

RADIO *and Television* RETAILING

MAY • 1939

INSTALLING
BOAT RADIOS

TELEVISION TO DATE

MORE "GOOD SET"
LETTERS

HOW TO HANDLE
WALK-INS

RECORDS IN REVIEW

BEST SOUND PROSPECTS

GETTING STARTED
WITH CAMERAS

TELEVISION ANTENNAS

TUBE SALES IDEAS

and other features



AFLOAT or ASHORE, New Battery Portables are the Season's Best Bet

A
McGRAW-HILL Publication
Price 25c

ROLL CALL *of famous names*

The selection of Mallory Vibrators, as original equipment, by the set manufacturers who are the very tops in the industry is the best possible evidence of their fine performance. Mallory Replacement Vibrators offer the same outstanding performance that has won the manufacturer's acclaim. The millions in use testify to their trouble-free, long life.

FREE! New Mallory 20-Page Vibrator Guide



Just off the press this new, up-to-the-minute Replacement Vibrator Guide gives all the answers on auto radio installation and service.

It includes complete replacement chart for all makes of auto radio and battery operated household receivers... practical vibrator servicing and testing information with scope pictures... installation and interference elimination in 1939 cars... vibrator connection charts and complete cross reference of Mallory Vibrators by receiver make and model.

See your distributor for a FREE copy today.

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P. R. MALLORY & CO. Inc.
MALLORY
REPLACEMENT
CONDENSERS... VIBRATORS

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

Use
YAXLEY
REPLACEMENT
VOLUME CONTROLS



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

are Original Equipment
in Auto Radio Receivers
built for:

BUICK... CHEVROLET... FORD
HUDSON... NASH... OLDSMOBILE
PONTIAC... SEARS-ROEBUCK
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and in Receivers made by:

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NEW *VIBRAPACKS!

Three new Vibrapack units have been added to the Mallory line of Vibrator Power supplies, designed to supply B voltage to operate portable and mobile radio transmitters and receivers, public address systems, and scientific apparatus.

Send for Vibrapack Booklet Form E-555-B

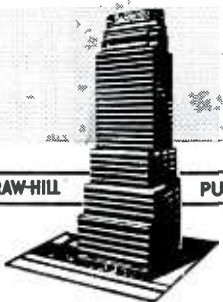
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RADIO and Television RETAILING

A MCGRAW-HILL

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MAY 1939



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BUSINESS BAROMETER	11
RADIO MONTH.....By O. Fred. Rost	12
EARS INSTEAD OF EYES.....	15
SALES PHOTOSHORTS	16
WHERE TELEVISION WILL START.....	18
FIRST AID FOR FURNITURE DEALERS.....By Tom Blackburn	20
PLEAS FOR BETTER PERFORMANCE.....	22
TRY ON TUBES.....By Contributors Haddad, Mayr, Eveleth, Friedl	25
HOW TO HANDLE WALK-INS.....By Martin Francis	26
ELECTRIC FENCES ENTER OUR ALLEY.....	28
RECORDS IN REVIEW.....By Richard Gilbert	30
GETTING STARTED WITH CAMERAS.....By W. MacDonald	32
SOME FACTS ABOUT SOUND.....By H. L. Shortt	33
PREVIEW OF NEW PRODUCTS.....	34
ON THE NEWSFRONT.....	46
RADIOS FOR BOATS.....By C. A. Nuebling	56
NEW CIRCUITS	60
TELEVISION TECHNICALITIES	63
TRICKS OF THE TRADE.....	65

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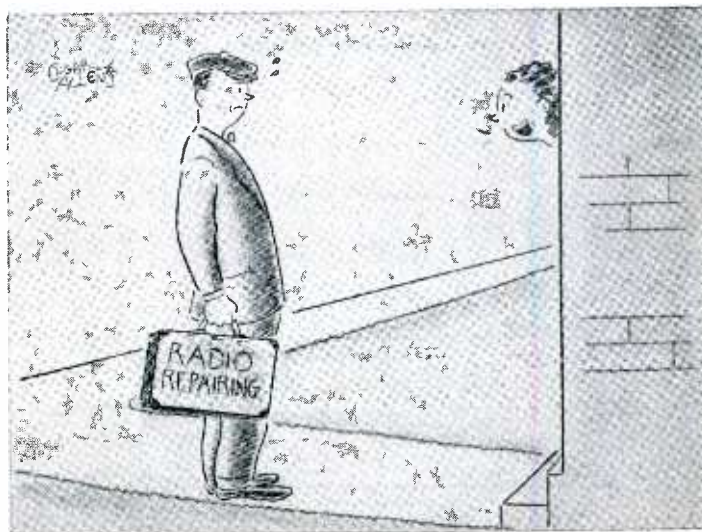
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SALES STATIC . . . (After coming 15 blocks) "I won't need you after all—I found out why the radio didn't work—a fuse blew out!"

EVERYONE IS ASKING!



WHAT'S THE MATTER WITH THE TUBE
BUSINESS?

HOW MANY TUBE SALES... AND SERVICE
JOBS DID YOU LOSE LAST YEAR?

WHAT IS THE MANUFACTURER GOING TO
DO ABOUT IT?

READ HOW A PROMINENT JOBBER **ANSWERS THESE QUESTIONS!**

"... A manufacturer whose interests are with the dealer and serviceman can meet this demand, set up new low list prices with corresponding discount changes, and put the dealer in a position to GET HIS SHARE of the tube business. THIS IS EXACTLY WHAT TUNG-SOL HAS DONE."



TUNG-SOL HAS ALWAYS CONSIDERED ITS
RETAIL AGENTS AS PARTNERS, AND HAS
MAINTAINED POLICIES WITH THEIR
INTERESTS THE FIRST CONSIDERATION.

MIGHTY MONARCH



OF THE AIR

A Message to Distributors

Within a few days the Mighty Monarch of the Air will present to you an inspiring first edition . . . complete facts about the new MAJESTIC - its policy, its plans, its aspirations.

The pages of this book will acquaint you with the men who are MAJESTIC today. You will meet Norman Bel Geddes, internationally famous artist-designer, whose creations for the 1940 MAJESTIC "Promotion Numbers" are destined to set new style trends in radio design.

You will learn why MAJESTIC DEMANDS NO QUOTAS.

The complete 1940 line will incorporate every fundamental necessary to profitable merchandising . . . diversity, style, popular price range, and exclusive MAJESTIC sales-boosting features.

To those of you who have reserved your decision on a line for 1940 - to you who have planned a change for the coming year, this enlightening MAJESTIC edition brings a vitally important message.

If you have not received your copy by May 30, wire me and I will mail one to you immediately.

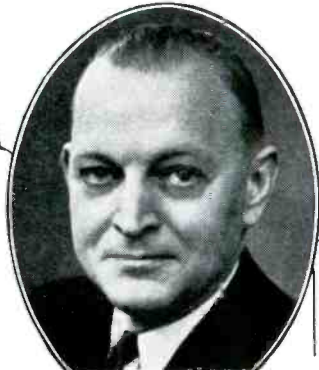
Very truly yours,

W. B. E. Norins, General Sales Manager,
MAJESTIC RADIO & TELEVISION CORPORATION

The Most Important



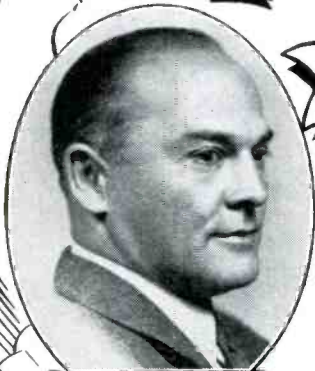
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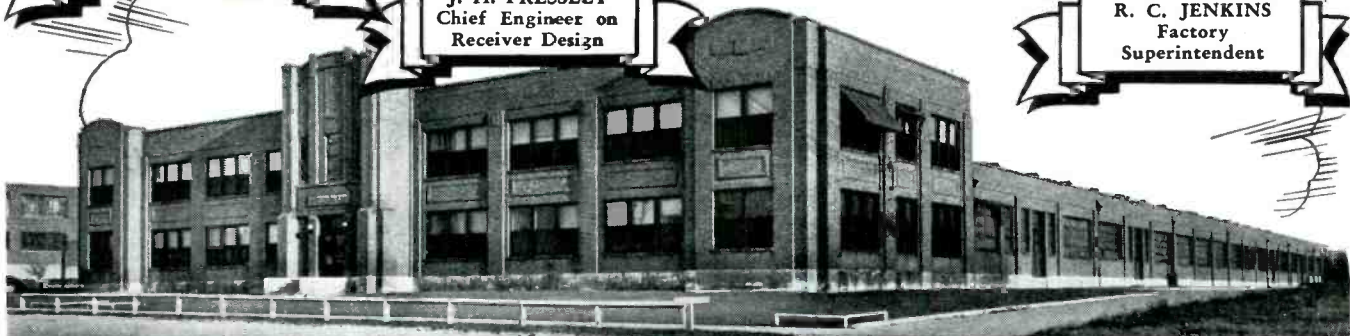


MADISON CAWEIN
Television Receiver
Design



R. C. JENKINS
Factory
Superintendent

*The factory at
Fort Wayne, Ind.*



FARNSWORTH

New Franchise since 1930!

Men, money, merchandise, plants and distributors fall in line under the Farnsworth banner. E. A. Nicholas assembles an executive staff of veterans . . . E. H. Vogel maps general policies, plans and products . . . J. P. Rogers whips the Marion plant into an orderly, smooth, efficient production unit . . . Philo T. Farnsworth guides his staff to perfect present developments that assure modern, advanced television products.

Engineers move in. B. Ray Cummings assigns design specialists to a dozen development programs . . . J. H. Pressley's fast-moving staff goes on a 24-hour day schedule creating Farnsworth radios and combinations. . . . Madison Cawein heads a select group into action on television receivers. R. C. Jenkins assembles his production lines and a skilled factory organization . . . F. B. Ostman lines-up service policies and plans.

A sales force swings into action with E. H. McCarthy, R. E. Kane, Dean Lewis and E. J. Dykstra in the field discussing Farnsworth franchises with alert distributors. Already forward-looking distributors from over 50 leading territories have requested an opportunity to discuss this *most important new franchise available since 1930!*

The program . . . Farnsworth radios, combinations and television sets for early Fall selling . . . backed with complete advertising and sales promotion plans.

