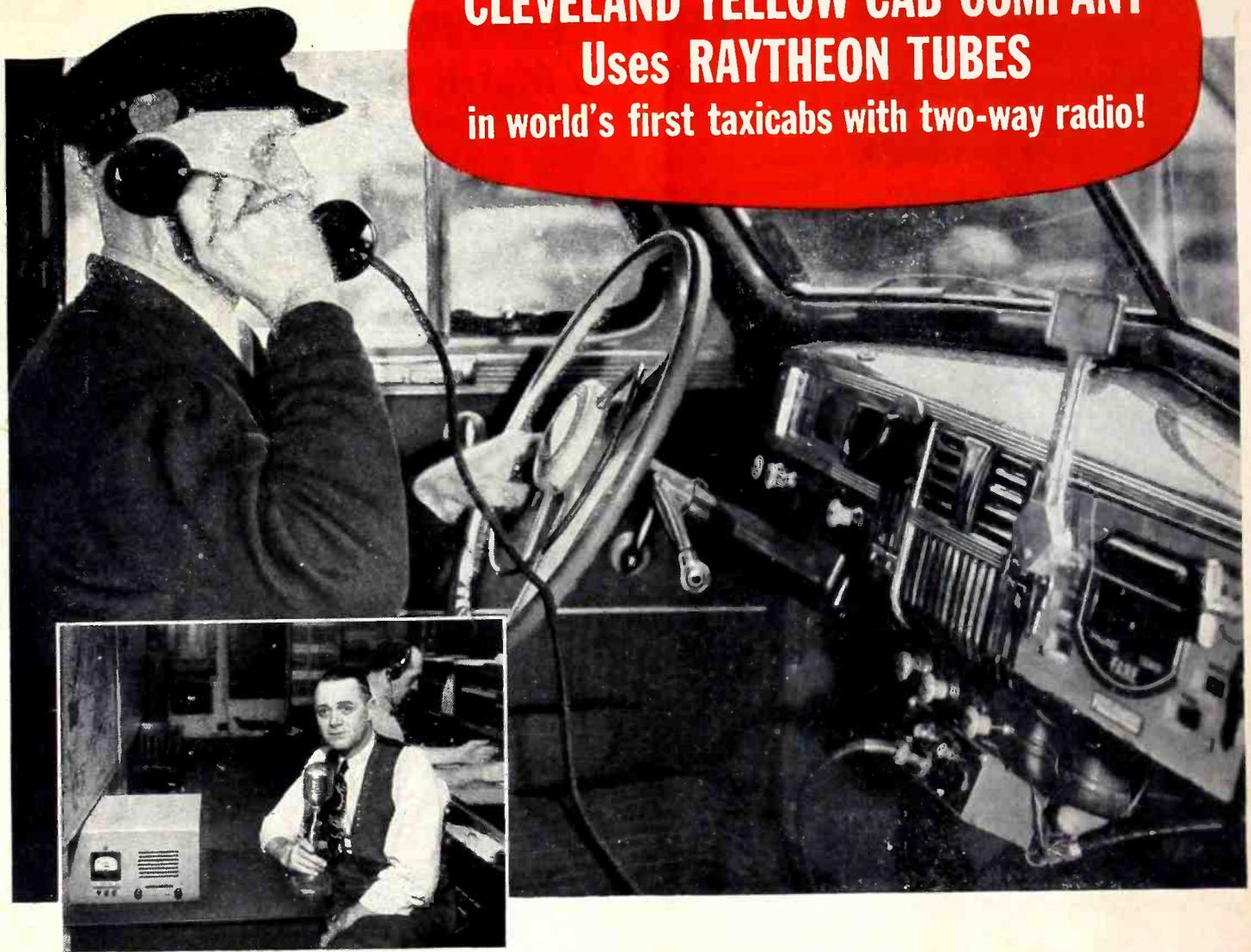
Scrupulous follow-up for servicing is mandatory—not only to keep one buyer happy, but to reap all the benefits and the prestige and the influence that his set will have on friends and neighbors who are brought face-to-face with the evidence of a job well done and decently handled.

In every possible manner the dealer should coordinate his efforts with the manufacturer's—tie in with the national advertising—use counter and window displays lavishly—keep merchandise displayed — use statement stuffers and other sales helps which are made available.

Television deserves the finest kind of send-off—the public is keyed up and ready to accept this new miracle. So it becomes a business duty, even a moral responsibility to see that it is sold properly. I might add that there will be a great reservoir of men available, trained in the Signal Corps, who have learned the intricacies of television through their wartime experience with radar and other devices, many of which are based on the functioning of the cathode ray tube.

None of the problems which television merchandising will pose is insurmountable. There is no better time than the present to acquire the knowledge—to train for the future, if we are to avoid the mistakes that caused so much loss of time and treasure in other young industries.

CLEVELAND YELLOW CAB COMPANY
Uses RAYTHEON TUBES
in world's first taxicabs with two-way radio!



The eyes of the nation's transportation industry are on Cleveland these days, for it is there that the world's first taxicabs equipped with two-way radio are being demonstrated by the Cleveland Yellow Cab Company.

Officials say that dispatching has proved so much more efficient that future fleets similarly equipped will eliminate millions of miles of wasteful "dead" cruising. And they also report that Raytheon High-Fidelity Tubes, used in both transmitter and receivers, provide clear, dependable reception—even in the tunnels under Cleveland's Terminal Tower.

This application of Raytheon Tubes is just one of many being planned for the postwar period by progressive manufacturers in the electronics field.

If you are a radio service dealer, you, too, should realize that Raytheon's combined prewar and wartime tube experience will result in even *better* tubes for all uses. Keep an eye on Raytheon . . . and watch for a Raytheon merchandising program that will help you be more successful, in the peacetime years ahead, than you've ever been before!

Increased turnover and profits . . . easier stock control . . . better tubes at lower inventory cost . . . these are benefits which you may enjoy as a result of the Raytheon standardized tube type program, which is part of our continued planning for the future.

Raytheon
Manufacturing Company
 RADIO RECEIVING TUBE DIVISION
 Newton, Massachusetts — Los Angeles
 New York — Chicago — Atlanta

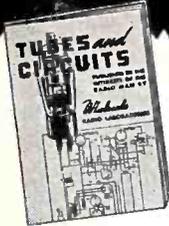


RAYTHEON
High Fidelity
ELECTRONIC AND RADIO TUBES



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

Send Only 10c For This Handy TUBE AND CIRCUIT REFERENCE BOOK

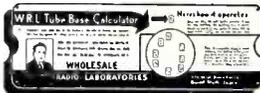


OUR NEWEST
GET-ACQUAINTED
OFFER!

Here's a handy refer-
ence book that meets the
demand for simple, easy-
to-understand data on
substitution of radio tubes.
Contains a special section

devoted to valuable technical information on
tubes and circuits. It's a guide you'll refer to
time and again. You can't afford to be without it.
Send for your copy today! Only 10c postpaid.

**TUBE-BASE
CALCULATOR
ONLY 25c**



Here's just the calculator you've been looking
for! Tells you quickly, tube characteristics that
enable you to substitute available tubes for those
hard to get. Send for one today. Only 25c. We pay
the shipping expense.

**Giant Radio
Reference Map 15c**



Time zones, amateur
stations, short wave sta-
tions and loads of
other valuable infor-
mation. Printed in col-
ors; size 3½ x 4½ ft.
It's yours free! Send
15c to help with pack-
ing and mailing.

**WE'VE GOT THOSE
HARD-TO-GET
RADIO PARTS**

You'll be surprised at
the many hard-to-get
parts we've been able to
get for you fellows.
Mike's, pickups, multi-
testers, meters and many
other items. They're
yours as long as they
last. Send today for our
latest flyer. It's full of
merchandise you've been
trying to get! Stocks
won't last long, so send
today!



HALLICRAFTERS

For many years we have been one of the coun-
try's largest distributors of Hallicrafter equip-
ment. We have Hallicrafters available for im-
mediate delivery on priority. For full particulars,
write.

**WHOLESALE
RADIO LABORATORIES**

744 W. BROADWAY
COUNCIL BLUFFS, IOWA

—Mail Coupon Today—

Wholesale Radio Laboratories
744 West Broadway
Council Bluffs, Iowa.

RTJ-3

- Send your reference Book "Tubes and
Circuits". Here's my 10c.
 You bet I want a Tube-Base Calculator.
25c is enclosed.
 Ship me your radio map. 15c is en-
closed for packing and mailing.
 Send your free flyer of hard-to-get
radio parts.

Name.....

Address.....

Town.....

State.....

I am an amateur; experimenter;
 service man.

Your Postwar Retailing— Can You Match Today's Volume?

*Stanley F. Teele, Professor
Graduate School of Business
Administration
Harvard University*

Distribution, in so far as physical
facilities and man power are concerned
will not be the postwar bottleneck to
expand production, higher incomes
and a better standard of living, but
failure by those engaged in distribu-
tion to spend enough effort and money
on marketing research so they can
base their decisions on facts will be
fatal.

The increasing recognition of the im-
portance of basing marketing decisions
on carefully determined facts is most
encouraging to the future of our econ-
omy. However, most of this research
is being done by manufacturers and
not by retailers, with few stores for-
mally organized to study continuously
the needs and desires of the market.

How long will retailers be the pur-
chasing agents for the consumer if the
manufacturers as the result of their
marketing research know more about

the needs and de-
sires of the consum-
er than retailers?
How long can re-
tailers avoid being
slot machines if
manufacturers have
the better basis in
facts for their deci-
sions? The day-to-
day character of the
department-store
business is one of
its fascinations; the
pre-occupation with
beating the same
day last year is ex-
citing, but a longer run view is essen-
tial and, in my opinion, retailers need
to put at least as much emphasis as
manufacturers on marketing research
in the years ahead.

Five authorities recently
joined together and voiced the
following requirements for
charting a successful postwar
course in retailing. Their sug-
gestions range from market-
ing research to advanced sell-
ing techniques, and even in-
clude methods of keeping
down running expenses. We
feel all radio retailers will
take a vital interest in these
ideas, and will wish to incor-
porate them into their post-
war thinking.

cases a matter of expediency; and our
real underlying conception of the val-
uation of personnel is still not funda-
mentally changed since before the war.

*Fred Begelow, President,
Abrahamson-Bigelow Co.*

Retailers must be prepared to com-
bat the competition of co-operatives
and credit unions for the consumer
dollar. Where such competition is
subsidized by government long-term
loans with low interest rates, retailers
must get state laws to regulate their
selling on an equal basis. Fair com-
petition stores can meet by increasing
volume with a lower distribution cost,
and this can best be done by better
salesmanship and display.

*Charles W. Green, Regional Director,
Committee for Economic Development*

In the postwar period, unless in-
creased employment is accompanied
by a corresponding increase in pro-
duction, the objective will be self-
defeating and the surest road to
national disaster.

The challenge
then for a high post-
war economy must
be laid definitely in
the laps of com-
merce and distribu-
tion. It is definitely
up to America's sell-
ing force to make
more people want
goods, effective im-
mediately, than has
ever been done be-
fore. The result of
having operated in
a seller's market
since 1941 has left our sales machinery
almost non-existent, and what there is
left is pretty well run down at the heels.

*Laurence S. Bitner, Vice President,
Wm. Filene's Sons Co.*

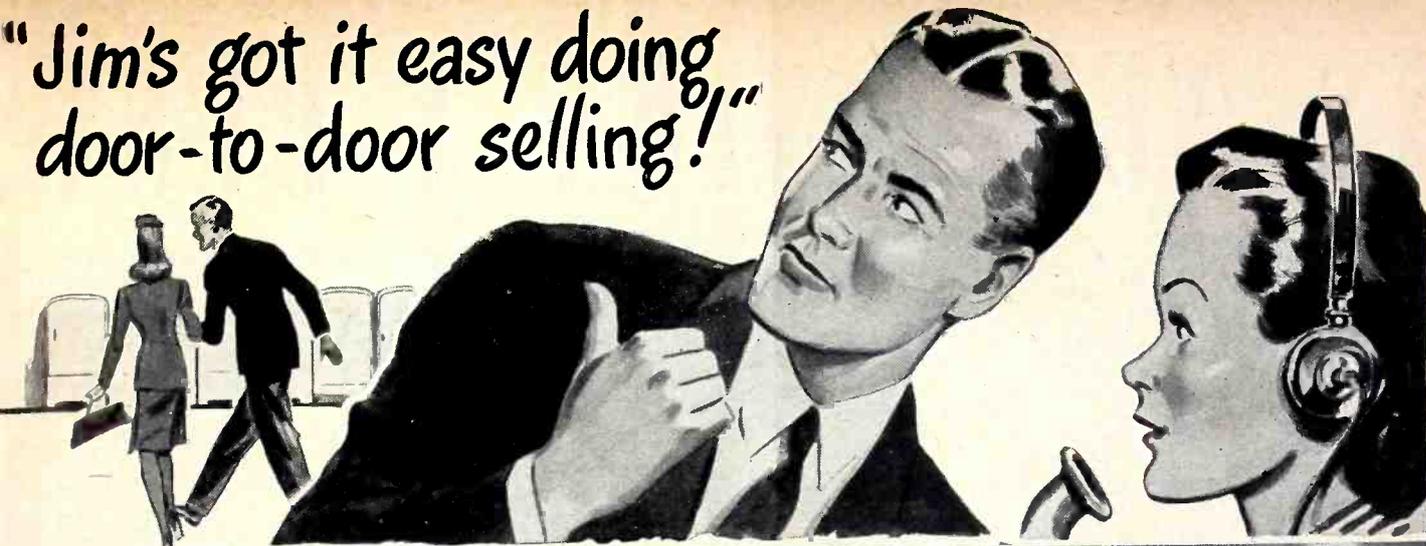
*Donald A. Fowler, General Manager,
Porteous, Mitchell & Braun Co.*

Retailers will have to do a better
and more aggressive selling job than
ever before, but in order to do this
they must first re-evaluate the role that
store personnel plays in the success of
retailing.

All the things being done to obtain
and keep store employees are in many

Retailers must spend part of their
working days now in planning for the
days to come when the money will not
be pouring in like a leak in Lake Erie.
Retailers in the postwar period again
will be forced to keep their eyes on the
cost of doing business and the control
of expense generally. Labor is not go-
ing to retreat, willingly, from any of
the beachheads they have won. And
perhaps they shouldn't, in every case.

"Jim's got it easy doing door-to-door selling!"



Jim: Naturally, madam, you are interested in the only truly "complete" refrigerator.

Customer: I've waited so long I certainly want nothing but the latest.



Jim: Notice these two refrigerators are almost identical. Latest mechanical improvements. Compartments contain same amounts of foods.

Customer: They look pretty much like all the refrigerators I've seen today.



Jim: (Raises door shade on Shelvador*) Here is the big difference—

Customer: Shelves—built right in the door! How wonderful! It's like opening two refrigerators!

Jim: Exactly, madam. The Crosley Shelvador* brings twice as much food to the front within easy reach!