FARNSWORTH TELEVISION & RADIO CORPORATION

Plants at Fort Wayne and Marion, Indiana

Headquarters: 3700 East Pontiac Street, Fort Wayne

The History of Television is the History of Farnsworth



R. E. KANE
District Sales
Manager



D. A. LEWIS
District Sales
Manager

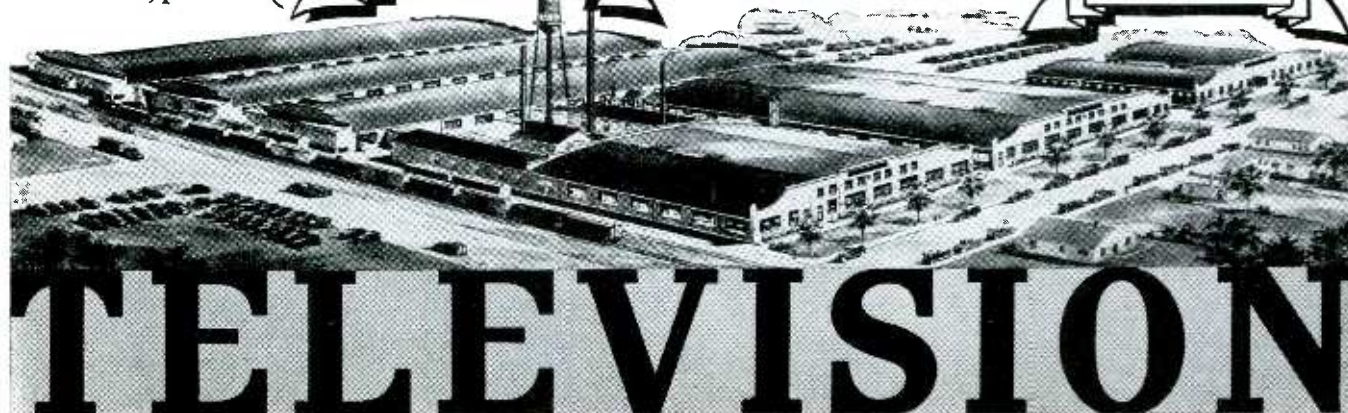


E. H. McCARTHY
District Sales
Manager

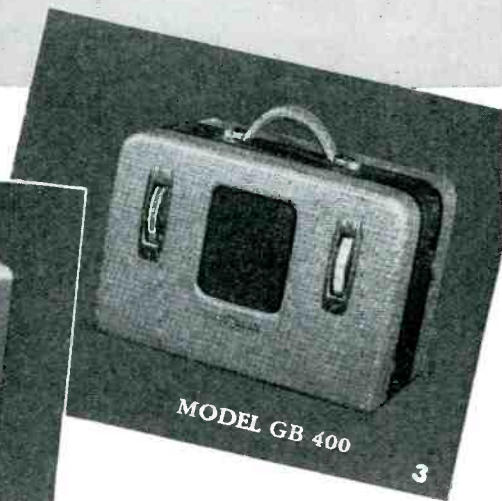
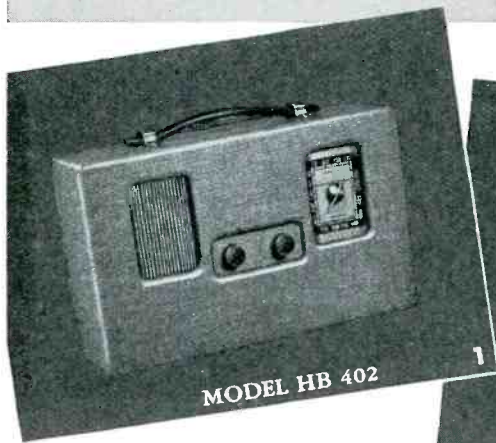


E. J. DYKSTRA
District Sales
Manager

*The Marion,
Indiana, plant*



HERE COMES THE GREATEST LINE OF *Portables* IN THE BUSINESS



STYLED UP! PRICED WAY DOWN!

*You need them!
You can sell them!
You can profit by them!*



PORTABLE sets are sweeping the country. They are in for a long sales ride. Why? Because they provide a new service that every customer wants. When it comes to portables the public will buy the line which leads in smartness, compactness, light-weight, outstanding performance, most value for the money. This is what it takes. And the new complete G-E CARRYABOUT line has it—more than any other.



You need all four of the new G-E CARRYABOUT models. All are smartly styled in the Country Club manner. All are priced down where the sales are thickest.

Phone, Wire, or Write your order—NOW!

G-E LEADS THE PORTABLE PARADE

GENERAL  ELECTRIC

1. MODEL HB 402—In weatherproof airplane luggage cloth, with leather carrying handle. Handbag size—8½ in. high—13¼ in. wide—4¼ in. deep. Weighs only 9½ lbs. with batteries.

2. MODEL HB 403—In pigskin Fabrikoid. Custom-styled and ultrasmart. 9¼ in. high—13½ in. wide—4¼ in. deep. Weighs only 10 lbs. with batteries.

3. MODEL GB 400—In weatherproof airplane luggage cloth with leather handle. 9¼ in. high—13 in. wide—7½ in. deep. Weighs 16 lbs. with batteries.

4. MODEL HB 408—Portable Radio-Phonograph Combination. Plays 10- or 12-inch records electrically through radio's loud-speaker—anywhere, anytime. In washable Fabrikoid case with leather carrying handle. 9½ in. high—14½ in. wide—13½ in. deep. Weighs 19½ lbs.

ALL 4 MODELS HAVE
 ● Self-contained Long-life Battery Power Supply. ● Permanent-Magnet Dynamic Speaker. ● Standard Broadcast Reception. ● Automatic Volume Control. ● Superheterodyne Circuit.

Even in far-off Iraq *they know* **RAYTHEON DEPENDABILITY!**

When the modern miracle of radio was added to the royal palace at Bagdad, of Arabian Nights fame, the genie of Aladdin's Lamp was of no help. But the genius of Raytheon engineers provided Raytheon Tubes, sturdily built for dependable service in any far-off corner of the world.

Dependability is a necessary requirement for this royal equipment—radio servicemen are few and far between in this kingdom of Arabia. So naturally, it is Raytheon-equipped—Raytheon offers the utmost in long life and dependability.

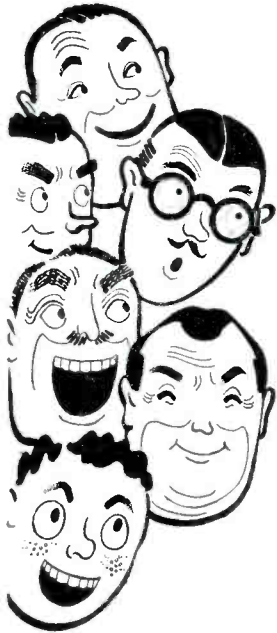
Even a king could find no better radio tubes than you can give your customers—yet they cost no more than the second best tubes. They are your safest and most profitable tube investment.



RAYTHEON

NEWTON, MASS. • NEW YORK • CHICAGO • SAN FRANCISCO • ATLANTA

"WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS"



COME ON LET'S GO!

to the Mighty 1939

RADIO PARTS INDUSTRY SHOW

Grab that extra shirt—let's go—the show's the thing! It's the one and only big annual event of the year—everyone in Radio Parts will be there! You'll get a complete personal picture of your industry—you'll see with your own eyes what's what and what's new! You'll shake hands with Manufacturers, Jobbers, Engineers, Sound Specialists, Servicemen, Retailers, and Amateurs—from all parts of the world, in Radio Parts City. You'll get interesting "dope" that will tell you what's ahead for you. You'll really benefit!



1940's Product Parade

Up and down the streets of Radio Parts City—a deluge of new exhibits, new products, new ideas—latest developments and achievements in Service Apparatus, Ham Gear, P. A. Equipment, and other Radio Parts—all vitally important to your business. Be there! Don't Miss It!

Real Television Demonstration

Complete demonstration of RCA Television as now operating on regular schedule in New York. You will see not "what's new" in Television but actually *what's what* in Television—during the entire Show period from Wednesday through Saturday. Television is definitely here—Get real first hand information about it. It means a lot to you. ★ Facsimile (another form of Television) on demonstration Saturday, June 17.

Convention of Radio Servicemen of America opens Friday, June 16, with Special Lectures, Meetings and Exhibits.



Special Days For Everyone

It's all streamlined for you—Two days will be devoted to Jobbers—and two days to Servicemen, Retailers, Amateurs and others in the trade—that means fullest attention and maximum benefit for everyone at the show! (Look at the Calendar.) All Booths manned by technical men on Servicemen and Amateur Days.

1939		JUNE		1939	
WED	THU	FRI	SAT		
14	15	16	17		
<p>OPEN these two days to Jobbers, Manufacturers, Manufacturers' Agents, and Manufacturers' Engineers only.</p>			<p>OPEN on these two days to Servicemen, Amateurs, Retailers, Students and others in the trade.</p>		

Stevens Hotel-Chicago

National Radio Parts Trade Show

Sponsored by Radio Manufacturers Association and Sales Managers Club
★Executive Office—53 West Jackson Boulevard, Chicago, Illinois



The Biggest Name in VIBRATORS

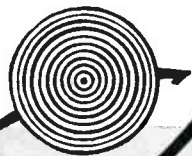


FOR twenty years, the name "Meissner" on a radio part has meant "tops" in quality!

Now, you'll find this same name on a complete line of Vibrators, each built with the same unimpeachable quality—with the same precision workmanship and careful painstaking design, that has always been associated with Meissner parts.

Naturally, any part bearing the Meissner name has to be "right," so Meissner Vibrators have all been extensively field tested. Furthermore, each Meissner Vibrator is thoroughly aged before final assembly and test; then aged again and re-tested as an assurance against metallurgical changes that could impair its efficiency or performance.

Mail the coupon today or ask your Parts Jobber for your FREE copy of the Vibrator Replacement Guide. With its aid you can tell in a minute exactly which vibrator to use in what set for top efficiency.



Meissner

MT. CARMEL, ILLINOIS

COMPLETE RECEIVER KITS • REPLACEMENT COILS • RECEIVER MODERNIZING PARTS, ETC.

MEISSNER MFG. CO.

Mt. Carmel, Illinois, Dept. R-5

FREE copy of the Vibrator Replacement Guide is to be mailed to the address given below.

Name

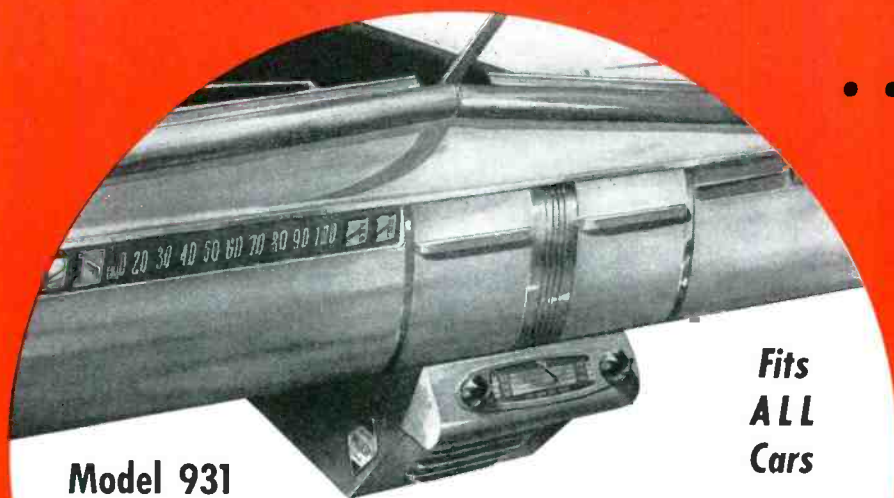
Address

City State

"A FAMOUS NAME FOR TWO DECADES"

**Dominate the Low Price
Market with this NEW**

PHILCO AUTO RADIO



Model 931

**Fits
ALL
Cars**

- Compact Single-Unit Superheterodyne
- Six New Super-Efficient Loktal Tubes
- Full Sensitivity, Tuned Antenna Circuit
 - Built-in Interference Filtering
 - Automatic Volume Control
 - Electro-Dynamic Speaker
 - Illuminated Dial

*... the finest ever
built to sell at*

\$19⁹⁵

Other New Auto Radios—\$29.⁹⁵, \$39.⁹⁵, \$49.⁹⁵ and \$69.⁹⁵

PHILCO ALL YEAR 'ROUND

HOME RADIO • AUTO RADIO • TELEVISION • PHONOGRAPHS • RADIO TUBES • PARTS • REFRIGERATORS • AIR CONDITIONERS • DRY BATTERIES

The RADIO MONTH

MAY

1939

Radio First Our periodic circuit of factories recently found us in that of one of the largest manufacturers in the radio field. During our visit with the president, we commented on the fact that we had found production, designing, sales managers busy on new radio models, radio sales and promotional campaigns and had found little or no mention of television although the company is known to have a big stake in the new field.

"That's very simple," said the gentleman, "I have told the boys that they are to spend no more time on television until they have shown me a hot line of radio sets. When I am satisfied that we are all ready for our distributors and dealers with a line that will make this a good radio season, then and not until then we'll get busy on television.

"Around here its going to be radio first, and make no mistake about it."

We believe that this one manufacturer's policy is duplicated in many radio plants all over the country, and—needless to say—that's the way it should be.

Good News To help dealers sell larger and better radio sets despite the current wave of television publicity most of the important manufacturers will equip many forthcoming new models for easy and convenient hook-up to video receivers.

All the consumers know is that television programs give sight and sound. When the dealer can show that the new set is ready for television, the ones who "want to wait" have no excuse.

They now can buy that new large radio set and enjoy all the radio programs—sound through the latest up-to-date equipment. Then, if, when and as television comes

to town they only need to buy a video receiver—hook it to the radio and "presto," they'll have sight and sound—television.

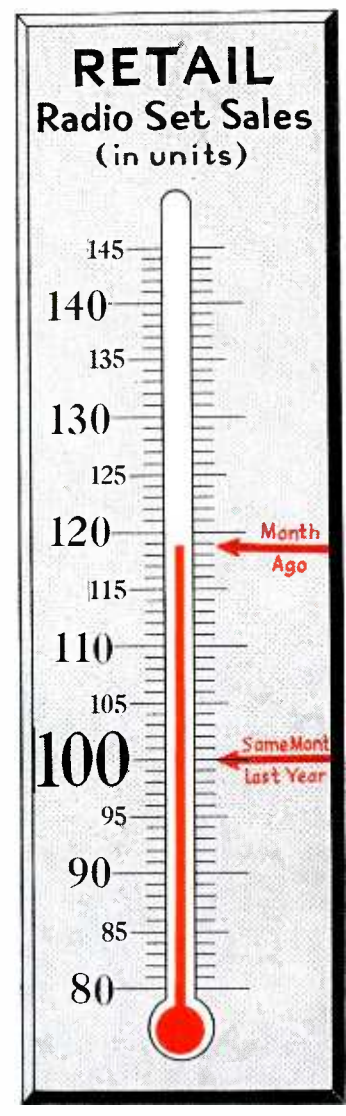
Television Straws As this issue goes to press the first week of commercial television in America's largest metropolitan center, New York, passes into history.

High public interest is reported from every public demonstration point, including several leading radio shops able to quickly get stock and start demonstrating, department stores, an aggressive chain and the exhibits at the New York World's Fair.

Lookers are legion. A quick survey at the end of the first 4 days indicates that nearly 100 sets or kits were bought by consumers. Specifically, one independent dealer uptown installed a demonstration booth, is drawing crowds of nearly 200 a day, reports the sale of seven complete receivers and six kits. Of the assembled sets one each went to a radio broadcast station, a laboratory, a radio manufacturer and the other four went to regular customers for home installation. Of the kits two were bought by amateurs and the others by experimenters who wanted to "roll their own." A downtown dealer reporting the sale of two completed televisions encounters difficulty in making good store demonstrations to date due to virtually complete line-of-sight shielding from the Empire State transmitter.

A distributor for one of the first televisions to reach the city says his showroom has been "like a madhouse" for several days, with over 100 dealers getting ready to try television, train men for installation and service and clamoring at his door for advice.

Manufacturers with sets in the



APRIL SALES
Radio Barometer

TOTAL Unit sales of radio sets maintained during April the same relative level as reached in March, namely 19% above the identical period of 1938.

Despite this excellent performance for the whole country, sales in some states again have become spotty, reflecting either seasonal trends, tapering off of radio sales effort in expectation of new models or temporary diversion to other merchandise.

South Eastern and Pacific Coast dealers continue to show healthy gains over last year. Totals for most of the inland states, right from the Canadian through to the Mexican border are about equal or slightly above 1938 sales. Turn-over of sets in the Mid Atlantic and New England states shows wide variations with reports of increases predominating.

Average dollar value per sale continues its recovery from the mid-winter and all-time low. Here are some interesting comparisons of average set sales by identical dealers during April.

State	APRIL AVERAGES	
	1938	1939
California	\$43	\$51
Florida	\$54	\$43
Georgia	\$51	\$48
Idaho	\$32	\$35
Indiana	\$52	\$41
Louisiana	\$54	\$49
Maryland	\$32	\$30
Minnesota	\$52	\$49
Pennsylvania	\$42	\$25
Tennessee	\$50	\$46
Average Sale—10 States	\$46	\$41

metropolitan market at this writing are optimistic, one definitely bullish on the television outlook after an initial market-taste.

Programs, now averaging 5 hours a day, are getting favorable comment. Observers predict that if programs improve sales will jump, installation engineering becoming a pressing immediate problem.

All of the above applies to the metropolitan New York area only. Elsewhere, as our "Television Progress Map" in this issue indicates, little of immediate merchandising significance has happened.

Foot Work Never before has the radio dealer *everywhere* had such a wonderful opportunity to boost his own sales by wearing a little rubber off his car's tires, or leather off his shoes.

The parade of classy looking portable battery radio sets that has come out of radio factories during the last six months is packed with extraordinary values that include good clean profits for the dealer.

The public is fascinated by their appearance and performance; mystified because there are no wires to bother with, and regardless of what type set they may have at home,—everybody wants a portable.

Those little "Handies" are the answer when it comes to motor boating, canoeing, fishing, camping, log-cabining, vacationing in general. College students cry for them, and doting parents buy them. Every residential block, in any town, will produce sales for the dealer who will carry a portable to the prospects.

And there are two big advantages in pushing portables while they're *hot*, viz: Few sales involve trade-ins because they are *extra* sets. Then there is the repeat business of battery renewals at a sweet profit. Need we say more?

Radio Programs In radio, it's programs that act as motive power, and the more and better the programs, the larger the army of listeners,

with resulting increases in wear and tear, need for replacements, repairs and *stimulated desire for better sets*.

Since increased sponsorship inevitably paves the way to better programs, it augurs well for radio's future, that the two leading broadcasting systems can report healthy gains in "billings"—the sales barometer of sponsored programs.

Columbia Broadcasting System broke all previous records for April billings, with gross sales of \$2,854,000 that were 17% above last year's April. National Broadcasting Company grossed \$3,560,000 in April, 7.6% better, and in the first four months of 1939 its total of \$15,514,000 topped the same period of 1938 by 7.7%.

Super-Cargo No, it's not a new radio circuit, nor a new testing instrument. It's a new book that we want to recommend to the blasé, bored or bothered. If you were to look over early copies of *Radio Retailing*, you would find the name of Earl Whitehorse on the mast-head as one of its editors. But Earl couldn't stay just with radio and so wandered into other fields, all within the McGraw-Hill family, until now for several years he has been editorial Boss on *Electrical Contracting and Wholesaler's Salesman*.

And it's that very same Earl Whitehorse who wrote SUPER-CARGO.

As its title indicates, SUPER-CARGO deals with the sea, not the sea of modern days, of speed liners and turbines, but it's the tale of a sailing ship in the era of wooden ships and iron men.

If you like action, mystery and drama, that book has it. There is mutiny in it; captain and crew tied to a huge iron anchor and drowned; the mystery of the bloody hand that left its imprint on the white cabin wall; a lone inexperienced white man—the super-cargo—forced to sail a vessel and its mutinous horde of 40-odd yellow skinned Chinese coolies across the Pacific back to their homeland to escape slavery in South American mines.

And it will thrill you to read the account of the court martial,

held on board an American warship in Chinese waters, the discovery of the damning evidence, the beheading of the mutineers, their heads finally stuck on posts on the public dock, as a warning to others.

If you're threatened with spring fever or ennui, SUPER-CARGO is a likely cure. Funk and Wagnalls published it. Any book store sells it.

Error We blush in embarrassment as we are forced to admit an error. In last month's issue under "Radio of Age" we hailed the announcement of a course in radio in the Washington Square College of New York University. Subsequently, in the same item, we referred to that venerable institution inadvertently as CCNY instead of NYU. Since that issue came off the press, our phone has buzzed, our mail has grown, members of our own organization have called in person, all because proud NYU graduates were not going to allow dear old Alma Mater to be thusly confused with its arch rival in launching this new activity.