And so another Shelvador* owner is added to your selling force! She'll convince her friends, just as you convinced her—by actual, visual demonstration. And they'll want to know where she bought hers. That's where you come in—profitably.

*Reg. U. S. Pat. Off.

SEEING is Believing

To sell something effectively . . . show it! . . . demonstrate it! What could be more quickly convincing than this simple demonstration of the vast, extra value of the Crosley Shelvador* double, front-row storage space? And the Shelvador* Demonstration Shade (available to you soon) dramatizes this extra value!



Remember, every Crosley product, household appliances or radio, gives your customers extra advantages and features they can see, or feel, or hear!—and features you can demonstrate!

CROSLEY

THE CROSLEY CORPORATION, CINCINNATI, OHIO



IS TELEVISION A BUST?



Four members of the Modern Dance Club of Mt. Holyoke College are shown dancing before a television camera. Groups such as these will play an important role in the television programs of tomorrow.

NO...!

says noted advertising agency



Rouben Mamoulian, noted screen director, who is confident that television has a brilliant future.

Some of television's "best friends" are also its most serious doubters. A leading manufacturer in a recent statement, flatly asserted that television remains "economically unsound." Maybe it is foolhardy for us to take exception to these statements by an industry leader, but we are going to do it. We're going to do it because we have the same faith in television that Bell had in the telephone—that the early pioneer had in the horseless carriage. We believe so-called facts are sometimes overruled by inventive genius, and because technological progress and human courage and faith frequently combine to make yesterday's facts tomorrow's absurdities. So let's examine some of the aspects of television's future.

Who Will Pay for Television Programs?

Some leaders in the industry say, "Who is going to pay for the programs?" . . . We can't get a mass audience until we provide continued entertainment pleasing enough to stimulate the American people to buy receivers by the millions. And that kind of entertainment can't be provided for a long enough time to build the audience, because there are no television producers financially big enough to pay for it." We disagree. We disagree for the same reasons that induced men with vision and money to back Bell—remember that telephones were of no earthly use until there were subscribers; moreover, the initial cost of a telephone exchange measured in

terms of possible income was huge. We disagree for the same reasons that induced men with vision and money to back the early auto pioneers, although it was clear that large numbers of cars could not be sold until roads were improved and roads would not be improved until large numbers of cars were sold. In any event, where some people see an impasse—we merely see a problem; a problem that can and will be overcome. Where he sees a bottleneck, we see simply the difficulties that attend the introduction of anything truly revolutionary. Let's dig further:

Was Radio Such a Howling Success?

By the end of 1922 — some 18 months after KDKA's initial broadcast — there were only 400,000 radio sets in operation in this country and at least 150,000 of those had been in operation before KDKA went on the air. In other words, actual sales of radio sets in some 18 months were approximately 250,000 — which is far from taking the country "by storm." In the entire year of 1923 only 700,000 radio receiving sets were sold — which still doesn't sound like taking the country "by storm." As a matter of fact, at the end of 1926, some five and one-half years after KDKA's initial broadcast, only 5,000,000 radio



COMMANDER E. F. McDONALD, JR.
 Commander McDonald, President of Zenith, whose views are diametrically opposed to those presented in this article.

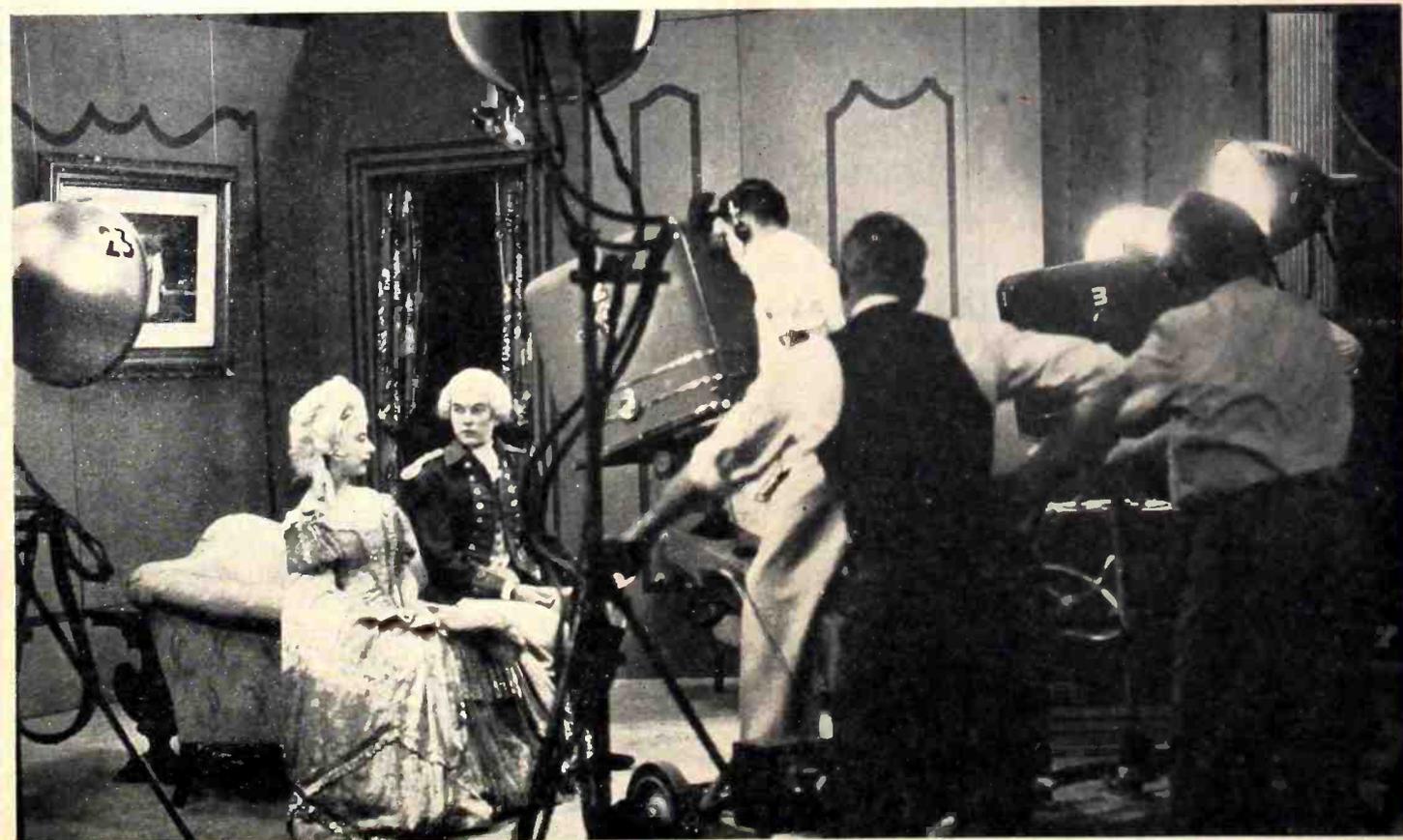
sets were in use! Actually, it took 8 full and long years for the radio industry to get 10,000,000 sets in use. Those are the statistics. Is there any reason to believe that television can-

not do as well? Is there any reason to believe that 250,000 television receiving sets cannot be sold in the first year of resumed production? We happen to believe that at least 500,000 video sets will be sold in the first year — but even at the lower figure television would be doing at least as well as did radio.

What About the Early Radio Stations?

Now, at the present time more than 90 applications have already been filed for television stations — with more coming in each week. There is every reason to believe that within one year after production is resumed there will be more television stations in operation than radio could boast of a year after KDKA began to broadcast! Those 90 odd station applications, it seems to us, are the best answer to television's doubting Thomases. In other words, while the doubters argue that television stations won't be built because they can't be made to pay — applications for station permits, filed by financially responsible groups, continue to pour in on the FCC. And here is another point: Most of those who invested money in those early radio stations weren't so naive as to believe that they would obtain a worthwhile return for a considerable time — but

(Continued on next page)



An amateur theatrical group is caught by the television camera in a scene from "The Rivals" by Sheridan. Television holds much promise for amateur theatricals.

they were willing to gamble on the future. Apparently, there are just as many people today willing to risk capital on television stations, confident that eventually the investment will prove a sound one.

What About Early Radio Advertising?

Talking about the fact that by 1926 radio stations had sprung up all over and that the "public audience was enormous," a recent statement said, "It wasn't until after this audience was created that radio networks were formed." Just analyze that statement for a moment. It means that for five years after KDKA's initial broadcast there was no national radio network. Yet national advertisers were using radio long before 1926! Yes—before there was a national hook-up, before such things as audience statistics, national advertisers were already putting money into radio. In fact, radio was such a threat to the established national media long before 1926, that a publication like "Printer's Ink" was attempting to prove in those days that radio could never become an important national medium because "all it offered was entertainment"! So apparently advertisers are willing to experiment with an advertising medium as they certainly did in the early days of radio. As a matter of fact, national advertisers used radio before 1,000,000 sets had been sold!

What About Early Radio Entertainment?

"To succeed, television must provide programs that at least equal the movies in entertainment value."

Whenever we hear that statement, we are puzzled—because we wonder why it is made to appear to be an extraordinary achievement to equal the entertainment value that Hollywood dishes out. But aside from that, we note that radio—in its first five years—sent over the air a brand of entertainment that certainly was far from being highly meritorious. In fact, there are many who vigorously assert that radio entertainment today is of a pretty low order; that at least 90 per cent of the programs of entertainment are way down at the moronic level. In any event, it would hardly seem as though television would have to exert itself tremendously to compete either with much of what Hollywood turns out or with what radio grinds out. And don't forget that Hollywood already has its fingers in the television pie so that actually Hollywood will be

putting its own brand of entertainment on the video waves.

Is the Public Blase?

There seems to be a feeling that the public has grown blase to scientific novelty. We imagine that the genius who invented the wheel probably felt the same way when he tried to sell our

EDITOR'S NOTE

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This article was reprinted from "Television Grey Matter," a monthly newsletter published by the Grey Advertising Agency, 166 West 32nd Street, New York, N. Y.

This advertising agency has consistently faced the problems and advantages of television with enlightened modern thinking solidly based on facts. Many of the country's leading manufacturers, Editors and advertisers have come to depend on "Television Grey Matter" for a sound analysis of the progress of video. We are indeed privileged to have the exclusive opportunity to bring you this interesting, provocative and challenging article which is the result of the combined thinking of the Grey Advertising Agency Executive Staff.

ancestors on the superiority of the wheel over the drag pole. Edison was known to complain about the same public attitude. It is our opinion that nothing has ever so thoroughly captured American public fancy as has television; never were our people so thoroughly aroused about and so thoroughly receptive to a projected development as is true of television. The public definitely is not blase about television; to the contrary, it is fascinated by it—eagerly awaits it. We know of no invention for which so huge and so receptive a market was

ever built up in advance of its actual mass introduction!

This Is How We Feel:

It is our deep conviction that, given a development with revolutionary potentials, men will come forth with the faith and the finances to push aside all obstacles. There has hardly been a single major invention that did not have to contend not only with an "economic bottleneck" but also with suspicion, doubt and even dread. Television at least does not have to contend with those factors—it needs only faith on the part of venture capital and that is no longer a matter of question because the stations now in operation plus the more than 90 station applications filed are adequately backed. As for faith on the part of advertisers, we are satisfied that our larger advertisers—and remember only a few hundred manufacturers spend over 75 per cent of our total national advertising dollar—will gladly invest in television and will find ways and means, some unknown at the moment, of keeping their investments at a reasonable figure. The fact of the matter is that scores of our national advertisers are investing money in television right now, when returns can only be negligible. Then, too, those who have a stake in television—General Electric, American Telephone, Dumont, RCA, etc., etc.—will invest in television entertainment much more liberally than they ever invested in radio in the early days. There are other points to be considered, too. Remember that radio not only had to struggle with the limitations of a small audience and lack of national networks, but also had to sell a brand new advertising idea—the idea of advertising via entertainment. That idea is today accepted as advertising gospel. Television won't have to knock down that obstacle. Remember, also, that many of our biggest and best radio programs could be broadcast over television with actually little more cost than is now involved! Hardly any consideration has been given to this point. Typically, our leading comedians—who comprise the type of entertainment most welcomed by the listening public—could be put on via television at an additional cost that would hardly represent a major jump in present expenses. The same applies to our leading dance orchestras, to our leading crooners. When you lump together our comedians, our dance orchestras and our crooners, you have the major percentage of our most popular radio programs—more than enough to furnish the required financial sustenance for television.



TUNE-IN **ON** RADIO PROFITS

No time now for manufacturing or merchandising home radios! Certainly not, when this nation is wielding her full strength to hasten Victory. But the day will come, and the time to plan for that day is NOW!

Tune in today on your line of tomorrow, and reserve your front-row spot in the Postwar parade of better home radios and better profits.

Investigate the profitable Maguire Franchise! Let us prove that we can boost your profits through the Maguire master plan of manufacture, distribution and sales of our smart line of home radios and television sets.

Sell the best . . . OUTSELL THE REST!

A NEW NOTE IN HOME RADIO



Maguire
INDUSTRIES · INCORPORATED
ELECTRONICS · DIVISION

An Over All View Of Television's Principles

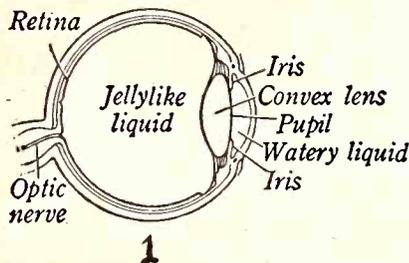
by

Joseph M. Oxenhorn

Technical Editor

In this first article, we will follow the broad electrical and optical principles upon which television is based. No attempts will be made to get at the details involved, but an over all view will be given.

It is not too strange that by understanding your own eye and how it works, you will be able to progress to an understanding of the principles of television. Let us, therefore, begin with a simple explanation of the human eye and see how it functions.



1

Fig. 1.

The Structure of the Human Eye.

The eye is capable of taking an image and recording it upon the brain. Before this can happen, light from the object which is being viewed, is passed through the lens. The amount of light that enters the eye is controlled by the muscular structure, the iris. After the light has entered the eye, it strikes upon the rear wall, the retina. This retina is coated with a complex chemical called visual purple which can be affected chemically by the slightest amount of light falling upon it. That is, a change is actually produced in the chemical makeup of the visual purple when light strikes it. The tissue of the retina, when examined microscopically, is seen to consist of thousands of nerve endings which merge to form the optic nerve. The optic nerve transfers the light effect upon the retina to

the brain, and we are conscious of seeing a cow, house or vacuum tube, as the case may be.

At this point it must be emphasized that the total effect is directly dependent upon the light which is reflected from the object we look at—both in quality and quantity. To make this point clearer, let us look at Figure 2.

Suppose that we have an object shaped as indicated in Fig. 2, and painted black and white. If this object were placed in a dark room, what would we see? Nothing, of course. No light is striking the object; no light is being reflected from the object; there are no light rays affecting the retina, and, so, no sensation is produced.