While we apologize most sincerely, and emphasize that only NYU—New York University—should be thought of in connection with that radio course, we must admit frankly, in fact gleefully, that we are glad we made an error.

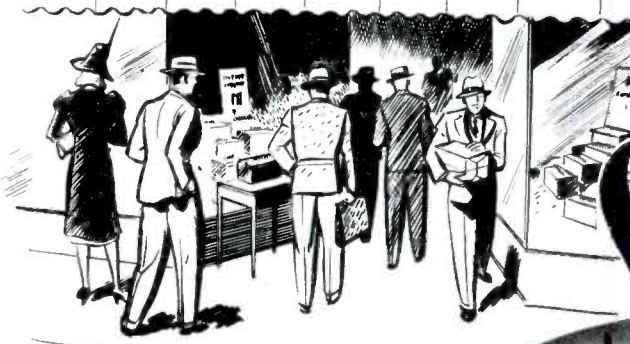
The letters, phone and personal calls demonstrated how carefully this column is read, and we are proud to know that there are so many college graduates—NYU graduates—in its audience.

Now that an error served as ice-breaker maybe we shall hear from them sometimes—even when there is no error involved.



EDITOR

YOUR RADIO STORE



Special INTRODUCTORY OFFER TO CHARTER DEALERS
Cash prepaid deal for limited time

MAIL

BEVERLY ELECTRIC MFG. CO.
212 South Robertson Blvd., Beverly Hills, Calif.
Ship RUSH prepaid | Beverly Phantom Tunettes at \$17.85 each,
Blonde Cabinets. | Walnut Cabinets. Ship via _____
We enclose remittance for \$ _____ in full payment of above order
and understand your established price is \$29.75. You agree to ship this
initial order prepaid.

DEALER _____

ADDRESS _____

CITY _____

STATE _____

SENSATIONAL BEVERLY Phantom TUNETTE

Developed to a point of incredible perfection

UNBELIEVABLE in its perfection and unreservedly guaranteed to perform under ALL conditions, the Phantom Tunette is now ready for national distribution. It's the big hit of 1939. The Phantom Tunette is a wireless remote control, combining sensational features. It provides "push button" and dial tuning for any radio from any room in the home. Now your customers can enjoy the luxury and convenience of a wireless remote control, using their present radios. It's a revolutionary instrument, positively uncanny in operation—and it instantly sells on demonstration. Here at last is the answer to the demand of radio owners for a genuine universal remote control for ANY radio. Every radio owner should be a buyer.

CHECK THESE AMAZING FEATURES

These are the Facts. There is no other instrument in America combining the features of this revolutionary utility.

1. Instantaneous station selection by manual "push button" or kc calibrated dial tuning.
2. First and only remote radio control with TONE CONTROL.
3. Complete control of volume.
4. Equipped with Tuning indicator.
5. High fidelity performance.
6. By use of five working tubes (EQUIVALENT TO NINE) it actually improves receiver reception and tone.
7. Plugs into AC outlet only. No batteries; no installation work.
8. No antenna nor ground required.
9. Controls one or more selected radios without interference to others.
10. Light weight; easily carried from room to room.
11. No trade-ins to cut down profits.



ATTENTION: JOBBERS

Recognized, rated jobbers and distributors. Airmail your orders. Retailers are going to place orders in your area. Be prepared.

It's Wireless!

RETAILS FOR ONLY

\$29.75

PRICED SO YOU CAN MAKE SALES AT A PROFIT

**WIRELESS
REMOTE
CONTROL**

**FOR
EVERY
RADIO
OLD OR NEW**

Recognized radio dealers are urged to cash in on this wide-open profit opportunity now! Stock the Phantom Tunette early! Be the first in your community to reap the profits on this money-maker. Special introductory offer enables you to stock the Phantom Tunette at only \$17.85 prepaid. Fast clear profit of \$11.90.

IT HAS EVERYTHING

After two years of development and hundreds in actual use, the Phantom Tunette has been perfected under the direction of leading radio engineers. The finest materials are embodied. You'll be impressed with the quality.

FINE CABINET WORK

Beautifully finished in choice of blonde or dark, rich walnut; hand-rubbed piano finish; modern streamline design. Wins instant eye appeal and makes a sale with every buyer. Small, compact, 5" x 5 3/4" x 11"

GUARANTEED PERFORMANCE OR MONEY REFUNDED

No "ifs" or "ands" about this proposition. We back up the quality by this outright Guarantee. Your complete satisfaction or cash refund on return within 10 days of inspection period. Parts and workmanship guaranteed for 90 days.

Mail Coupon Today for Special Offer

BEVERLY ELECTRIC MFG. CO.

Beverly Hills

California

"AMERICA'S FINEST IN RADIO REMOTE CONTROL"



SYLVANIA GIVES YOU

Perfect Balance



Company dependability and product dependability—you want them both, in the tube line you sell. But even *more* important is **PROFIT DEPENDABILITY**—for profit is the reason why you're in business.

Sylvania brings you "perfect balance"—a happy combination of the three things so vitally important to the success of your

tube business . . . not only company and product dependability, but *profit dependability*, too!

That is why thousands of enthusiastic retailers are pushing Sylvania. And that's why Sylvania is *the* tube line for you. Stock—sell—feature Sylvania tubes—and watch your prestige and profit jump UP!

Hygrade Sylvania Corp., Emporium, Pa. • Also makers of Hygrade Lamp Bulbs.

SELL SYLVANIA

SET-TESTED RADIO TUBES

Meet us at Booth Nos. 18 & 20, Chicago Radio Show, June 14-17.

DEPENDABLE ALLWAYS

RADIO *and Television* RETAILING

MAY, 1939

EARS *instead of* **EYES**



FORMIDABLE competition for the women's magazines are the new "antennaless" radios so easily used in the kitchen. For, whether such broadcasts gag male listeners or not, the morning-to-noon flood of 15-minute serials that frequently leave the heroine suspended by her eyebrows from a precipice as the gong rings help housewives feel romantic. And more serious programs delve daily into the mysteries of cooking, clean-

ing, clothes, child-training, decorating and gardening.

While the lady who must stay at home to peel potatoes is about her chores she is entertained and informed by using her *ears* instead of her *eyes*. This explains why so many second-sets ultimately find their way into the "homiest room in the house". And suggests that dealers might, with profit, ride their promotion money along with the trend and *Koncentrate On Kitchens*.

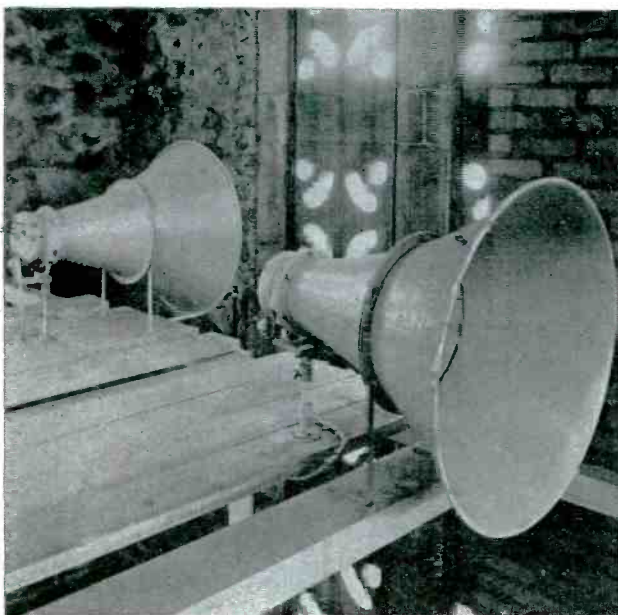


BLACK MAGIC SELLS SUITS

Interesting business use for wireless remote control is this Philco installation by the Artophone Company in the window of the Weil Clothing Company at St. Louis. The set in the window plays a repeating salespiel record through a speaker mounted outside when the control is dialed

TOWER MOUNTING OF SPEAKERS

Simple yet effective method of mounting speakers (two of four shown) in the tower of an eastern church covering 10 square miles with chimes. The area is adequately covered with much less than the full output of a 250-watt Clarion amplifier. Twenty-one tubular chimes such as those used by musicians feed two crystal mikes



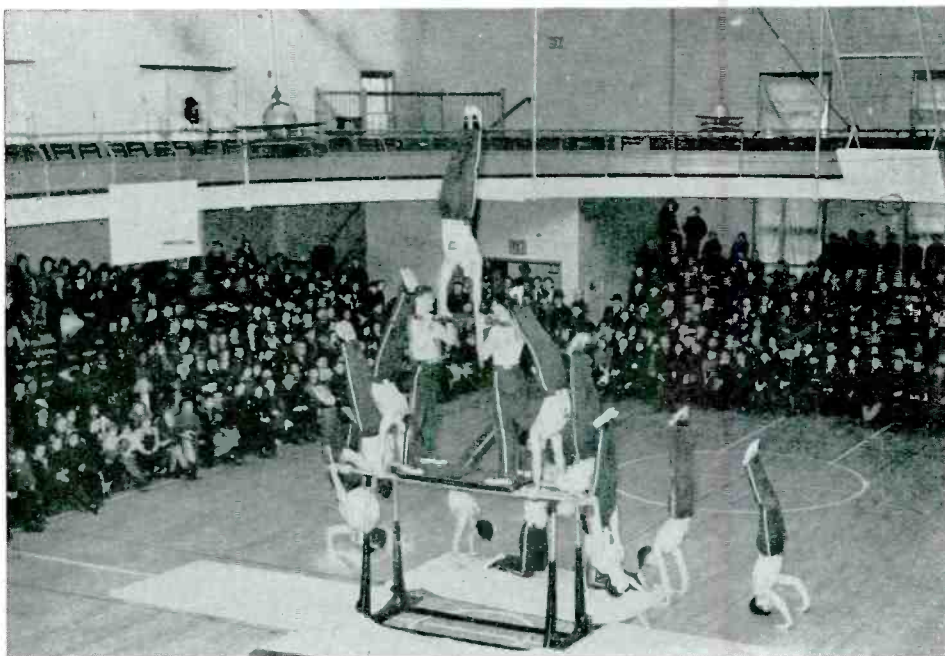
THIS SALESMAN WAS SPEECHLESS

To grocers last month Hormel food product salesmen took portable phonocombinations, a record telling the story of a new canned meat. Solicitors stood speechless while the record did the selling, softened up the prospect with suitable musical interludes. Set pictured is an Emerson



TEN WELL-DRESSED ROOMS

Accessibility and visibility of audition cubicles is a feature of the newly arranged Seruggs, Vandervoort & Barney radio and record department in St. Louis. Considered the last word in layout for big stores with dough to spend



PYRAMID TO MUSIC

Difficult distribution job of covering the big, bare gym at Troy's Rensselaer Polytech as solved by Montross Sound with the aid of two 12-inch Atlas chandelier baffles of the 360-degree exponential type suspended from the ceiling

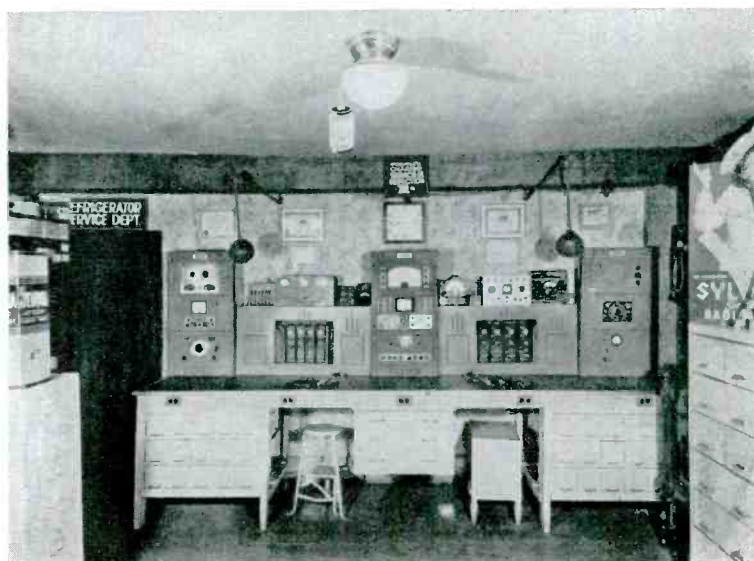
SETS THAT FLY

Apparently defying the force of gravity are 12 sets suspended from ceiling screw-eyes on nearly invisible steel wire in the window of Dau, The House Furnisher. The "feet" on most small sets prevent them from slipping from the two looped slings



SUGGESTIONS FOR THE SHOP

Here's a newly revamped radio and sound service shop incorporating many features which merit copying. It's the pride and joy of Forrest Fox of the Fox Radio Service, out in Richmond, Indiana, which also does considerable repair work on refrigerators



Where TELEVISION

WE once again present our Television Progress Map with added explanations because many dealers have requested us to supply the map in such form that it may be more conveniently displayed.

Primarily purpose of the map is to enable any dealer in the United States, no matter where located, to ascertain for himself and his customers whether or not the current activities in television hold any prospects or possibilities for gaining early reception of televised programs.

The circles represent areas in which television is, or may become, a factor before long.

SIZE OF CIRCLE The size of the circles vary according to the known or probable height of the sending antenna because that largely determines the area of possible reception. Thus, for instance, the circle in the New York area has a radius of 45 miles (drawn in exact scale with the map) because with the transmitting antenna 1200 feet above sea level, the television waves will have a horizon of approximately 45 miles, and that's the limit of practical reception. Where the antenna is lower, the circle is smaller.

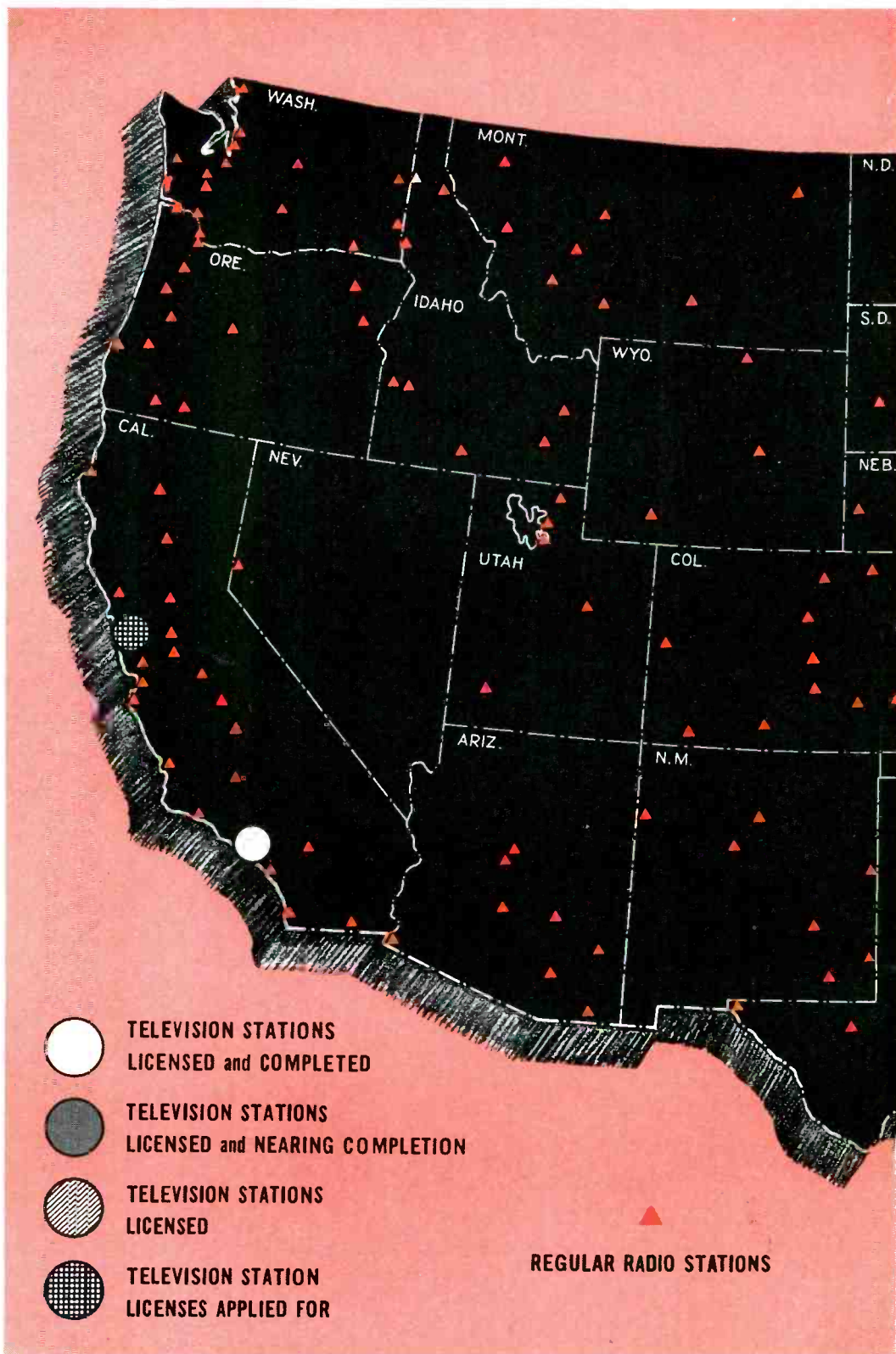
WHITE CIRCLES Only shown for New York and Los Angeles, and the area in which television programs are now available during certain hours each week.

GRAY CIRCLES These represent the Philadelphia, Schenectady, Bridgeport and Kansas City areas which will be within range of television broadcasting stations that have been licensed and are, or will be completed shortly, and may be expected to announce a program schedule soon.

LINE SHADED CIRCLES Licenses have been issued for stations at Boston, Chicago, Iowa City, West Lafayette, Ind., and Manhattan, Kans., which may serve the respective shaded areas as indicated. Holders of these licenses have authorized no statement as to the time when stations will be ready for other than experimental broadcasts nor their intentions as to regular schedules of programs.

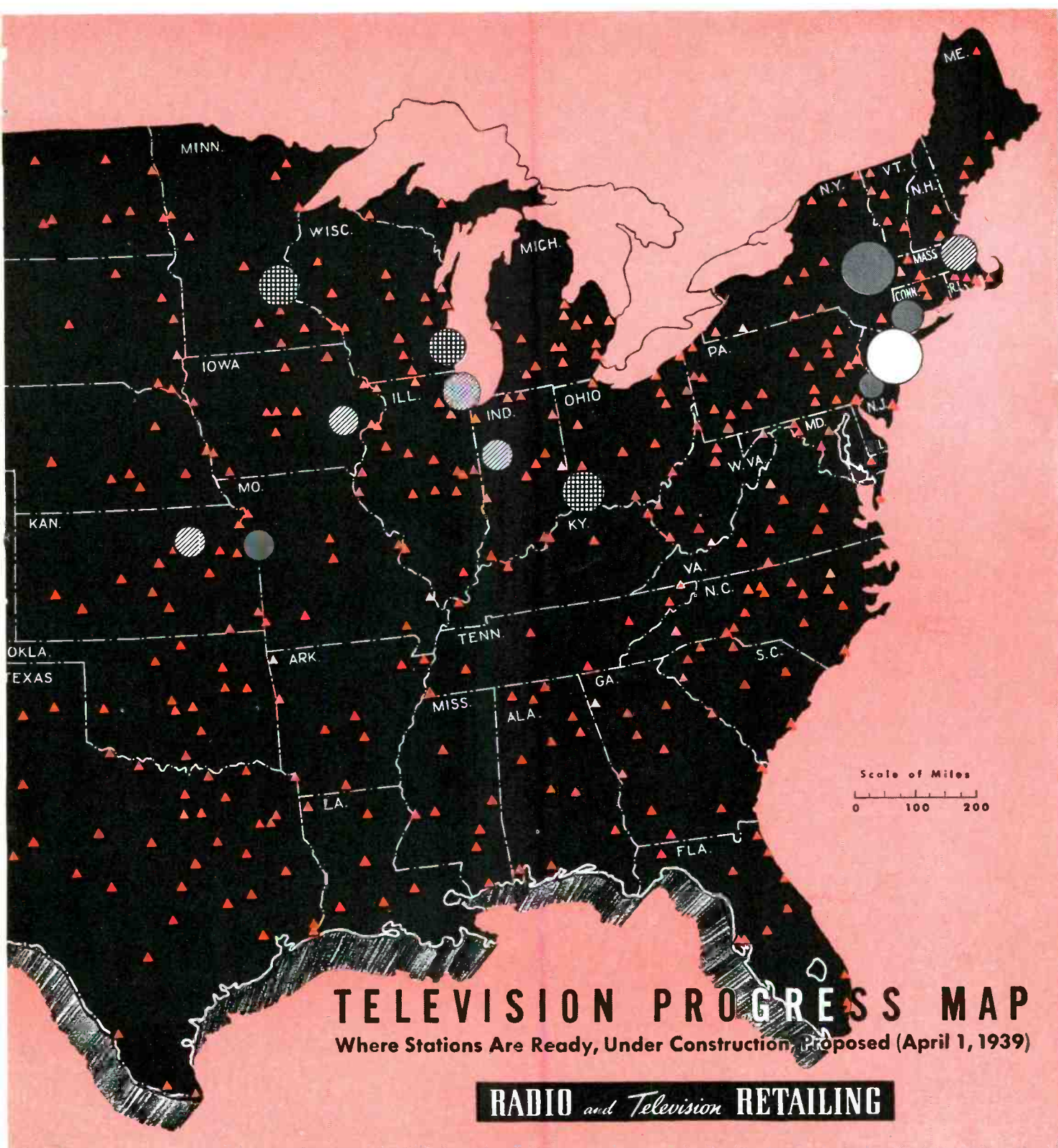
CROSS-HATCHED CIRCLES Responsible parties have applied for licenses at Cincinnati, Milwaukee, St. Paul and San Francisco. Assuming that antennas would be installed at highest available point, those stations would serve circular areas of the size indicated. No one knows when licenses will be issued to these applicants, but it is a known fact that it will be many months *after* licenses have been received before any station would be ready to go on the air.