Now snap a light on. The solid arrows, running from right to left, represent the rays of light coming from the lamp and illuminating the object. The dotted arrows, running from left to right, indicate the reflected rays being given off by the object, and those rays which are entering the eye to pro-

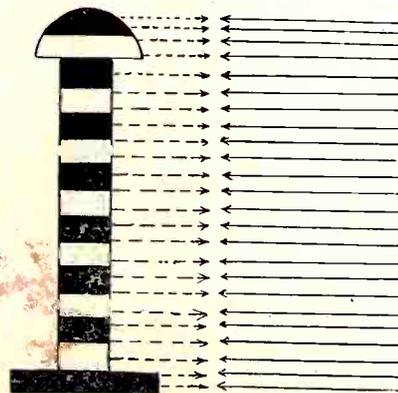


Fig. 2.

Distribution of Light by an Illuminated Object.

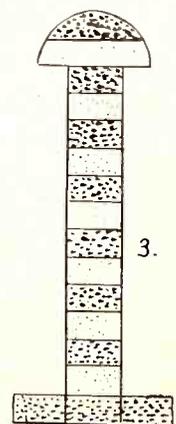
duce vision. For purposes of simplifying the diagram, we have indicated only those rays coming from one side of the object, although we know, of course, that the rays are coming from all sides of the object.

How many such reflected rays are there? Theoretically, hundreds of thousands may be drawn, because of the fact that each point of the object is giving off some portion of the light. In other words, the object may be considered as made up of countless small elements. Here is the first important underlying principle of television:

Every object or picture or image is made up of countless PICTURE ELEMENTS.

The object that we saw in Figure 2, may be redrawn to show the various picture elements. (See Figure 3.)

The entire object may now be considered as made up of these picture elements, each one reflecting its share of light. Referring to Figure 2 once



3.

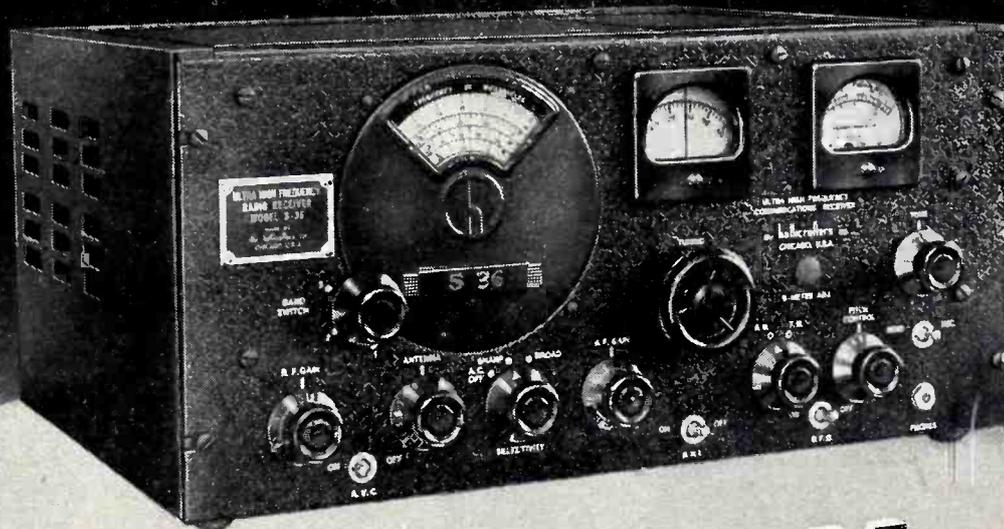
Fig. 3.

Picture Elements in an Object.

(Continued on page 48)

5 YEARS AHEAD OF ITS TIME

EM
AM
CW



27.8 to 143 Mc

Covers old and new FM bands

hallicrafters Model S-36

EXACTLY five years ago—in 1940—Hallicrafters introduced a very high frequency communications receiver with a range of 27.8 to 143 Mc. This model was clearly five years ahead of its time in its anticipation of new and exciting possibilities for superior performance on the higher frequencies. Today Model S-36 stands by itself as the only commercially built receiver covering this range. It is outstanding for sensitivity, stability, high fidelity. With its extraordinary VHF versatility it is ready for immediate application in the ever widening fields of FM and higher frequency development work. Engineering imagination at Hallicrafters is reaching out beyond the next five years, beyond the present known limits of radio technique so that Hallicrafters equipment will continue to be always ahead of its time, above and beyond your best expectations.



BUY A WAR BOND TODAY!

hallicrafters RADIO

THE HALLICRAFTERS COMPANY, MANUFACTURERS OF RADIO AND ELECTRONIC EQUIPMENT, CHICAGO 16, U. S. A.

TECHNICAL SECTION

(Continued from page 46)

more, we see that some parts of the object are black and some white. By comparing these dark and light sections with the corresponding sections in the object shown in Figure 3, we see that there is a difference in the amount of light given off by the various picture elements. In other words, we have indicated darkness and lightness by the amount of detail. The important point to remember here, is that there is a difference in the **amount** of light given off by the various picture elements.

At this point the objection may be made, "but we don't see picture elements when we look at the object." True enough. Recalling our explanation of how the eye works, we find that each picture element would cast its quantity of light upon the retina of the eye. Each light quantity will cause an individual chemical change which is picked up by one of the nerve endings. Now, however, the blending of the various picture elements occurs through the optic nerve, and the net result on the brain is a **total reassembled** image. This blending is because of the fact that all of the light effects fall upon the retina simultaneously.

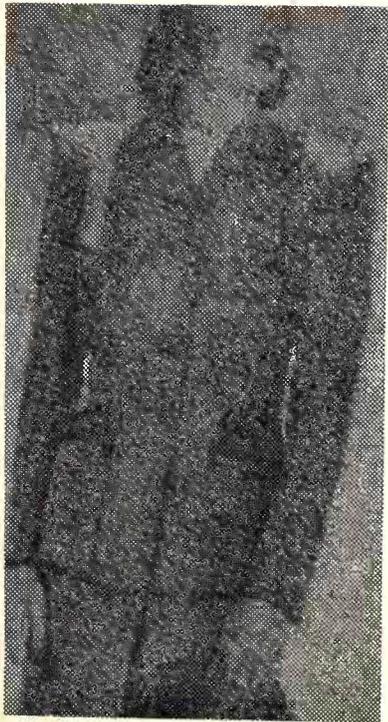


Fig. 4.
Picture Elements in a Newspaper Photograph.

One last demonstration will serve to bring this idea home clearly. The photograph shown in Figure 4 is like



MR. JOSEPH OXENHORN
TECHNICAL EDITOR

many others you have seen. If you hold it at a distance you see a total image. As you look very closely you begin to notice detail—you see picture elements. And if you have a magnifying glass handy, you can "creep up" on the detail still more. Compare the picture elements in the hair, gloves, suit and face. Each picture element is giving off its own share of light, and the total blended effect upon our brains is a picture of whites, grays and blacks.

One more characteristic of the human eye which it is necessary to understand in television is what we may choose to call "visual memory." Suppose you were in a dark room. A light flashes on for a brief moment and you see a picture on a wall. Scientists have discovered that the image of this vision may linger on your retina for as long as 1/50th of a second **after the light is out**. Technically speaking, there is a **PERSISTENCE OF VISION** or **RETENTIVITY**. Remember this phenomenon for it is highly important in the art of televising. Now, suppose that the light flashes on again before the first image disappears from visual memory. The two images will blend into one. And if this is done still more rapidly, an illusion of continued vision is brought about. You are, no doubt, all familiar with this technique in the motion picture. In that case 4 still photos of a man in walking position are flashed on a screen in one second. The eye causes the brain to think that the man is actually in motion.

We are now ready to analyze the second fundamental principle behind

television — the photoelectric effect.

One of the basic laws of our universe is that light energy can be changed into electrical energy and vice versa. If this were not possible, we could never transmit light images through space. By use of photoelectric cells—the so-called electric eyes—the light rays which are reflected from each picture element could be converted to produce an electrical impulse. From your knowledge of electronics you can readily see that the intensity of light coming from any individual picture element, will determine the strength of the electrical impulse produced. The more intense (brighter) picture elements will produce stronger impulses; the less intense (darker) picture elements will produce weaker electrical impulses upon a photoelectric cell. We shall not proceed to discuss the details at this time. Let us merely understand that the light coming from the picture elements of a picture or scene can produce varying electrical impulses. Now we can do what was not possible before: We can transmit these impulses over an electrical wire or superimposed on a radio carrier wave.

These electrical impulses, when picked up by a receiver, will be translated into a picture by the effect they produce upon a fluorescent screen in a cathode ray picture tube. The electrical energy has been reconverted into light energy.

But, here, we reach another stumbling block. We have stated that each picture element casts off a certain amount of light, and that this quantity of light can affect a photoelectric cell to produce a proportional electrical current—that this current can be transmitted by wire or radio. So far, so good. But, visualize the attempt to transmit each picture element's effects over a corresponding wire **simultaneously!** How many wires would be necessary? This would, of course, be impossible.

On the other hand, suppose we transmit the electrical impulses of all picture elements **one at a time** in rapid succession. In this case we can use but a single wire. Now, our knowledge of the eye comes to our rescue. Remember persistence of vision—the visual memory which makes images "stick" for a brief moment. If the picture elements come through in rapid succession, obviously, the eye will retain them and receive a unified, blended image. The rapidity between signals will not give the eye a chance to forget.

(Continued on page 50)



Clarion RADIO



PUT YOURSELF BEHIND THIS WINDOW

Someday soon there'll be crowds before every CLARION RADIO dealer's window. And there will be good reasons. Here are six of them!

1. A name known for proved quality for 23 years . . . backed by national advertising.
2. A line of models complete for every need.
3. Beautiful designs by Jack Morgan, nationally known designer.
4. Advanced engineering by Howard Gates that will give a new conception of faithful reproduction.

5. Values that appeal to sensible thrift . . . the result of experienced management.
6. A merchant known and trusted in his community.

This is more than a promise. The CLARION line is now an accomplished fact. It will be ready for production and delivery just as soon as we are given the go-ahead by Uncle Sam.

In the meantime there are no restrictions on good business judgment. So, if you're a forward-looking radio merchant, read the headline again.

For complete details write

WARWICK MANUFACTURING CORPORATION
4640 West Harrison Street
Chicago 44, Ill.

PROVED QUALITY FOR 23 YEARS

Here, then, is the solution. We must first break the picture—or dissect it into its individual picture elements. This, the process of **SCANNING**, was one of the hurdles in the development of television. Its perfection went a long way in bringing television closer to reality.

The individual images are transported on a carrier wave to the receiver where a scanning device, similar to the one at the transmitter, re-assembles the individual images into the composite whole which is being televised. The two scanning devices

(at receiver and transmitter) must, of course, be in step so that confusion does not occur. This process is called **SYNCHRONIZATION**. This is brought about by special synchronization signals generated at the transmitter.

One last principle involves the amplification of the weak impulses which the picture elements create, so that no losses will occur. The complete television—modulated signals will arrive at the receiver without loss of energy.

An over all view of the television system will involve the steps outlined in Figure 5.

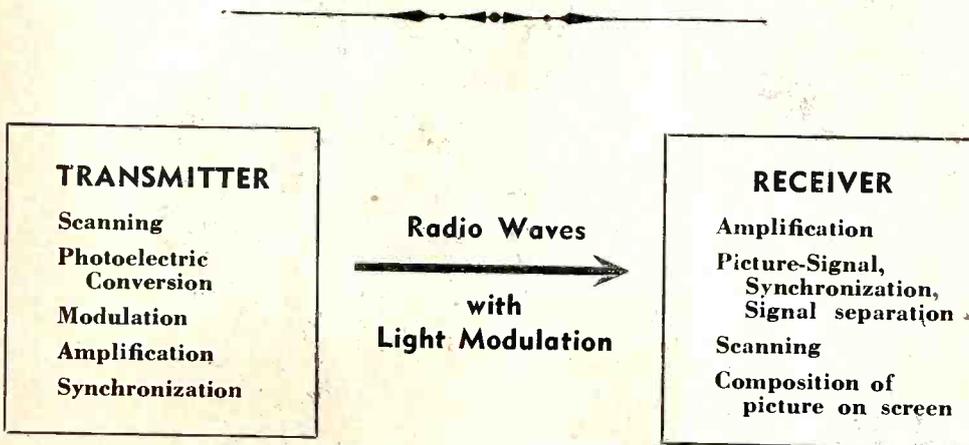


Fig. 5.
Over All Block Diagram of Television System.



Fig. 8.

One kind of television receiver. Its most important component is the kinescope, a cathode ray tube with a fluorescent screen.

These then are the basic principles of television. Many of the mechanical solutions to the problems involved may and probably will change as scientists discover improved and more simplified methods of conveying images across space. Nevertheless, these fundamentals will continue to be the underlying principles on which most future changes and developments will be made.

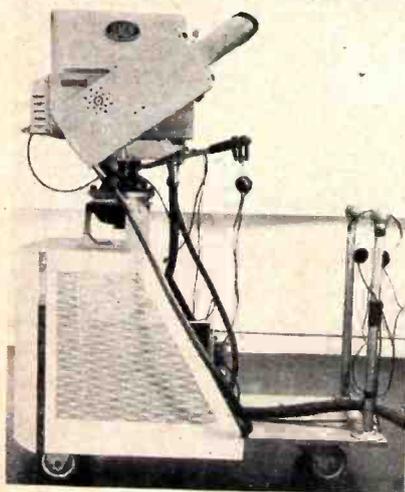


Fig. 6.

A television camera. It focuses the image by means of a lens. The camera tube, the iconoscope, scans the image and converts the light images to electrical impulses.



Fig. 7.

A television transmitting antenna. Light-modulated electro-magnetic waves are sent out from this antenna into space.

WORD REVIEW

Try to define the following words in terms of the material covered by this article. Refer to the text if you have difficulty.

1. Iconoscope
2. Kinescope
3. Photoelectric effect
4. Picture element
5. Retina
6. Scanning
7. Synchronization

Next Month

SCANNING

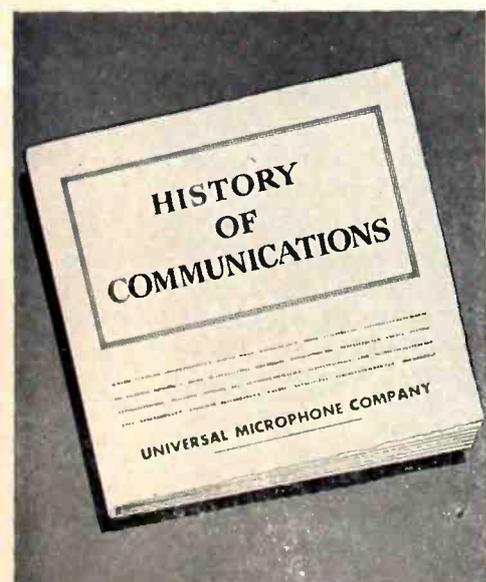


UNIVERSAL'S NEW D-20 MICROPHONE

The stage was set for something new and here it is. Universal's new D-20 Microphone . . . soon on your radio parts jobbers' shelves to fill your essential requirements . . . uses Universal's "Dynoid" construction . . . A dynamic microphone of conventional characteristics built to fill the utility requirements of war time plus advance styling of the many modern things to come. Orders placed now with your Radio Parts Jobbers will assure early delivery when priority regulations are relaxed.