TRIANGULAR SPOTS These indicate cities where one or more of the country's 700 *Radio* broadcasting stations are located.



Necessity for Concentrated Audience Within Its Limited

Selling Will Start



Range Confines Television Initially to Big Cities, While Radio Continues to Cover the Country

POINTS TO HEADACHE—Furniture man's chief worry when selling radio is that price-cutting elsewhere may lead people to conclusion that prices on other furnishings are also higher, says Muncie, Indiana's T. M. Friel

By
Tom Blackburn

First Aid for FURNITURE DEALERS

Natural best-seller for such stores, radio nevertheless finds many inhospitable



OLD Omar Khayyam used to declare that a loaf of bread, a jug of wine, and a girl out in the woods—singing, of course—had just about a 4-11 alarm amount of attention-getting power with the average human animal.

If a furniture store man could knock out poetry like Omar did, he would be compelled to admit that the most charming objects with which he could surround his customer would be a radio, an easy chair, a cigarette and a handy ash tray, plus a light to read by. These are the knickknacks that come closest to having 100 per cent appeal 100 per cent of the time. They can take Life to a Party any old evening.

Only in verse, however, would your average furniture man *admit* the gregarious charm of radio. In real life he would tear his stanza to bits.

How the average furniture man gives the razzberry to radio! My, oh my, what a sour puss you meet



SUGGESTS ONE PALLIATIVE—Partial protection against price-cutting is to stock only standard brands made by manufacturers who discourage it where practicable, says L. O. Rainier of Indianapolis

when you talk to him about radio business. No farmer's favorite golden-haired daughter who has gone astray and returned to dump

her brood of eight on father's doorstep was ever in worse standing.

RADIO and Television RETAILING sought the reason for inhospitality to the best seller in the furniture field. Here was the beef in seven out of ten places "Up the street, down the street you can buy radio at any old discount. When we give it the legitimate list price, what happens? Customers compare our tags with the price-cutters, holler 'robber.' Worse—they jump to the conclusion that all our furniture prices are inflated."

Salesman Ford of the Bennett Radio Company, Columbus, Ohio, (Philco) summed the whole thing up with this explanation: "The trouble comes when the furniture man considers radio in the same light as furniture. He can wait a long, long time to sell a table—in fact often makes a turnover only twice a year. But if radio is held too long, it becomes obsolete. So you cannot *mix* radio with furniture and succeed. It calls for: 1.



DISTINCT DEPARTMENT DIVISION DESIRABLE—Radio, or appliances, should be kept apart from furnishings by partitions such as these at Banner-Whitehill's

A specialized department. 2. A full stock of models. 3. A school for salesmen. 4. A policy of eliminating stickers, regardless of cost.

Banner-Whitehill, a furniture store that does a profitable radio business both at Indianapolis and at Muncie, Indiana, measures up to the Ford yardstick.

Since it is fashionable to see how everything is done in America's most typical city, Muncie, Indiana, written up so frequently in "Life" and books on economics, let's observe how Banner-Whitehill does it there:

Departmentalized — Sure enough, Banner-Whitehill keeps its radios and appliances in departments, in full view, and yet sequestered away from the rest of the store by low partitions.

Specialized Salesmen — While the store has six furniture men, they will turn you over to one of the two major appliance specialists in case you seem interested in that subject.

Virtually all radio sales are made on the floor. Quite close to the radio department proper are some tempting combinations of chairs, lamps and radios and frequently the whole thing goes as a unit or gives the customer ideas. Thanks to the cooperation of the Appliance Dealers Association of Muncie, of which Banner-Whitehill's manager, T. M. Friel, is president, there is

SPECIALTY SALESMEN ESSENTIAL—They are easily summoned by furniture salesmen when radio customers appear if the store is equipped with intercommunicators

no advertising of free home demonstrations, and less than a fourth of the consoles sold are ever sent home on trial.

A Service Department — "We figure that 40 per cent of our radio prospects are created because of the trouble they are having with old sets," Mr. Friel says. "Another 40 per cent originate because they see the new models in the homes of friends.

"So downstairs, near the time payment window is the service department, managed by two men.

"Three years ago it cost us around \$300 a month to operate a service department," Friel told this reporter. "However, it is necessary to have a good one if you expect to sell radios and electrical appliances. We didn't cut down on what we were giving our clients, but rather found ways and means of more profitably using our service-

men's time, and as a result our service department costs us only \$50 to \$75 a month today. Today it gets credit on all \$3 aerial sales as pay for installations. The men get credit on tube sales and we arrange to pay for the service and repair work put in fixing up trade-in merchandise."

Trade-in Control—The association rules that a maximum of 10 per cent of the new set price be allowed on trade-ins, and nothing on table sets. Free aerial installations are



barred. On refrigerators only \$5 is allowed for old ice boxes, with the exception of Coolerators. With 17 out of 20 dealers who sell appliances belonging to the association, and with the advertising media cooperating, this agreement has been quite effective.

Standard Brands — Banner-Whitehill encourages its radio men to take a part in association and local activities. In Indianapolis, L. O. Rainier, manager of the electrical appliance department for that branch of Banner-Whitehill, is president of the Retailers Association of the Electrical League, just as Mr. Friel is active in Muncie.

He says: "A furniture store's tendency to go to odd brand merchandise is its undoing in radio. Sell the makes the public knows about and wants, rather than something that is unknown. There is a better chance of price-protection too."

WITHIN the March issue, and on its cover, we asked this pointed question: "Are New Radios Good Enough?" Readers replied in five pages set aside for this purpose in the April number, while the editors reiterated the need for minimum quality standards in modern radios regardless of price or purpose.

Letters on the subject continue to converge at our desk and, without further preliminary, we once again present pertinent paragraphs from as many as space in this issue permits.

One Way Out Of the Cellar . . . You are rendering a yeoman service to the radio business in its effort to have dealers sell up and manufacturers build up. . . . It is not necessary for the industry to sell price alone for by initiating aggressive selling and advertising campaigns on such specialties as portables the matter of price may be subjugated. . . .

It is not necessary to go down in the cellar on prices in order to do business, as the experience of several manufacturers with portables proves. . . . SET MAKER

For Truth In Advertising . . . I think that your magazine is to be congratulated on its campaign. . . . The public should be made to realize that while certain sets may have a place it is not in the reception of accurately reproduced musical programs. I think the industry should act to prevent any more advertising of the type which leads the public to believe that they get the same reception from the smallest, cheapest table type as from the largest, most expensive consoles.

SET MAKER

Public Already Wise . . . The public is already demanding more in cabinet style, tone and selectivity. . . . Answering some of your questions directly I would say: (1) That the market is best served by sets with bigger speaker baffles. (2) That manufacturers are justified in reducing the size of sets but not the safety factor of parts. (3) The semi-modernistic cabinets in which most new sets are encased is 80 per cent of the sale. . . .

The sooner manufacturers stop claiming so much for cheaply constructed sets the better it will be for all concerned. . . . DEALER

Builds What He Wants . . . I have read with interest your articles on conditions in the radio field. Dealers are going to read them and deliver three cheers. Manufacturers will say "nuts." Economically it will accomplish nothing but will do you a service in feeding the retailer's ego.

I can well imagine the dealer you quote in the early part of the first article who tried to sell a \$79 set that could not even match an old one. There are several of them on the market. Also, there are several on the market that do far out-perform old sets. It's too bad your quoted dealer hasn't the ability to pick the best sets. . . .

As a lover of music and after many years of study I know what I personally demand in radio performance to completely satisfy me. I am considering such a set, the parts of which at wholesale amount to more than \$200. This is without labor and does not include the price of the cabinet. When it's finished it will be as

PLEAS

for

Better

Performance

More LETTERS from readers relative to the quality of new radios

fine a radio receiver as there is anywhere, and the fidelity of its reproduction is remarkable. Such a set is not available in the regular commercial channels because you could not sell enough of them at the price they would have to bring to make the risk of manufacture attractive.

Every radio set is a compromise, a compromise to deficiencies in listening and pocketbooks. Thousands of people are perfectly satisfied with everything a \$100 radio will give them. Millions are satisfied with everything a \$15 radio will give them. ADVERTISING AGENCY

Calls New Sets "Cute" . . . We think your drive for better radios is admirable. The customer cannot be fooled by gadgets forever. And he certainly will be more satisfied in the end with a radio that works well than with one that is just "cute". SHORTWAVE CLUB

Blames Parts Makers . . . Your campaign idea has been a long cry of ours. We did discuss it with everyone who possibly could be a part of this scheme of selling low-priced equipment.

However, the condition that you have today has not been brought about by the set manufacturer at all. This condition is caused by nobody else but the parts manufacturers. The set manufacturer asks for a low price and in the anxiety of the part manufacturer to get the business he will quote at cost or even 10 per cent below cost just to keep the shop busy or be in a position to come out and brag that he just got a large order.

PLANS Suggested So Far...

Labelling of sets designed primarily for auxiliary use so that the public will clearly recognize them as such

Establishment of minimum technical standards for all radios, regardless of price or physical size

Cooperatively subscribed advertising fund to be used in popularizing a seal of industry approval

New product proving-ground similar to those employed so successfully by the auto industry when skimping threatened its reputation

Campaign built around certified performance features such as those used to put over AGA and CP gas ranges

More emphasis in advertising on the best radio manufacturers make and less on the poorest

This is a condition that nobody can control and no matter what is done it will happen all over again. I hate to say, and even hate to think that you are waging a losing fight . . . but I personally attempted this same thing among tube manufacturers and when they walked out they just laughed at me. I don't think you will find six people who will support your fight. If you can find that many let me know. SOUND EQUIPMENT MAKER

Says Something Has Happened . . . I have been a radio dealer since the very beginning. . . . I like the business but in the past year or so something has happened to the radio manufacturers. They no longer seem interested in quality performance.

It seems foolish to broadcast the finest kinds of programs and then build radio receivers that cannot possibly do the programs justice. I believe that if this policy continues it will destroy the radio business to a very great extent. This is not only my opinion but other radio dealers feel the same. . . .

The new sets of today, with many other faults, also pick up the local amateurs on the standard broadcast bands. In fact the amateurs, not often at fault, sometimes completely knock out the other programs. DEALER

Suggests We Tackle Tubes . . . I agree 100 per cent with your contention that the industry, through the manufacturers, distributors and dealers, must start putting their houses in order. I honestly believe that while the public is getting more value per dollar expended in radio than in any other commodity now on the market John Q. Public would gladly pay more for radio sets and parts if the industry would do some constructive work along the lines outlined by you.

I also believe that a separate drive along similar lines but confined particularly to radio tubes should supplement the one you are running on sets in current issues. . . . TUBE MAKER

Says Servicemen Know . . . Congratulations! The gentle nudge you gave the radio industry in the March and April issues is something every serviceman has been praying for.

Your articles weren't exactly news to the servicing end of the business, which may be last but not least.

For the judgment and opinion of a serviceman goes far in classifying the efforts of the radio industry as a whole. . . .

I am personally in favor of radios being classified in each price range upon:

(1) Type of circuit or circuits employed. (2) Number of stages per circuit. (3) Control circuits. (4) Indicators. (5) Audio amplifiers. (6) Size speakers, and (7) Automatic controls.

The above procedure would iron out the wrinkles in the business at present and bring the consumer and dealer into a better understanding about current radio products. . . . SERVICEMAN

Thinks Consumer Will Pay . . . I have just finished reading the letters from your subscribers concerning the article "Are New Radios Good Enough?" in the April issue . . .

The consumer *will* pay for good merchandise and I honestly believe this major evil can be stamped out if everybody concentrates on it. . . . SERVICEMAN

Plugs For Poster . . . Allow me to express my thanks for the splendid articles and excellent accompanying cover with the one in March on the subject: "Are New Radios Good Enough?" . . .

That cover was a stroke of genius and I only hope that the rest of the trade recognized it for what it is really worth and you are subsequently deluged for poster-sized reproductions of it suitable for hanging up in store windows. This cover alone was reason enough for the sell-up idea which the trade has virtually abandoned during the past few years. It illustrates very graphically the wide difference existing between the average radio and the one capable of doing a really good job.

Here is an excellent opportunity for the trade to change the motto from "explain the difference" to "show them the difference." . . . How much more constructive this is than the efforts of manufacturers who think they are doing the trade a favor when they "labor like a mountain and bring forth a louse". . . . DEALER

Not Price Alone . . . Even as a novelty, sale of radio on the basis of low price alone is not the type of development that can improve the public's enjoyment or its appreciation of radio; nor is it the kind of development that can support the manufacturer-distributor-dealer team that is necessary to deliver radio products throughout the country. . . . SET MAKER

Must Be Rebuilt . . . Some new radios are good enough but, in general, I have to agree with your article. . . . I do not think that most of them have good enough tone quality. . . .

I think it would benefit us all, factory, distributor and dealer, if this thing could be remedied. . . . I often have to put better replacement parts in new sets than they were originally equipped with as I am sure original replacements would not stand up well enough to satisfy my customers. . . . DEALER-SERVICEMAN

Room For Improvement . . . Answering the query in your March and April articles I would say there is plenty of room for improvement in new radio quality. . . . SERVICEMAN



A WINDOW THAT CLICKS

By MICHAEL HADDAD
Detroit

● A display window containing old transmitting tubes together with a complete set from an average radio receiver is my idea of the best method of creating sales.

I procured cast off tubes from a local broadcasting station. Indicated below each one was the price. This gave the passerby an idea of the great expense the broadcasting stations shoulder to keep their equipment working at its best.

Show cards went on to say that the transmitting tubes were checked *hourly* in order to provide the best possible entertainment and suggested that radio listeners should have their tubes checked at least twice a year.

ADJACENT HOME STUNT

By J. A. MAYR
Oroville, Calif.

● No single idea will magically increase tube sales. It takes faith in, and plugging at, a number of good ideas. Here are some of mine:

A classified advertisement in the daily newspapers under "Notices", changed monthly and calling attention to the need for tube replacements.

Your label on every tube you test or sell.

Talking complete replacements, or at least group replacements.

A good-looking tube-tester that inspires confidence and a willingness to explain its workings to anyone interested.

Well-known brands of tubes.

Distribution of dealer-helps put out by manufacturers.

When delivering a repaired radio to any home I make it a point to call on the two homes adjacent, mentioning the neighbor's name and offering to test tubes without charge.

Direct mailings to my entire file of customers every few months.

Last, but not least, breaking of all tubes that test poor before the customer.

USE FOR EMPTY CARTONS

By H. A. EVELETH
Wholesale Radio and Electric Supply Co.
San Francisco

● Anybody will buy the tubes necessary to make his radio operative but few will maintain a set of good operating tubes. Right there lies the field for building tube sales.

Radio set owners should be made tube conscious. Spark-plug manufacturers remind the car owner that plugs are an important part of his car equipment and must be maintained in good condition and replaced at frequent intervals for efficient performance. That tubes are the "spark-plugs" of his radio set should be called to the attention of set owners.

It is important to let it be known that the customer himself may test

TRY THESE on TUBES

his own tubes on your tester as the procedure requires nothing more than an English-reading tester and a few words of advice. This builds confidence. And try this idea: *Get your tube jobber to supply you with some empty tube cartons. Print your "tube conscious" message, inclose it in the cartons and leave one at each home in your vicinity and also in the front seat of cars parked along the street.*

10-POINT PLAN

By NICHOLAS FRIEDL
The Dale Radio Co., Inc.
New York

● To build large tube volume the dealer must *sell* tubes instead of just *handling* them. The following 10-point plan is suggested:

1. Effective window displays regularly.

2. Tube department or counter within the store plainly identified by a sign.

3. Mentioning of the need for

(Continued on page 68)

How to Handle

The **RIGHT WAY** . . . It not only turns shoppers into buyers but also sells up



1
OPEN YOUR DOOR
— And don't be blasé about the importance of a welcoming smile



2
SHOW WHAT SHE ASKS FOR — There is no better time to quietly size up the prospect



3
DEMONSTRATE SOMETHING BETTER
— Offer a chair and watch her reaction while you tune



4
FIT EACH NEED AND PURSE — If price is the question trot out time payments

WALK-INS

Posed By Milwaukee's AUGIE D'AMICO
for photographer MARTIN FRANCIS

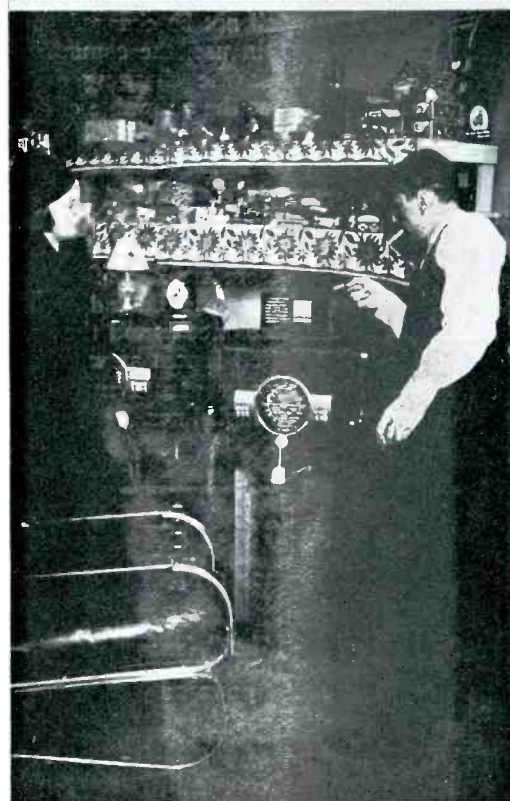
The WRONG WAY . . . Near closing time, when you're tired, this is apt to happen



1
KEEP RIGHT ON SMOKING — Look bored as the door opens, be sure you're in shirtsleeves



2
EXHIBIT IMPATIENCE — Assume she's a shopper so you can get back to your magazine

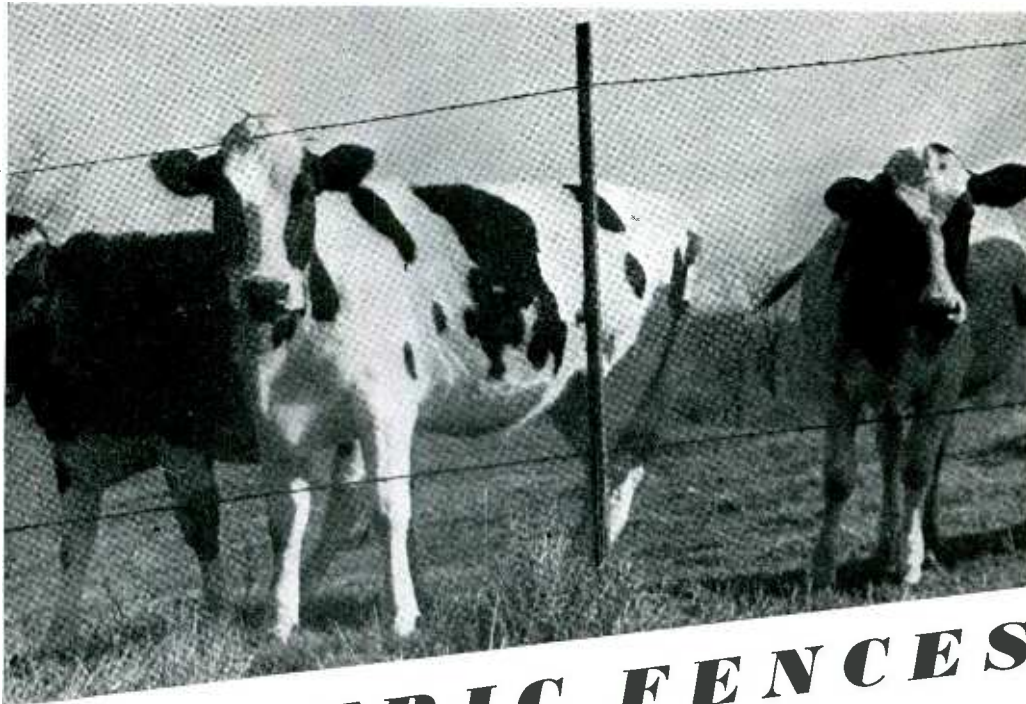


3
NEVER SELL UP — If she asks for a table model point it out and let it go at that



4
BE GLAD YOU SOLD SOMETHING — Take the cash, forget what she might have bought

VIBRATOR A PRISON MAKES—Four feet on moist ground plus a wet nose make livestock wary of charged wires. Shock makes cows less contented but is not harmful



ELECTRIC FENCES **... Enter Our Alley**

ABRAMHAM LINCOLN, splitting fence rails, was about the last man to impress city folk with the perpetual struggle of the farmer and his fences.