◀ *FREE* — *History of Communications Picture Portfolio*. Contains over a dozen 11" x 14" pictures suitable for office, den or hobby room. Write factory for your Portfolio today.

UNIVERSAL MICROPHONE COMPANY
INGLEWOOD, CALIFORNIA



TECHNICAL SECTION

(Continued from page 46)

more, we see that some parts of the object are black and some white. By comparing these dark and light sections with the corresponding sections in the object shown in Figure 3, we see that there is a difference in the amount of light given off by the various picture elements. In other words, we have indicated darkness and lightness by the amount of detail. The important point to remember here, is that there is a difference in the **amount** of light given off by the various picture elements.

At this point the objection may be made, "but we don't see picture elements when we look at the object." True enough. Recalling our explanation of how the eye works, we find that each picture element would cast its quantity of light upon the retina of the eye. Each light quantity will cause an individual chemical change which is picked up by one of the nerve endings. Now, however, the blending of the various picture elements occurs through the optic nerve, and the net result on the brain is a **total reassembled** image. This blending is because of the fact that all of the light effects fall upon the retina simultaneously.

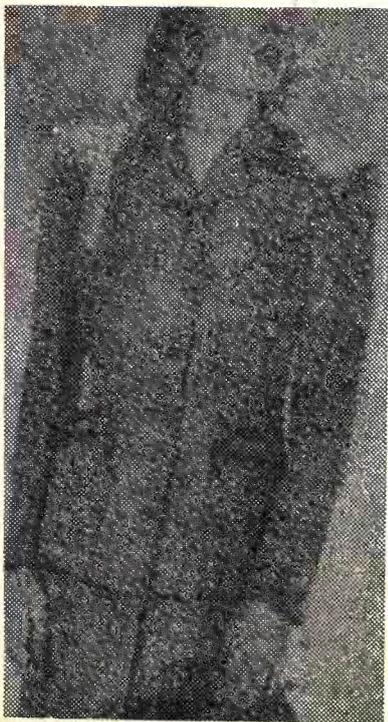


Fig. 4.

Picture Elements in a Newspaper Photograph.

One last demonstration will serve to bring this idea home clearly. The photograph shown in Figure 4 is like



MR. JOSEPH OXENHORN
TECHNICAL EDITOR

many others you have seen. If you hold it at a distance you see a total image. As you look very closely you begin to notice detail—you see picture elements. And if you have a magnifying glass handy, you can "creep up" on the detail still more. Compare the picture elements in the hair, gloves, suit and face. Each picture element is giving off its own share of light, and the total blended effect upon our brains is a picture of whites, grays and blacks.

One more characteristic of the human eye which it is necessary to understand in television is what we may choose to call "visual memory." Suppose you were in a dark room. A light flashes on for a brief moment and you see a picture on a wall. Scientists have discovered that the image of this vision may linger on your retina for as long as 1/50th of a second **after the light is out**. Technically speaking, there is a **PERSISTANCE OF VISION** or **RETENTIVITY**. Remember this phenomenon for it is highly important in the art of televising. Now, suppose that the light flashes on again before the first image disappears from visual memory. The two images will blend into one. And if this is done still more rapidly, an illusion of continued vision is brought about. You are, no doubt, all familiar with this technique in the motion picture. In that case 4 still photos of a man in walking position are flashed on a screen in one second. The eye causes the brain to think that the man is actually in motion.

We are now ready to analyze the second fundamental principle behind

television — the photoelectric effect.

One of the basic laws of our universe is that light energy can be changed into electrical energy and vice versa. If this were not possible, we could never transmit light images through space. By use of photoelectric cells—the so-called electric eyes—the light rays which are reflected from each picture element could be converted to produce an electrical impulse. From your knowledge of electronics you can readily see that the intensity of light coming from any individual picture element, will determine the strength of the electrical impulse produced. The more intense (brighter) picture elements will produce stronger impulses; the less intense (darker) picture elements will produce weaker electrical impulses upon a photoelectric cell. We shall not proceed to discuss the details at this time. Let us merely understand that the light coming from the picture elements of a picture or scene can produce varying electrical impulses. Now we can do what was not possible before: We can transmit these impulses over an electrical wire or superimposed on a radio carrier wave.

These electrical impulses, when picked up by a receiver, will be translated into a picture by the effect they produce upon a fluorescent screen in a cathode ray picture tube. The electrical energy has been reconverted into light energy.

But, here, we reach another stumbling block. We have stated that each picture element casts off a certain amount of light, and that this quantity of light can affect a photoelectric cell to produce a proportional electrical current—that this current can be transmitted by wire or radio. So far, so good. But, visualize the attempt to transmit each picture element's effects over a corresponding wire **simultaneously!** How many wires would be necessary? This would, of course, be impossible.

On the other hand, suppose we transmit the electrical impulses of all picture elements **one at a time** in rapid succession. In this case we can use but a single wire. Now, our knowledge of the eye comes to our rescue. Remember persistence of vision—the visual memory which makes images "stick" for a brief moment. If the picture elements come through in rapid succession, obviously, the eye will retain them and receive a unified, blended image. The rapidity between signals will not give the eye a chance to forget.

(Continued on page 50)



Clarion RADIO



PUT YOURSELF BEHIND THIS WINDOW

Someday soon there'll be crowds before every CLARION RADIO dealer's window. And there will be good reasons. Here are six of them!

1. A name known for proved quality for 23 years . . . backed by national advertising.
2. A line of models complete for every need.
3. Beautiful designs by Jack Morgan, nationally known designer.
4. Advanced engineering by Howard Gates that will give a new conception of faithful reproduction.

5. Values that appeal to sensible thrift... the result of experienced management.
6. A merchant known and trusted in his community.

This is more than a promise. The CLARION line is now an accomplished fact. It will be ready for production and delivery just as soon as we are given the go-ahead by Uncle Sam.

In the meantime there are no restrictions on good business judgment. So, if you're a forward-looking radio merchant, read the headline again.

For complete details write

WARWICK MANUFACTURING CORPORATION
4640 West Harrison Street

Chicago 44, Ill.

PROVED QUALITY FOR 23 YEARS

Here, then, is the solution. We must first break the picture—or dissect it into its individual picture elements. This, the process of **SCANNING**, was one of the hurdles in the development of television. Its perfection went a long way in bringing television closer to reality.

The individual images are transported on a carrier wave to the receiver where a scanning device, similar to the one at the transmitter, re-assembles the individual images into the composite whole which is being televised. The two scanning devices

(at receiver and transmitter) must, of course, be in step so that confusion does not occur. This process is called **SYNCHRONIZATION**. This is brought about by special synchronization signals generated at the transmitter.

One last principle involves the amplification of the weak impulses which the picture elements create, so that no losses will occur. The complete television—modulated signals will arrive at the receiver without loss of energy.

An over all view of the television system will involve the steps outlined in Figure 5.

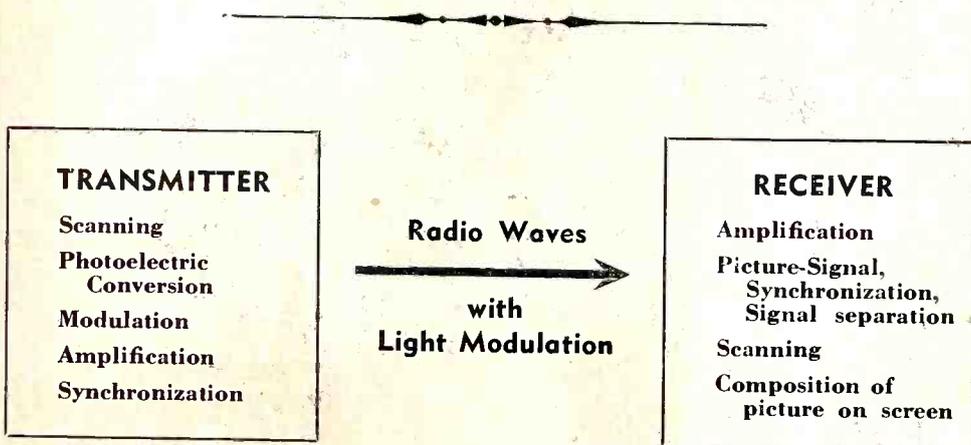


Fig. 5.
Over All Block Diagram of Television System.



Fig. 8.

One kind of television receiver. Its most important component is the kinescope, a cathode ray tube with a fluorescent screen.

These then are the basic principles of television. Many of the mechanical solutions to the problems involved may and probably will change as scientists discover improved and more simplified methods of conveying images across space. Nevertheless, these fundamentals will continue to be the underlying principles on which most future changes and developments will be made.

WORD REVIEW

Try to define the following words in terms of the material covered by this article. Refer to the text if you have difficulty.

1. Iconoscope
2. Kinescope
3. Photoelectric effect
4. Picture element
5. Retina
6. Scanning
7. Synchronization

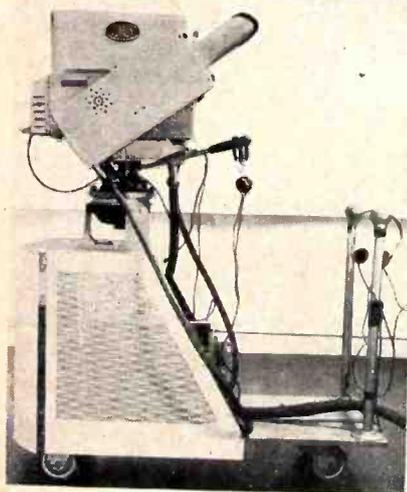


Fig. 6.

A television camera. It focuses the image by means of a lens. The camera tube, the iconoscope, scans the image and converts the light images to electrical impulses.

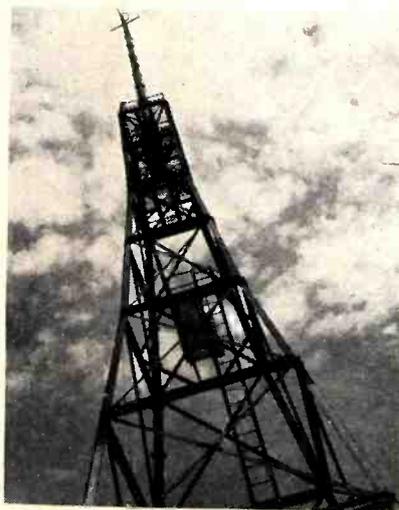


Fig. 7.

A television transmitting antenna. Light-modulated electro-magnetic waves are sent out from this antenna into space.

Next Month

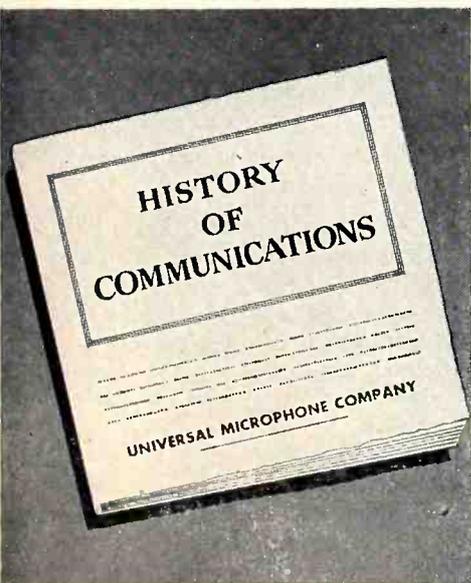
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UNIVERSAL MICROPHONE COMPANY
INGLEWOOD, CALIFORNIA





Shown above is one of Milt Gabler's famous Jam Sessions in action

TO BE A SUCCESS IN RECORD RETAILING *Specialize*



MR. GABLER

says

Milt Gabler

**Commodore Record Store
New York, N. Y.**

as told to

**NATALIE RAPP,
Editorial Associate**

The Commodore Music Shop is known throughout the entire world for its remarkable and complete stock of jazz records which includes the rare hard-to-find collectors' items. In many instances they are the only store carrying particular discs. This unique collection was originated and built up by Milt Gabler.

Many of the merchandising features that are responsible for much of Mr. Gabler's success are applicable to any store selling records.

Back in 1927 the Commodore Music Shop was a radio store. In those early days of radio, loud speakers blared through the open door into the street to entice the casual passerby. People began coming into the Commodore asking for records of the pieces being played. At that time jazz was just becoming popular and Milt's own enthusiasm for it led him to collect and specialize in selling these items. By word-of-mouth the news travelled among interested circles that there was a small store on East 42nd Street where they could find any record they wanted. Musicians, too, started going

to Milt Gabler to obtain records of other artists and to talk over the music. Through them the reputation of the store spread. When interested patrons at various nightclubs and hotels inquired where records of these performances could be bought, they were told to go to the Commodore. In this way the store became known to music patrons. And public awareness of the quality and facilities of a shop is the first prerequisite to the building up of a reputation and the initiation of special services.

It is therefore equally important for the local radio dealer to make his potential customers aware of his facilities. High school musicians and other student groups interested in music can be drawn through his front door by making records available for their school dances. This gives him an opportunity to become acquainted personally with the young musicians and as an introduction to the facilities he can extend them.

For several years the Commodore continued to broaden and expand its reputation for having any record a customer could name, especially hot discs. Then came the crash of '29. But it wasn't until around 1934 that the record depression was at its lowest. Manufacturers at that time stopped producing hot records. By this time, however, the Commodore had built up quite a demand for its specialty. People would come in asking for hot records and were willing to pay more than the standard prices for them. Taking advantage of this situation, Milt Gabler formed the United Hot Club of America. He bought hot jazz discs from the companies which had the master records and sold them to members under the United Hot Club label.

An adaptation of the United Hot Club for the local record dealer would be to form a music club of the local musicians for the purpose of making recordings of their performances. The musicians, their families and friends would be a potential market for these recordings. Musical schedules of the U.S.O. and school dances could be so arranged that live performances of the musicians could alternate with recordings of their pieces, in this way giving them a chance to join in the general fun and lead their dates around the floor to the tune of their favorite pieces played by themselves.

The local dealer might also take a leaf from Milt Gabler in the matter of publicizing his young musicians to both his own and their advantage. In order to publicize the United Hot Club and build up its membership, Gabler

initiated "jam sessions," which were held in record studios. At these sessions the musicians gathered informally and played without rehearsal and without pay. The public was invited to attend free of charge. The musicians came simply for the love of playing their music in their own way. Milt later transferred the sessions to nightclubs but because this commercialized them somewhat, he let the "sessions" die out.

In 1939 somebody started "jam sessions," charging admission in nightclubs, though they did not pay the musicians. They usually snagged one or two good names and the rest of the instrumentalists would be of mediocre ability. The result was a fairly inferior type of music in most cases. Feeling that he owed it to his reputation to start his own "jam sessions" again, Milt hired two jazz bands to play at Jimmy Ryan's on Sundays, merely charging enough admission to cover expenses . . . and sometimes it was pretty skimpy covering.

"Jam sessions" would be a splendid social activity for the local dealer to initiate. He could encourage his student musicians to hold the sessions in some appropriate club such as the Y.M.C.A., the U.S.O. canteen, the local highschool auditorium or a similar place where refreshments could be served for their friends and families. The students would gather together simply for the love of playing their favorite pieces, unrehearsed and in accordance with their mood. This would have the additional advantage of interesting the more mature elements of the population in popular music. Certainly parents could not resist their children's invitation to attend such gatherings. Once interested, they would become an excellent outlet for the recognized professional recordings. Furthermore, as a social event, it would draw many of the other young people who were not primarily interested in music. Almost surely a number of these, if only because they would want to be "one of the gang," would become actively interested in recordings.

As the result of the jam sessions initiated by Gabler, the public became thoroughly jazz conscious. It became evident to the large companies holding the master records from which Gabler obtained his discs that a very profitable business lying right under their thumbs was being ignored. They discontinued selling records to the Commodore. Gabler decided to make his own records. He assembled his own orchestras . . . hand-picking the musicians for each instrument . . . and made the recordings in one of the big

studios with appropriate facilities.

The local radio dealer planning to make recordings of local musical organizations such as Chamber Music groups, Choral Societies, the U.S.O. and school bands, etc., could make such recordings the occasion of a get-together among the musicians and other students interested in music. By providing the "professional atmosphere," by making himself familiar with the music of the students, with the quality of their achievements and their aims, he can eventually acquire the position of musical advisor. An understanding of the popular musical field of his particular group, and knowledge of the professional achievements of the same type of music, will enable him to introduce the recordings of professional artists into the circle. This might be done for instructive criticism and analysis.

The radio dealer should consider carefully the type of music he will encourage his groups to record. The Commodore doesn't make recordings of new songs. Their policy, however, is not necessarily applicable to the local dealer. Gabler brings out old songs that are steady but slow perennial favorites. By recording them with new artists and original arrangements, he achieves a sensational hit, such as "Begin the Beguine," with Eddie Heywood at the piano.

At first blush it would appear that it would be to the dealer's advantage to encourage his young musicians to make recordings of the current hits as they appear. However, as these songs usually have a life as brief as it is spectacular, such a policy may soon appear rather extravagant and wasteful to the musicians. It might be sounder to follow the lead of the Commodore and suggest recordings of the perennial favorites that, though they never make a splash, are played year after year. A few current hits might be included upon occasion.

The reason Gabler makes discs that he feels will have a long, steady demand over a period of years, rather than something that will sell enormously for just a few months is because his facilities for producing records are limited.

The local dealer, on the other hand, should remember that local recordings will have an immediate and extensive demand. But once that spurt dies out, the discs will lie inert on his shelves. Therefore, he should estimate very carefully the maximum demand for the recordings and restrict his production within that limit.

(Continued on next page)



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(Continued on next page)

RECORDISC

Instantaneous Recording Blanks



**...because making
"SNAPSHOTS-IN-SOUND"
is fun...**

... leading dealers will testify that more people make instantaneous home recordings with *Recordiscs* than with any other blank in America. These practically self-selling *Recordisc* blanks provide a steady market for profitable sales twelve months of the year.

By permission of the WPB, we are able to produce a limited quantity of these fine blanks. They have a flawless, mirror-like surface, and are available in pre-war qualities. Contact your nearest *Recordisc* representative.

THE RECORDISC CORP.

395 BROADWAY, NEW YORK 13, N. Y.
Cable Address: Recordisc, New York, N. Y.
Export Dept: Royal National Company, Inc.
89 Broad Street, New York

(Continued from preceding page)

The Commodore was the first shop to put pertinent information on record labels. Previously customers had to guess for themselves who was playing any particular piece of music. Gabler and his assistants went through their stock of records, playing and analyzing the discs, trying to identify the musicians. When possible, they corroborated their findings with the musicians themselves. On their own records, they listed the band leader, musicians and the date of the recording.

The local dealer in making recordings of his student bands should emphasize the professional appearance of the discs produced. It is important to note that the selling point of these records is the names of the individuals playing the instruments. The label must be designed to accommodate them. In cases where the bands are particularly large, they might be broken down into two bands, each having separate recordings. Once he has acquired a sufficient number of customers, the dealer might put out albums of the records.

Dealers of neighboring localities might suggest some inter-locality activities. Musicians of one locality might buy records of the musicians of a neighboring locality and vice versa for purposes of constructive criticism and analysis. Some of the "jam sessions" might be jointly held. This would increase the demand for any one particular recording.

It is interesting to note that "hot clubs" began in Europe, England and France. The Europeans were very fond of American Jazz and because they were unable to drop in on the band playing in some nightclub, they bought records, and gathered together to listen and discuss the music.

The local radio dealer might initiate such gatherings to listen to and criticize the new records of the bands as he releases. If his store facilities permit, such gatherings might be held in the store himself. Such an exchange of criticism among the members of the groups would be in itself a source of stimulation for making even more records.

In order to reach an even wider audience, the dealer might make recordings of dramatic recitations. Members of the local theatrical groups might be induced to have recordings of certain specially fine scenes. Rehearsal scenes could be recorded so that the actors could hear and analyze for themselves where their faults lie.

Public-speaking classes could make excellent use of recordings. A student

would make a recording of himself delivering a speech at certain progressive stages in the course. This would be an invaluable source of self-analysis.

The local dealer should feature these local recordings in his window display. Pictures of the artists both in groups and alone would be of enormous drawing power. Each new series of records should be featured as it comes out. Recordings of the same items by professional artists, when available, might be displayed alongside the local recordings. Pictures of the professionals, too, might subtly but powerfully appeal to the young musicians or dramatists alongside their own.

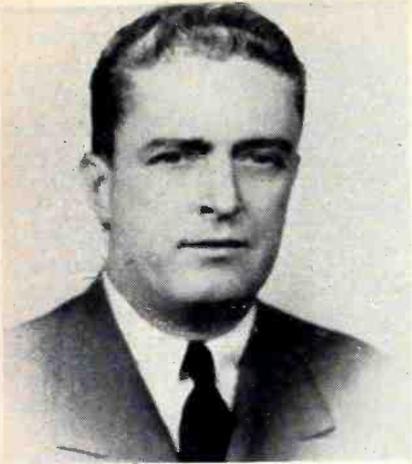
The dealer might be interested to note the interior arrangement of the Commodore, which combines efficiency and a touch of atmosphere.

Two counters run parallel to each long wall and at the back are half a dozen demonstration booths. The walls are packed from floor to ceiling with albums. On one side a picture of Toscanini hangs from one of the shelves next to a caricature of a Fritz Kreisler and Louis Armstrong duet dreamed up by Covarubius. Over the door is a print of "Fats" Waller. On the other wall hangs a colorful card listing new Commodore releases and next to it a similar card of other new popular releases. Except for these touches, the store gives the impression of complete business-like efficiency which is curiously impressive by contrast to the informal and friendly manner of Jack Crystal, who has been the manager for the past six or seven years, and the clerks, Bill Pere, Norman Leif, Lou Blum, Danny Acosta and Marie Fizz, all of whom "know their records."

The local radio dealer would do well to combine, as the Commodore has done, both efficiency of organization and informality of sales technique. Possibly some of the school musicians might be persuaded to act as salespeople in their spare time. By making the suggestion attractive to those students who are the leaders of the groups, the dealer almost at once makes his store a focal point for the students of those groups.

The important point is that the dealer should recognize that his records should be merchandised and not just left to sell themselves. Furthermore, this is something that need not be postponed to the end of the war. It can be done *now*. And it is to the advantage of the dealer to start making his community record-conscious in relation to his particular store *now* rather than later when many army veterans may be invading the field.

Distributor News



MR. O'LOUGHLIN

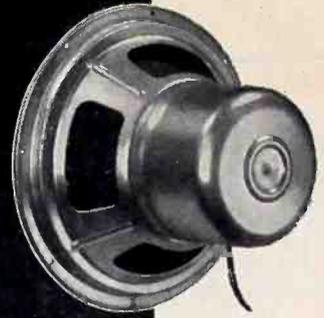
Philco Appoints T. A. O'Loughlin Distributor

Appointment of T. A. O'Loughlin & Co., Newark, New Jersey, as distributors of Philco products in northern New Jersey and Staten Island was announced today by Joseph R. McCoy, Atlantic Division Manager of the Philco Corporation.

The O'Loughlin Company is headed by Thomas A. O'Loughlin, who recently was placed on the inactive list as a Captain, U. S. Marine Corps after having been in that branch of the service for the past two years. He has been connected with the Philco Corporation since 1929 in various executive capacities; his immediate prewar post being Vice President of Philco Distributors, Inc., a subsidiary of the Philco Corporation. Mr. O'Loughlin has a large circle of friends and business acquaintances in New Jersey, having made his home in the Oranges for the past ten years.

Another member of the firm who will direct the company's sales activities is Albert K. Spears, a resident of East Orange, New Jersey, who has been connected with Philco for the past seventeen years in various sales positions throughout the country. For the past five years, Mr. Spears has been sales manager for New Jersey when the territory was operated as a factory branch.

Frank, E. Quinn, formerly advertising manager of Philco-New York, who has also been with Philco since 1928, will supervise the advertising and promotional activities of the new organization. He has been closely associated with Mr. O'Loughlin, both in New York and other territories, for the past fifteen years. Quinn is a life long resident of New Jersey, and at present lives in West Orange.



RADIO SPEAKERS

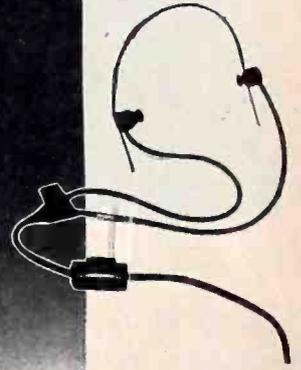
for all applications

Recently expanded production facilities combined with complete engineering "know-how" enable Consolidated Radio Products Co. to supply the finest radio speakers available. Speakers can be furnished in the following ranges:

Dynamic Speakers from 2 inches to 18 inches

Permanent Magnet Speakers from 2 inches to 18 inches

Headsets



Electronic and Magnetic Devices

CONSOLIDATED RADIO

Products Company

350 W. ERIE ST., CHICAGO 10, ILL.

Small and Medium TRANSFORMERS

Consolidated Radio is also a nationally known manufacturer of small and medium transformers including Pulse Transformers, Solenoid and Search Coils.

Engineering service is available to design transformers and speakers for special applications, or to your specifications.



NEWS ABOUT DISTRIBUTORS



RUDY BROWD

Postwar Pledge to Dealers Outlined by H. A. McRae & Co., Distributors

An eight-point postwar pledge to the dealers in its territory highlights the "after-V-day" plans of one of the upstate New York area's leading radio and appliance distributors. The distributors, H. A. McRae & Co., of Troy, N. Y., were recently appointed area distributors for the Stromberg-Carlson postwar radio, FM and television lines, by Clifford J. Hunt, manager of radio sales for the Rochester, N. Y., radio-telephone firm. The territory assigned the Troy firm comprises part of central New York State, and parts of Massachusetts and Vermont, Mr. Hunt said.

Rudy Browd, appliance sales manager for the Troy distribution firm, said that the pledge, a written one, includes provisions for dealer protection, profit opportunity safeguards, advertising and sales promotion helps, sales training meetings, service suggestions, and the use of a spacious display room to set off the distinctive features of the postwar Stromberg-Carlson receivers.

Walker-Jimieson Features Air Express Deliveries

Walker-Jimieson, Radio and Electronic distributors at 311 South Western Ave. in Chicago, has long been known as the "Emergency Service Distributor." For several years they have successfully maintained and continued to build their reputation of supplying electronic parts and equipment to Industrial plants with the greatest possible speed. Now, as a special contribution to the hastening of victory, Walker-Jimieson is encouraging its customers to request shipment by Air Express and is paying one-half the air express charges on each shipment of 3 lbs. or less. Every plant in the U. S.—from coast to coast and border to border—is only overnight from Chicago and from one of the nation's finest stocks of electronic supplies. Vital production schedules need no longer be delayed while awaiting the arrival of some electronic or electrical part. It is expected that many industrial engineers and purchasing agents throughout America will henceforth specify air express delivery when ordering urgently needed items from W-J's large well-maintained stocks.

Recordit Distributor for Sonora

The Recordit Company announces this firm has recently been appointed the distributor on the Sonora Record line in the midwestern area. They have also received the distributorship on the Jensen Needle line.

Recordit has been in business only five years and in that time has acquired the distribution on Fidelitone, Pfanstiehl, Aeropoint, Walco and Duotone Needle lines. They also distribute the Peerless Record Album and the Josephson Record Carrying Cases exclusively.



KURZON COMPANY NEW YORK
HEADQUARTERS SHOWN ABOVE

Joseph Kurzon, Inc., Appointed Exclusive Metropolitan Distributor for Olympic

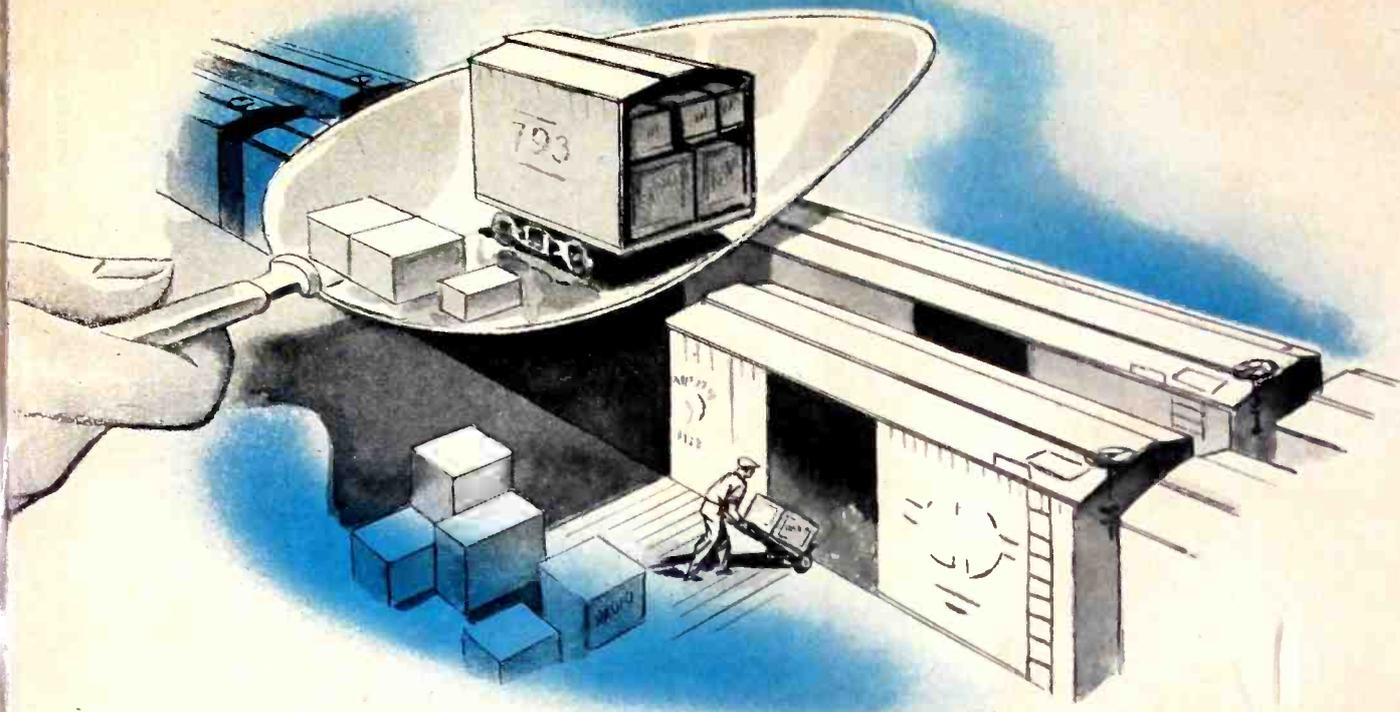
Joseph Kurzon, Inc., New York electrical equipment and appliance distributor of 29 years standing, has been appointed as exclusive Metropolitan distributor for Olympic Radio and Television, according to Jack F. Crossin, Director of Sales for Hamilton Radio Corporation, New York.

Fred J. Greene, well known in the trade through his 27-year connection with General Electric, most recently as Sales Manager of Gen-Electric Supply Corp.'s Traffic Appliance Division, recently became Kurzon's General Sales Manager.

The Kurzon company occupies its own 6 story building at 112-114 West 31st St., New York. Plans have been approved for erection of a new building on the adjoining property at 116-118, already owned, which will approximately double the warehouse, display and shipping facilities.

Duotone
Manufacturers of the world's largest line of Phonograph Needles
Makers of the Five Dollar "Star" Sapphire Needle
799 BROADWAY, NEW YORK 3, N. Y.

- The Filter Point
The Duomatic
The Duochrome
Cactus Needles
- The Miro Point
The Durpoint
The Lifetone
The Regent
- Transcription
Needles
Duodiscs
Record Preserver



Cut Yourself a Slice of the First Radio Shipments

-- guarantee delivery on your
first radio requirements



"Buy your new radio from
Your Radio Dealer"—that
is the theme of MECK ad-
vertising to your customers
—appearing in Liberty.

Your biggest postwar problem is—deliveries. Here is a sales plan
that answers that problem by guaranteeing deliveries.

An organized sales and distribution plan makes it possible for you
to depend on *your share* of the *finest* radios available immediately
after civilian set production starts.

Meck Radios will be sales leaders, year in and year out—from the
start. You can now reserve a section of my production line, get your
share of the first radio shipments, and stop worrying.

Ask your Parts Jobber today or write

JOHN MECK INDUSTRIES, Inc., PLYMOUTH, INDIANA

John Meck



MECK RADIOS

TABLE MODELS • PORTABLES • CONSOLE COMBINATIONS • PHONOGRAPHS

IMMEDIATE DELIVERY FROM STOCK

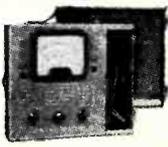
SPRAGUE - CORNELL DUBILIER AEROVOX CONDENSERS



10 mfd 450v Tubular	50¢
16 mfd 450v Tubular	65¢
20 mfd 450v Tubular	70¢
40 mfd 450v Tubular	99¢
20 mfd 150v Tubular	44¢
30 mfd 150v Tubular	47¢
40 mfd 150v Tubular	50¢
20-20 mfd 150v Tubular	76¢
40-20 mfd 150v Tubular	82¢
30-30 mfd 150v Tubular	79¢
50-30 mfd 150v Tubular	94¢
10 mfd 50v Tubular	32¢
25 mfd 25v Tubular	35¢
.001 mfd 600v	12¢
.002 mfd 600v	12¢
.003 mfd 600v	12¢
.004 mfd 600v	12¢
.005 mfd 600v	12¢
.006 mfd	12¢
.01 mfd	12¢
.02 mfd	12¢
.05 mfd	15¢
.1 mfd	18¢

TEST EQUIPMENT!!!

Volt-Ohm-Milliammeters
GE UM-3 31.50
Superior PB-100 28.40
 Servicemen's Priority
 AA-5 MRO CMP5A
 Delivery—3 weeks



PM SPEAKERS



4" Square 2 oz.	1.35
5" Round	1.25
6" Round 3.6 oz.	2.10
10" Round 20 oz.	7.20
12" Round 11 oz.	5.19
12" Round 31 oz.	10.14

TURNER MICROPHONES

Model	Type	Cord	List	Your Cost
BX	Crystal	7'	\$9.95	\$5.85
22X	Crystal	7'	18.50	10.88
33X	Crystal	20'	22.50	13.23
BD	Dynamic	7'	14.50	8.53
33D	Dynam.	20'	23.50	13.82



RADIART VIBRATORS

Type	Mallory Equal	Base	Size	Used in	Ech.
S-1	4-4	4 Prong	1 1/2-3 1/8	Universal	\$1.35
5300	294	4 Prong	1 1/2-3 1/8	Universal	2.09
5326P	509P	4 Prong	1 1/2-2 1/8	Philco	1.76
5334	868	4 Prong	1 1/2-3 1/8	Delco	2.09
5341M	901M	4 Prong	1 1/2-3 1/8	Motorola	1.76
5400	248	6 Prong	1 1/2-3 1/8	Truotone	3.50
5426	716	5 Prong	1 1/2-3 1/8	Buick	3.50

ORDER OTHERS BY MAKE AND SET MODEL

TRIMM ACME DELUXE PHONES



2000 OHM	1.50
Cannon-Ball Dixie	1.56
Brush Crystal Phones Type "A"	7.95

ASTATIC CRYSTAL CARTRIDGES

L40	2.35	LP6	4.70	M22	2.94
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PHILCO BEAM OF LIGHT

Selenium Cell only, no holder 1.80

AC-DC RESISTANCE CORDS

135-160-180-220-250-290 OHM			
Each	48¢	10 for	4.50
ICA Universal 22-330 ohm			73¢
560 ohm for 3-way Portable			73¢

BALLAST TUBES

K42B K55B L49C L55B			
100-79			
K49B K55C L49D 100-70			
100-77			
Each	45¢	10 for	4.20
Clarostat Universal 23-55A (octal) each			59¢

20% deposit required on all C. O. D. orders. Orders of \$25.00 or more accompanied by payment in full, will be shipped prepaid. DON'T FORGET L-265 or AA-3 certificate.

RADIO SUPPLY & ENGINEERING CO., Inc.
 127 SELDEN AVE. DETROIT 1, MICH.



MR. C. C. BOWER



WM. M. FISKE

Stromberg-Carlson Names Two Distributors

Clifford J. Hunt, manager of radio sales for the Stromberg-Carlson Company, Rochester, N. Y., announced last week that the company had appointed distributors for the company's postwar radio, FM and television lines to cover two of Tennessee's key trading areas. The Better Home Products, Inc., which has been appointed the fifty-one-year-old Rochester firm's distributor for the Nashville trading area, is headed by William M. Fiske, its general manager. Although a newly-established firm, it promises to cash in on its head's wide business experience throughout the southern and central states. The firm will feature along

with Stromberg-Carlson receivers a high quality line of "famous brand" home appliances, Mr. Fiske said.

The Tri-State Supply Company of Chattanooga, considered one of the foremost distributing teams in Tennessee, will represent Stromberg-Carlson in the sixty-mile trading area of which Chattanooga is the hub, Mr. Fiske said. The enterprising company, is headed by C. C. Bower, a well-known figure in appliance trade circles. An out-of-town visitors' headquarters featuring an attractive radio showroom, is one of the postwar extra services this distributor will offer his dealers.

Davis Radio Company Appointed Motorola Radio Distributor

The appointment of Davis Radio Company, 2501 Tulare Street, Fresno, California, as wholesale distributor for Motorola Radios, is announced by W. H. Kelley, General Sales Manager, Galvin Manufacturing (Motorola Radio) Corporation. When post-war radios and electrical household appliances are available, the new distributor, with a crew of ten, will cover the California counties of Stanislaus, Tuolumne, Merced, Mariposa, Madera, Fresno, Kings, Tulare and Kern.

The Davis Radio Company will carry the complete line of Motorola Radios for the home, automobiles and the battery operated Table Models and Consoles for farm areas and the new, more powerful than before, matched radios for automobiles.



Meeting of Members of Jules Alexandre, Inc.

When the firm of Jules Alexandre, Inc., was organized in Harrisburg, Pa., to handle the distribution in Central Pennsylvania of products of The Crosley Corporation, members of the new organization met at a dinner in Harrisburg to discuss the future plans of the new company.

In the above photograph, taken at the Penn-Harris Hotel, Mr. Jules Alexandre, president of the company, is shown in the center.

Mr. Ben Eby, owner of the Eby Chemical Company of Harrisburg, is vice-president of the new company, which succeeds the firm of Golling-Alexandre, Inc.

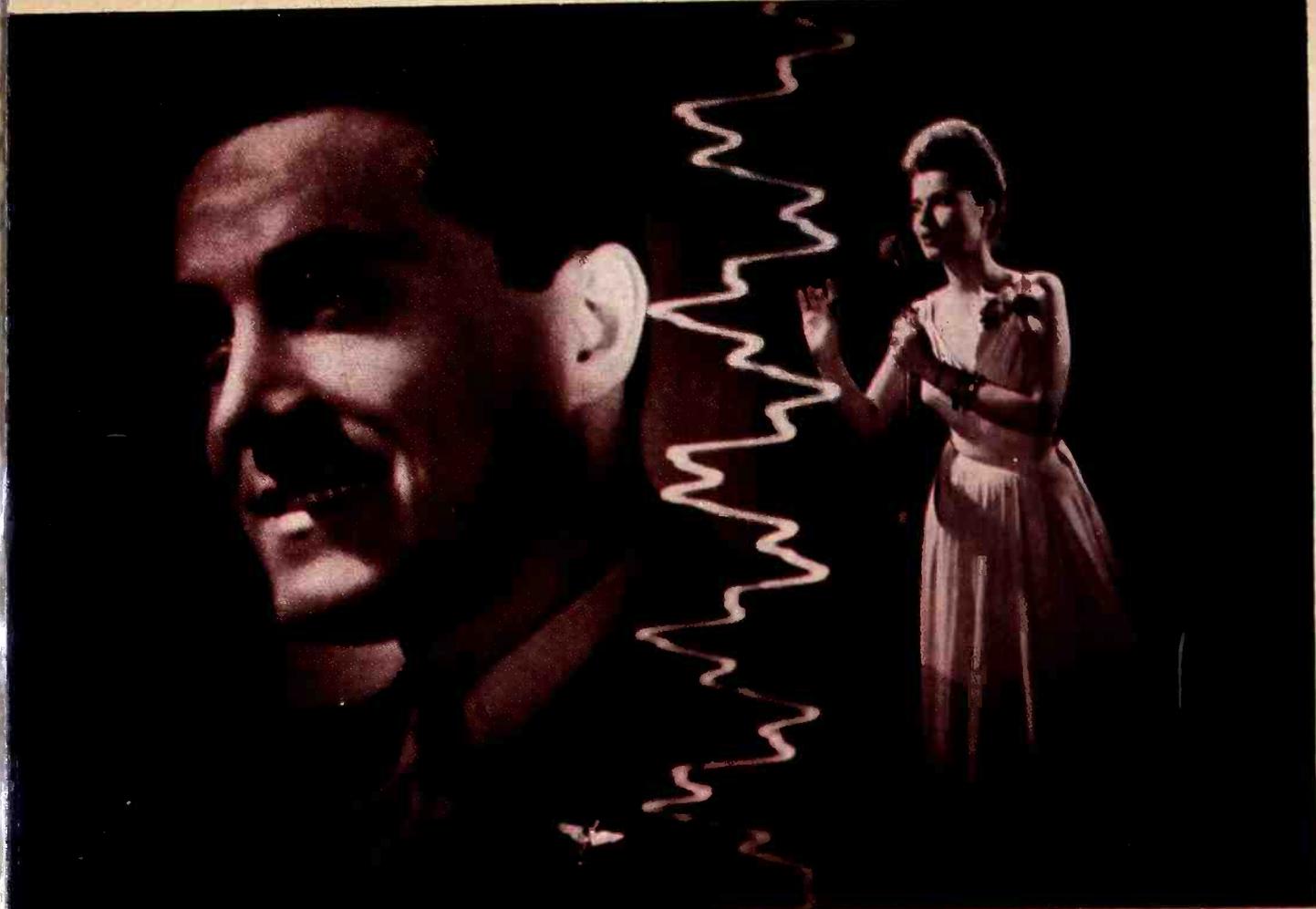


ILLUSTRATION FROM PHILHARMONIC'S NATIONAL ADVERTISEMENT, "NO WOMAN EVER SANG TO HIM THIS WAY BEFORE!"

Earmarked for profit . . . by those who "Listen for Pleasure"

NOT everyone who buys the new PHILHARMONIC Radio-Phonograph will be a patron of music. Many will buy it merely because of its greater listening pleasure. To them, PHILHARMONIC'S feature of a "tonal range spanning the reach of human hearing," will be important. But more important will be the translating of this feature into "perfect listening" — the ability to hear every tone from lowest to highest with absolute fidelity. And on this basis they will select PHILHARMONIC in preference to the conventional radio-phonograph.

In America's changing economy you'll find many such buyers — people willing, able, and anxious to own the new PHILHARMONIC. They will join with the musicians, music students, and music lovers to make the PHILHARMONIC profitable for postwar business. Recognizing the potentials, many leading music and department stores have chosen PHILHARMONIC — are now protected through our exclusive franchise plan.

• PHILHARMONIC RADIO CORPORATION •
526 East Seventy-Second Street, New York 21, N. Y.

Philharmonic

RADIO-PHONOGRAPH

® TRADE MARK

Olympic Appoints Butler Brothers

Appointment of the Chicago and Minneapolis branches of Butler Brothers, as exclusive franchise distributors for Olympic Radio & Television, was announced today by Jack F. Crossin, Director of Sales for Hamilton Radio Corp., New York.

The 68-year-old firm is universally known as the largest wholesaler of general merchandise in the United States, with more retail accounts on its books than any other distributor. Butler Brothers expects to play a proportionately dominant role in post-war marketing of radio, television and household appliances, through its "Major Appliance Division." This division functions as a completely separate, specialty-selling operation, under the direction of C. E. Gunther, with George M. Kamberg in charge of National sales, and a full sales and servicing staff at each local branch.



When I said "extra measure", I was talking about the **GAROD RADIO**

The moral of this tale is that even if you're enthusiastic about postwar GAROD Radios, don't tell your tailor. Perhaps he's never heard of the "extra measure" of GAROD planning, designing and construction. Perhaps he doesn't know that they're priced to get you an "extra measure" of profit for every one you sell . . . and you'll sell many. In any event, good fit or bad, you'll attract customers with GAROD, no matter what you wear.

Place your order now with your nearest GAROD distributor.

GAROD  **RADIO**

70 WASHINGTON STREET BROOKLYN 1, N. Y.

Fred A. Ray Appointed Vice President of Lindsay & Morgan Co.

Fred A. Ray has recently terminated his affiliation with the General Electric Company and become a Vice President of Lindsay & Morgan Co. of Savannah, Georgia, distributors of radios, household appliances and air-conditioning equipment throughout the Savannah wholesale area. Exclusive distributing franchises already executed include the Crosley Products.

Olympic Announces Three Distributors

Franchise distributor appointments for Olympic Radio & Television, in 3 key marketing areas, were announced today by Jack F. Crossin, Director of Sales for Hamilton Radio Corp., New York: Economy Electric Supply Company, Atlanta, Ga., Cardinal Distributors, Inc., St. Louis, Mo., Risley-Leete Company, New Haven, Conn.

Economy Electric Supply, founded by H. L. Jackson in 1925, has steadily expanded its operations with the addition of Arlie M. Hitt and Harry L. Gilham as partners. Mr. Gilham recalls listening to the first broadcasts over KDKA, on the first commercial radio receiver to be brought into Atlanta, and has been intimately concerned with radio marketing in Georgia ever since.

Morton and Walker Cooper joined with the St. John Brothers, during 1944, to organize Cardinal Distributors, Inc., with H. J. Fuchs as President. Mr. Fuchs has been continuously active in radio and appliance marketing in St. Louis for the past 25 years.

Risley-Leete Co., owned by R. M. Risley, in 1929 extended its operations as an automotive supply house to include radio. Plans are now being put into effect for a new and entirely separate building, facing the presently-owned quarters in New Haven, in which to house the multiplied activities in the radio and appliance field during the postwar period.

Motorola Appoints Oakes Company

W. H. Kelley, General Sales Manager, Galvin Manufacturing (Motorola Radio) Corporation, announces the appointment of the Oakes Battery and Electric Company, 23 Texas Street, El Paso, Texas, as wholesale distribu-

tor for Motorola Radio's complete line for the home, the car, the outdoors and the farm, in the El Paso Territory.

Headed by Mr. Howard G. Oakes, the Oakes Battery and Electric Company, formerly known as the Randel Battery and Electric Company, will use El Paso as headquarters and, with a specially trained staff, will cover the dealers in this territory. The new distributor will feature the dealer's advantages to be obtained from Motorola's streamlined six point plan which includes such fundamentals as advertising, sales promotion, sales training and service.

When peacetime production of radios is resumed, the Oakes Battery and Electric Company will have on display the complete line of Motorola Radios including F-M and A-M Table Models and Consoles; Automatic Phonographs; AC-DC Battery Portables for the home and outdoors; new war-improved portables, The Playboy and Playmate; and battery operated Table Models for farm areas. Oakes will also feature the new, more powerful, matched radios for automobiles, so easily changed from car to car.

Schiffer Distributor for Stromberg-Carlson

The Stromberg-Carlson Company announces the appointment of a Georgia distributor for its postwar radio, FM and television receivers. The state, experts say, is expected to offer one of the richest postwar trading areas in the South. Significantly, the distributing firm named to represent the fifty-one year old communications firm in the Atlanta area is a sound, firmly based enterprise with strong roots in the business life of the South.

As announced by Clifford J. Hunt, manager of radio sales for the Stromberg-Carlson Company, the firm is: the Schiffer Distributing Company of Atlanta, Georgia.

Mr. M. Stephen Schiffer, who heads the firm bearing his name, sees his firm's role as "definitely and completely linked with the success of the local dealer." An intensive knowledge of his market, a more-than-nodding acquaintance with the technical excellence of his product, advertising, sales promotion and display facilities aimed specifically at the dealer are features which rank high in Mr. Schiffer's list of "musts" for forward-looking distributors.



R. F. BLASH

Webster-Chicago Corporation Acquires Webster Products

Announcement has just been made by R. F. Blash, President, that Webster-Chicago Corporation, 5622 Bloomingdale Avenue, Chicago, has purchased Webster Products, 3825 West Armitage Avenue, Chicago. The latter firm was, before the war, the largest manufacturer of automatic phonograph record changers. The former Webster Products organization and facilities will be retained intact and will operate as the Electronics Division of Webster-Chicago Corporation. Personnel at the parent company also remains unchanged.

The Electronics Division is now manufacturing dynamotors and voltage regulators for the war program. For peacetime production the new division will resume manufacture of Webster Record Changers. Several new, but related, products are reported to be designed and ready for postwar manufacture.

The Bloomingdale plant of Webster-Chicago Corporation will continue to specialize in the design and fabrication of laminations for motors and transformers primarily for the radio industry. The consolidated company employs approximately 1,000 people.

McMurdo Silver Establishes Own Organization

A new engineering and manufacturing company has just been established in Hartford, Conn., by McMurdo Silver known as the McMurdo Silver Company. This organization will devote its efforts primarily to the amateur parts, kit and special equipment market, and to consulting non-competing clients in the radio-electronic field. A number of new and non-duplicating items of test equipment will be announced shortly.

"Mac" needs no introduction to engineering circles here or abroad, his technical papers having appeared in engineering periodicals everywhere.



Pfc. RAGNEL LUNDGREN

Lone Yank in Aachen Germany with Motorola Radio "Handie Talkie"

Pfc. Ragnel Lundgren, Jamestown, New York, is shown alone in the heart of Aachen, Germany, reporting to his command post via the Motorola Radio "Handie Talkie" in his right hand. Note the battered condition of the buildings and the debris in the streets attesting to the bitter street by street fighting before the Yanks took over. In this form of fighting the Motorola Radio "Handie Talkie" has proved invaluable in keeping the advancing forces in constant two-way radio communications with their command post.

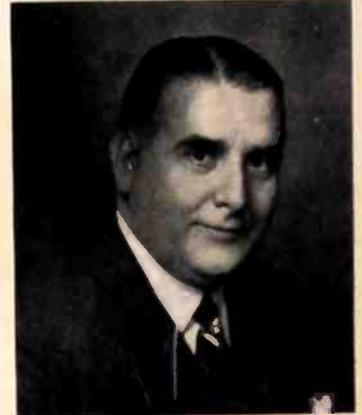
Philharmonic Expands Its Operations

In a move marking its entry into the industrial electronics field, and supplementing its long standing activity in the quality radio-phonograph field, the Philharmonic Radio Corporation, a subsidiary of American Type Founders, Inc., has just announced its consolidation with the A.T.F. Remote Control Division.

Zeus Soucek, present head of the Remote Control Division, will be in overall charge of future operations of Philharmonic Radio Corporation as its President. He assumes his new duties on March 7, 1945.

Avery R. Fisher, founder of the Company, will continue as Vice President and General Sales Manager.

No change is contemplated in Philharmonic's home radio plans for the sale of these instruments on exclusive franchise through a selective distribution system comprising the country's leading department and music stores.



HORACE SILLIMAN

Bendix Radio Names District Manager

Horace H. Silliman, veteran radio sales executive, has been named district manager to supervise New England and New York State marketing for the forthcoming line of Bendix radios and radio-phonograph combinations, it was announced here by Leonard C. Truesdell, general sales manager for home radio, Bendix Radio division of Bendix Aviation Corporation.

Silliman has been associated with the radio industry for the past 20 years in executive capacities with the A. C. Gilbert Company of New Haven, Conn., Splittdorf Electrical Company, Thomas A. Edison, Inc., the United American Bosch Corporation and the Detrola Corporation.

Silliman will supervise marketing in the entire New England and New York State territory with the exception of the metropolitan New York area.



MEET YOUR NAVY

Raytheon's "Meet Your Navy" Radio Show

The Raytheon Manufacturing Company's party for blue-jacket members of the "Meet Your Navy" cast turned into a traditional busman's holiday when these musicians gathered around the piano.

This popular and well-rated radio show, for which Raytheon and its 16,000 employees make network time available every Saturday evening, has some 20,000 "alumni" members now on naval duty in all parts of the world, who, at one time or another, have taken part in the all-sailor air show.

Graybar Electric to Handle Stewart-Warner Radios In 7 Areas

Graybar Electric Company of New York has negotiated with Stewart-Warner Corporation to handle the latter's home radio distribution in the following cities: Boston, Des Moines, Davenport, Grand Rapids, Seattle, Portland and Spokane.



CLEVELAND TAXIS

Cleveland Taxis Now Using Motorola 2-Way F-M Radio In 118 MGC Spectrum

The Yellow Cab Company of Cleveland, Ohio, is now successfully using Motorola Radio F-M transmitting and receiving units to direct and control operations of part of their taxi-cab fleet by two-way radio employing a wave length of 118.65 megacycles. This experiment of the Galvin Manufacturing Corporation in the use of the 118 mgc spectrum for mobile units has been pronounced such a success by General Manager J. T. Smith of the Cab Company that he has started proceedings to obtain permission of the FCC to install Motorola Mobile units in 100 additional taxicabs.

"The use of F-M two-way radio in the 118 megocycle spectrum for our cabs has proved so successful," declared Mr. Smith in a recent interview, "that it may eventually prove to be an economic necessity for most cab companies. In the cabs equipped with mobile Motorola Radio units "dead" cruising is cut to a minimum, yet each cab gives the public far greater service than before."

Through a Motorola Radio remote control station located in the cab dispatcher's office, outgoing orders and incoming messages to and from the cab drivers are transmitted and received with sufficient power to cover the entire Cleveland area. "Talk-back" with the cab driver is clear and distinct, and the use of F-M in the 118 mgc spectrum, with power of 15 Watts for both the mobile and fixed transmitters, gives static free reception from natural as well as man-made electrical disturbances, superior in many ways to that obtained by the use of the 30-40 mgc frequencies.

Westinghouse Radio Names Lehner at Atlanta

Appointment of Curtis W. Lehner as southeastern district manager for the Home Radio Division, Westinghouse Electric and Manufacturing Company, has been announced by Harold B. Donley, manager of the division.

Mr. Lehner will maintain headquarters in Atlanta and serve North Carolina, South Carolina, Georgia, Florida, Alabama, Louisiana and parts of Tennessee and Mississippi.

A native of Terre Haute, Ind., Mr. Lehner has spent 20 years in the electrical appliance merchandising field, serving as both manufacturer's and distributors' representative.

From 1924 to 1934 he was on the appliance sales staff of Westinghouse at Mansfield, Ohio. Since 1934 he has been with the Westinghouse Electric Supply Company, merchandising subsidiary of the parent organization, serving from 1934 to 1938 as New England merchandise manager at Boston; and since 1938 as southeastern district appliance and lamp manager with headquarters in Atlanta.

In the latter post he served four of the states included in his new Home Radio Division district.



EARL L. HADLEY

Hadley Heads Advertising For Bendix Home Radio

Appointment of Earl L. Hadley as director of advertising and sales promotion for the company's forthcoming line of AM and FM radios was announced here today by Leonard C. Truesdell, general sales manager for home radio, Bendix Radio division of Bendix Aviation Corporation. Hadley formerly was advertising and promotion manager for Grigsby-Grunow (Majestic), the Rudolph Wurlitzer Company and the Cable Company.

Freed Radio Corporation Receives Army-Navy "E"

Saturday afternoon, February 24, marked the official presentation of the Army-Navy "E" Award for excellence in war production to the employees and management of Freed Radio Corporation when the company, which manufactures important special communications apparatus for the armed forces, played host to more than 800 guests at the ceremony and luncheon in the grand ballroom of the Waldorf-Astoria.

After a particularly stirring address by Lt. Comdr. John D. Lodge, USNR, Headquarters, Third Naval District, who acted as master of ceremonies for the occasion, formal presentation of the award was made by Commander Samuel J. Singer, Executive Officer, Industrial Incentive Division, U. S. Navy. In his remarks, Commander Singer referred especially to the need for sustained production to deliver the knockout blow to Japan, in the Pacific, as well as Germany, in the European theatre.

In accepting the award on behalf of his fellow-employees, Mr. Arthur Freed, Vice President and General Manager of the organization, paid specific tribute to the splendid cooperation of those employees who, although previously unskilled in radio manufacturing techniques, have met every demand made upon them by the Army and Navy.



WILLIAM R. ALBRIGHT

Albright Named Western Merchandise Manager For Bendix Radio

Appointment of William R. Albright as western merchandise manager for the company's forthcoming line of AM and FM radios and radio-phonograph combinations was announced here today by Leonard C. Truesdell, general sales manager for home radio, Bendix Radio division of Bendix Aviation Corporation.



Sylvania Manual Aids Wartime Servicing of Radio Receivers

To help radio servicemen during wartime tube shortages, a comprehensive 20-page manual providing practical replacement tube data has been compiled by the Commercial Engineering Department of Sylvania Electric Products, Inc., Emporium, Pa. The manual gives full information needed for the adaptation of available tubes to many different types of radio receivers which may otherwise become inoperative through the failure of original equipment tubes which cannot be immediately obtained.

In addition to a section describing the recommended use of substitute types when original types are not obtainable, the manual contains specific information for battery, 150 ma., 300 ma., transformer and auto tube types. The information is conveniently tabulated for quick-reference. Thirty-six adaptor circuit diagrams are included for use with the tabulations when changes in tube socket wiring are required. Tabulations are used to indicate the type of changes needed including: filament voltage, filament current, socket wiring, socket type, alignment, top cap connection and changes in bias or plate voltage.

Circuit modifications for battery and AC-DC sets are also described in detail. The manual, size 8½ x 11, is provided with a durable cover. It is distributed free to radio servicemen through Sylvania distributors or direct from Sylvania at Emporium, Pa.

Arthur Etkin Now with Clinton Square Auto Supply Co.

Arthur Etkin has been appointed Radio and Appliance Manager of the Clinton Square Auto Supply Company, 22 Elizabeth Avenue, Newark, N. J., Distributors of Stewart-Warner home radios. Etkin is well-known in New Jersey for his long experience in the appliance field.

Retiring Aerovox Officials Feted

In an atmosphere saturated with reminiscences of almost a quarter century of closest teamwork, S. I. Cole, retiring president, and Samuel Siegel, retiring vice president, were feted by their Aerovox associates at a banquet held in the New Bedford Hotel ballroom on Thursday evening, February 18th. Colonel Emanuel Cohen, U. S. Signal Corps Reserve, third member of the original owners and management, could not be present but was charmingly represented by Mrs. Cohen.

One of the features of the evening was the playing of phonograph recordings of the lasting vocal tributes of thirty-two of Mr. Cole's associates. Similar records were also made for Mr. Siegel. The recorded messages were supplemented by several brief speeches from among those present.

Appropriate words of praise and resolution on parchment scrolls and signed by sixty-four key men of the general administrative, sales, engineering, production and consulting staffs, were presented to Mr. Cole, Mr. Siegel and to Mrs. Cohen for Colonel Cohen.

As a token of their esteem and lasting affection, the retiring officials were presented with gifts appropriate to their professed hobbies or interests upon retirement.

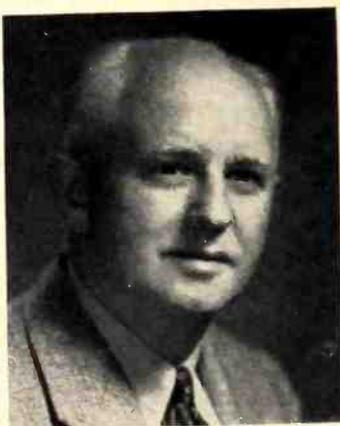
Mr. Cole thanked his associates and reminisced a while over the spectacular growth of Aerovox from a tiny New York shop with a handful of workers, to the present giant New Bedford plant with a second plant at Taunton, employing several thousand workers. He announced that the retiring owners had set aside a fund to be shortly distributed among the key personnel on the basis of service. Also, he announced his retirement as General Manager of the company on February 28th, when he would take his first real vacation in a quarter century, by way of a pleasure trip to the Coast.

Babkes Is Made Purchasing Head for Lear Radio

E. Joseph Babkes, formerly in charge of scheduling distribution of radio test equipment for the War Production Board, has been appointed Radio Purchasing Agent for Lear, Incorporated, as announced by Elmer R. Crane, General Manager of the Radio Division.

"Lear Know-How" Booklet Issued

Lear Incorporated has just issued a booklet that surveys some of Lear achievements over the past year. A partial list of the technical fields covered by their engineers as well as the production skills of their personnel is presented. A series of problems with Lear solutions and applications follow, generously supplemented with illustrations.



DEE BREEN

Dee Breen Becomes Sales Manager for Universal

Dee Breen has resigned as western division sales manager of the El Monte, Cal. plant of Littlefuse, Inc., to become sales manager for the Universal Microphone Co., Inglewood, Cal. Cecil L. Sly, vice president and sales manager for Universal, now becomes director of sales, a newly created post.

Mr. Breen, two and a half years with Littlefuse in the Chicago and El Monte plants, had previously been sales manager for the Michigan Screw Company, Lansing, for two years.

He was also with the Detroit plant of Chrysler in various executive posts over a period of nearly 15 years.

At the start of the war, Mr. Breen was called to Washington, D. C., where he served two years in organization capacities in conjunction with service field groups of procurement, inspection and coordination.

He is now planning a spring cross country trip to call upon the trade as well as confer with the fourteen factory representatives of Universal in various parts of the country.



Smooth as Velvet!

The same smoothness and dependability which have always characterized General Industries phonograph mechanisms will be found in peacetime models when their production is resumed.

Whether it's combination record-changers-records, recording assemblies or *Smooth Power* motors, they'll have that quick pickup, unvarying speed and velvety smoothness that is so essential for faithful reproduction. They'll deliver that time-proved satisfaction to manufacturers, dealers and users.

For your postwar selling—count on General Industries equipment.



THE GENERAL INDUSTRIES COMPANY
DEPT. M ELYRIA, OHIO



FADA
Permanent
NEEDLES



List \$1.00

Special Introductory Offer 39¢
(TO DEALERS ONLY—IN LOTS OF 6 OR OVER)

- Plays 4M Records without changing
- Better Tone Reproduction
- Help Reduce Background Hiss
- Longer Record Life

FADA OF NEW YORK
928 BROADWAY NEW YORK 10.N. Y.
Large Stock of Replacement Parts and Cabinets

• **Ted McElroy**

World's Largest Manufacturer of
Wireless Telegraphic Apparatus
COMPLETE CENTRAL OFFICE EQUIPMENT

McElroy Manufacturing Corp.
82 Brookline Avenue • Boston, Massachusetts

STORE PLANNING CALLS FOR THINKING

(Continued from page 22)

Dressed store mannequins in furniture show-windows is one new idea which seems to be headed for wide use in the future. A radio display window might present a console type radio in an appropriately designed setting. A mannequin, attractively clothed, in some natural listening pose might dramatize the console. Porter's, in Racine, Wisconsin, is the only furniture store which I have seen using mannequins in show windows. The effect was tremendous. In this particular display the setting was for porch furniture. The three mannequins in sports clothes added an inimitable punch. Four years ago, the use of two mannequins in lounging robes placed in a setting of rich boudoir furniture brought much added attention to a space at the American Furniture Mart in Chicago.

A lady mannequin, of good quality, costs approximately \$125, and a man or child mannequin costs approximate-

ly \$75. A highly commendable arrangement would be to have the near-by clothing store furnish the mannequins and clothes in exchange for a small neat sign in your window acknowledging the loan.

The display field for a radio store also includes model rooms for the proper setting of ensemble groups and supporting pieces. This lends glamour to the consoles and also visualizes for customers how they will fit into their own rooms. Such model rooms should be up-to-the-minute in fresh ideas for fitting radios harmoniously and distinctively into interior designs. In particular, the placement of the radio within comfortable reach of the most frequently-used chairs' is desirable. Such display rooms should not be ultra modern nor ultra conservative but strike a happy balance so that, despite differences, the prospective customer can see the relation between his own home and the room displayed, as a setting for the radio he purchases.

A BRIEF ANALYSIS OF RADIO'S BACKGROUND

(Continued from page 26)

Retail Sales of Radio Receiving Tubes in the United States, 1922-1943 and Their Estimated Service Life

Year	Number of Tubes Sold (a) (000 omitted)	Total Retail Value of Tubes (a) (000 omitted)	Average Retail Price per Tube	Average Age of Tubes Replaced (b) (in years)
1922	1,000	\$6,000	\$6.00	N.A.
1923	4,500	12,000	2.67	N.A.
1924	12,000	36,000	3.00	1.65
1925	20,000	48,000	2.40	1.31
1926	30,000	58,000	1.93	1.63
1927	41,200	67,300	1.63	1.74
1928	50,200	110,250	2.20	1.75
1929	69,000	172,500	2.50	1.92
1930	52,000	119,600	2.30	2.42
1931	53,000	69,550	1.31	2.98
1932	44,300	68,730	1.10	3.52
1933	59,000	49,000	.83	3.43
1934	58,000	36,600	.63	3.72
1935	71,000	50,000	.70	3.95
1936	98,000	69,000	.70	3.92
1937	91,000	85,000	.93	4.10
1938	80,000	105,000	1.31	4.58
1939	98,000	120,000	1.22	N.A.
1940	110,000	110,000	1.00	N.A.
1941	130,000	143,000	1.10	N.A.
1942	87,000	96,000	1.09	N.A.
1943	17,000	19,000	1.12	N.A.

(a) *Broadcasting Yearbook*, 1944.

(b) Julius Weinberger, "Basic Economic Trends in the Radio Industry,"

Reprinted from Proceedings of the I. R. E., November, 1939.

M.A.—Not available.

Parallel to these uses there had to be developed a comparable increase in the production of electronic tubes. Approximately 80 per cent of the value of all tubes produced prior to the war represented radio receiving tubes. A record of the sales of such tubes, of the trend in the retail prices and of the great improvement in the length of useful service is submitted below:

Prior to the war, both television and frequency modulation had appeared, to an extent limited by inadequate refinement in the case of television, and insufficient numbers of broadcasting stations in the case of frequency modulation. However, the potentialities of both developments were apparent, and the prospects of their greater practical use and service have been expedited by wartime research and experience.

EDITOR'S NOTE:

The above data was abstracted from a special analysis of the Engineering Interpretation of the Economic and Financial Aspects of the Electronic Industry. This valuable study was made by George S. Armstrong & Co., Inc., and is reprinted through their courtesy and cooperation. Anyone wishing to receive copies of this work should write to the company at 52 Wall Street, New York, N. Y.

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Journal's End by MAL PARKS

Hi there . . . here it is only March but the sun is shining and I'm getting restless to break out the fishing tackle and get up there in the mountains for a while . . . seems like I'm always planning to do it but something interferes . . . these city fellows work long and hard to make a little money and then, when they've got it, they're too old to enjoy it . . . don't seem right, somehow . . .

. . . **Tom Joyce** dropped in to see us and gave us first news of his recent resignation from RCA . . . was sorry to hear about it, too, because Tom and the company just seemed so perfectly fitted to each other . . . however, it was mighty fine of RCA to give him such a nice send-off, still, it's just the kind of thing I've come to expect of them.

Good letter from Middle West Service Company's **Mal Rodgers** who wrote to tell me about the progress of his National Electrical Retailer's Association . . . I was real proud to have had the chance to sit in on the formative period of this little Association with Mal and can really recommend it to any alert retailer who sincerely believes in organization for the industry's good . . .

. . . It was swell of The Louisville G. E. Supply Company's **Wilfred M. Pearson** to take time out to send along that fine report of the Radio Service Men's Association's Annual Banquet held recently . . . congratulations too, are in order for president Paul Wurtz; v.-p. Tim Ferguson and secy. Julius Groeninger . . . wish I'd been able to get down there and am going to make a real effort next time I'm invited . . .

. . . Sparks-Withington's **F. T. Sterritt** phoned all the way from Jackson, Michigan, and told me new Radio and Appliance Division sales manager Ed. Bonia would continue the Sparton cooperative merchandising plan . . . it was

mighty nice of him to take all this trouble, nice, too, to see that grand ad of theirs which you will find on page 9 of this issue . . .

. . . Wasn't it Abraham Lincoln who first said "Impoliteness Denotes Inferiority" . . .

. . . RCA Victor's **Sara Dunn** in town and invited me out for cocktails which thrilled me no end because I'm seldom asked to be a gigolo . . . surprised Sara to find out I don't touch the stuff so she wanted to know how she could bend me to her will on 7-Ups . . . though everybody knew I was putty in the hands of a beautiful woman . . . I tell you, fellows, this being the editor is sure the life . . . wish every one of you could be with me when I'm having all that fun . . .



. . . Aside to **Harry Overholzer** of Pottstown, Pa. . . that was a mighty nice thing for you to say, and I appreciate your loyalty to your Radio Journal . . . it is good friends just like yourself out in the field who have contributed so much

Suppose it was . . .

Your Boy
who needed help!

**GIVE TO THE
RED CROSS
Today!**

to our growth . . . thank you again, very much . . .

. . . Sorry I had to miss Majestic's introduction party for **Gene Tracy** and **Jimmy Walker** . . . still, you know how these little family celebrations are, if daddy isn't home the kids seem disappointed . . . at any rate, judging from the plans **Parker Erickson** outlined, Majestic will be a real factor in the business right soon . . .

. . . Then there's the one about the radio retailer who failed at suicide because he tried to hang himself on a shoe-string . . .

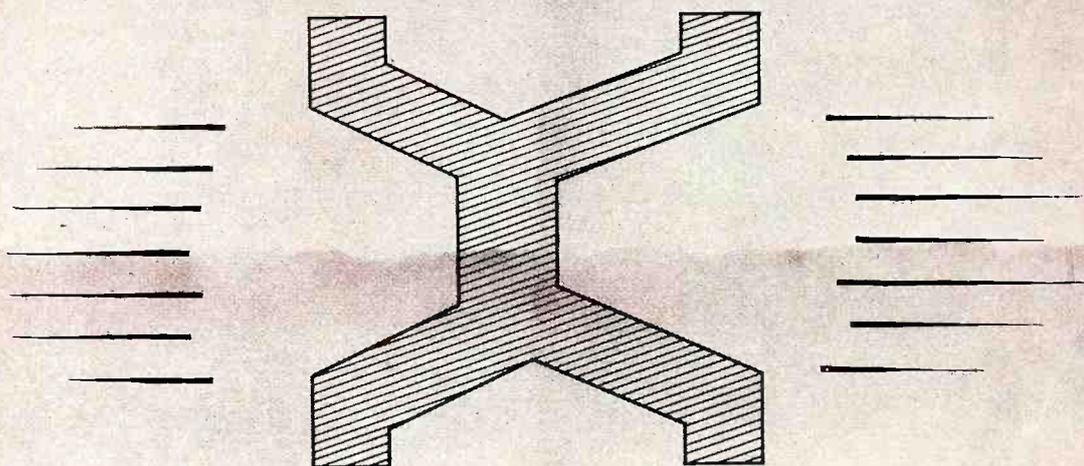
. . . **Joe Jalenak** of Memphis' Mills-Morris Co., sent along the first issue of their swell little monthly bulletin for dealers and it was a honey . . . which prompts me to say again that we rely on the ideas, advice and suggestions we get from distributors all over the country . . . and we can't go along with those who say "the day of the distributor is finished" . . . thanks for thinking of us, Leo, and keep on sending your magazine along . . .

. . . **Merle Bennet** of Wichita's Adams Bennet Company wrote with a suggestion for a corking good article . . . we're getting data on it now and hope to have it in time for the next issue . . . honest, fellows, you don't know how much I appreciate these suggestions . . . without them I'd have to buckle down to work and I don't think I could stand it any more . . .

. . . Over to the Golden Horn with a few good friends at our Annual Golden Gloves Party . . . saw some real good fights and managed to win twenty-five cents from Ed de Nike . . . which means I'll probably be getting a visit from La Guardia very soon . . . no more gambling here in New York, you know . . .

. . . Well, here we are at the end of the column again . . . can't understand how it gets here so quickly unless it's just that I enjoy visiting with you so much . . . hope you all will decide to come and see us soon so we can take in a few of the sights together . . . until then, so long and thanks for being with me again this month . . .

Quality Counts



IN THE International Bureau in Sevrés, France, there is a peculiarly shaped rod, a picture of which is shown above. That rod is the internationally accepted length of the meter, the basic unit of the metric system. Its length determined mathematically as a part of the terrestrial meridian contained between the north pole and the equator, its shape developed after much experimentation and its composition a special platinum and iridium alloy,

it is a standard of quality to which the whole world refers . . . In the judging of any product, *it is the quality that counts.*

In the antenna field, **THE WARD PRODUCTS CORPORATION** is a nationally known manufacturer of quality products. **WARD** sectional and one-piece antennas are the workmanship of craftsmen using modern equipment under ideal conditions . . . For quality antennas for all applications, look to **WARD**.



BUY WAR BONDS

WARD

Antennas

THE WARD PRODUCTS CORPORATION, 1523 E. 45TH STREET, CLEVELAND 3, OHIO

1.50

Symbol OF STRENGTH



Since the unrecorded dawn of history, communications have been a symbol of strength, of civilization, of progress.

FADA will do its share in Peace, as it has in War, to maintain American supremacy in the never-ending development of electronic marvels.

Dealers with an eye to the future are eagerly looking forward to the time when they can once more handle the newest in Fada Electronic developments.

PLACE YOUR FAITH IN THE

FADA Radio

OF THE FUTURE

Famous Since Broadcasting Began!

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