"Pig tight, horse high and bull strong" has been the never-completely-arrived-at ideal since man first tamed livestock. First revolution in fence building occurred in 1874 when Joseph Glidden of DeKalb, Illinois, invented barbed-wire and introduced the principle of pain rather than main force for holding back animals.

The electrified fence is the latest event in fence making. Given popularity by the rural electrification movement, its modus operandi has been to send surges of current through wire periodically by means of a vibrator. To the animal with four legs in contact with the ground, this slight shock acts like a whip. Animals are affected more by electricity than humans, and after a few treatments they even shun the neighborhood of the fence.

Great advantage of electrified fence, in addition to the wholesome way it keeps farm stock corralled, is its economy. Only one or two wires and light stakes—easily driven in the ground—are needed.

Gone is the expense of massive posts and post hole digging. Actually, in most cases, the charged wire is run on top of the old fence posts, saving the cost of all repair to old fences, which gradually rust out.

Cost of the new style fencing is estimated to be about one-fifth the price of a regular fence, as low as \$10 a mile in some instances. With two strands, everything but poultry is held in bounds.

Although a brand new idea in farm circles, a private survey of 1,000 farmers in Wisconsin revealed that about 10 per cent of the farms already have charged wires about their farms.

News that brings electric fence into the headlines is the recent decree of the Wisconsin Industrial

Commission which forces farmers to use batteries for charging fences, specifically makes illegal fence energized by any power source in excess of 15 volts, either directly, or through lamps or other resistance. Batteries shall not be charged while the fence is in use, the commission orders, unless the charging device does not cause the allowable current to be exceeded.

The editors are informed that 24 other states, including Oregon, have rulings or legislation pending on this subject. Although it is estimated that there are 2,242,924 electrified farms in the United States, this figure does not bound the market for charged fences as wind and gasoline chargers permit use where there are no high lines.

News:

Power-Line Connection is "Out"

Estimated total is 200,000 electric fence systems in use in the United States

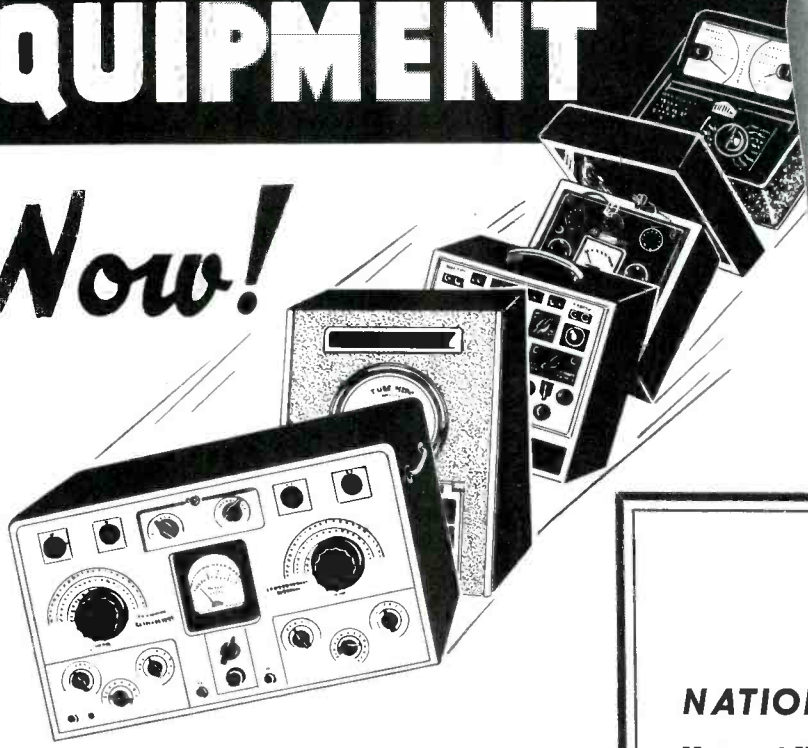
This means about 40,000,000 rods of "hot" fence

About 60 per cent are believed to be powered from high-lines . . . but

New State laws and others pending throw business to batteries, wind and gas chargers

Get Your Free TEST EQUIPMENT

Now!



PURCHASE POINTS GO UP JULY 1st!

WHAT test equipment do you need? A new tube tester, another volt-ohm-milliammeter, or one of the latest Television Testers—you'll find all the leading makes in National Union's Equipment Catalog—and now is the time to get it. Before the Purchase Point requirements go up on July 1st, 1939.

Remember, the National Union way requires only a small deposit and this is refunded as a merchandise credit when the required number of Points, based on your purchases of N. U. tubes and Condensers has been reached. Thousands of completed deals tell the story of complete satisfaction and National Union help.

The raise in purchase points becomes effective July 1. This advance notice will permit all dealers to take advantage of the present level but there will be no extension after July 1, as the low nets recently established simply will not permit continuation on the present basis.

NATIONAL UNION QUALITY

National Union radio tubes and condensers have the precision and performance that makes friends for you wherever they go. National Union is the logical choice of radio service engineers everywhere.

TEST EQUIPMENT AVAILABLE

Leading Makes Of

- TUBE TESTERS
- SET TESTERS
- OSCILLOSCOPES
- VOLT-OHM-MILLIAMMETERS
- POCKET TESTERS
- SIGNAL GENERATORS
- NEW TELEVISION TESTERS
- VIBRATORS

SEE US AT BOOTHS 1012-1014—
CHICAGO JUNE RADIO PARTS SHOW

Mail Coupon for More Information

NATIONAL UNION RADIO CORPORATION
57 State St., Newark, N. J.

Please send me information on how I can get free (Test or Shop Equipment).

Name

Address

City..... State.....

RR 5-39

**"GET THE TEST EQUIPMENT YOU NEED NOW
...DON'T DELAY...ASK
YOUR N.U. JOBBER"**

RECORDS *in* REVIEW

ENTHUSIASM for the product you sell is an axiom which must be applied as rigorously to the retailing of phonograph records as to any other line of merchandise. No successful dealer has ever failed to communicate his own experience and delight in the salient features of a new radio model. To expect prospects to discover for themselves such novel and compelling devices as automatic tuning, remote control, patent tonal chambers, etc., is, of course, absurdly impractical.

Yet how often is it true that the only assistance given a record buyer is to hand him what he asks for, start the record twirling, and then wait for nature to take its course.

Fortunately for many dealers, this apathetic procedure often results in sales. Unlike the radio business, that of records frequently finds the customer much better informed than the person behind the counter. Yet you wouldn't consider demonstrating a new radio before you had become thoroughly acquainted with each of its important features. So why not apply the same logic and method to record retailing.

Listen to every record as soon as it is released. However partial you may be to a certain type of music never lose sight of the wide diversity of tastes everywhere. If you know the music on a record, a little well-directed enthusiasm on your part can really boost its sale. Familiarity with the new tunes and different styles of dance bands and singers will enable you to observe quickly the type of music that pleases your customer, and to know instantly where to find similar fare to tickle his palate still further.

Admirers of Count Basie's orchestra aren't going to thank you for recommending the "Swing and Sway" rhythms of Sammy Kaye. But the latest Basie, Ellington and Goodman platters can be sent home in the same wrapping if you're up on the bands. Save Guy Lombardo



EIGHTY-FIVE IN ACTION—Every spring the "Pops" orchestra stages concerts in Symphony Hall at Boston, where it records. The events are a feature of Bay State musical life but anybody can buy "Pops" recordings

and the warblings of Dorothy Lamour for the Kaye delivery bag.

Information on any musical subject is helpful. Reading Wilder Hobson's *American Jazz Music* (Norton, New York, \$2.50) will result in additional sales in the "hot" department of any record store. And for every copy of this excellent book that you sell, you can expect dividends in sales of the records Hobson mentions. The same goes for Benny Goodman's *The Kingdom of Swing* (Stackpole, New York, \$2.00). Put both books in the window with appropriate record label and album set trimmings.

Some new dealers are skeptical of their ability to handle profitably the higher-priced records of classical music. Faced with a "basic unit" of single discs and album sets prescribed by the manufacturer on the basis of best-sellers for a period of years, small shops hesitate to take on works whose titles carry little if any significance to their owners.

Yet this field is of tremendous importance, and it must not be overlooked. There is a great demand everywhere for recordings of the world's best music.

However, instead of suggesting a basic unit of album sets and other classical recordings, selected from every form of the art, I would start the small and inexperienced dealer with a comprehensive nucleus of favorite tunes from semi-classical music around which he can build his own appreciation of, and future business in, the larger and more vital works. Rather than saddle him with symphonies, concertos, operas, sonatas and tone-poems, I'd begin with the melodies of Victor Herbert, George Gershwin, Sigmund Romberg, Jerome Kern, et al (of which almost every company has a representative selection) and the lighter pieces of Tschaikowsky, Brahms, Dvorak, Mascagni, Mendelssohn, Massenet, Rimsky-Korsakow, Ponchielli, Rachmaninoff, Schubert and Verdi, for example, and the waltzes of Johann Strauss.

As for the light pieces, you can obtain a fine collection by stocking the splendid list of recordings by the Boston "Pops" Orchestra, conducted by Arthur Fiedler. Here are more than fifty compositions, all magnificently performed and superbly recorded, scarcely one of

After "hot" music try the semi-classics . . . Boston "Pops" refreshing repertoire provides easy-to-take link between swing and classics . . . Style easy for salesmen to understand

By RICHARD GILBERT

which is not familiar to everyone. And, indeed, the verve of their performance is so highly contagious that salesmen without a rudimentary knowledge of music will have no difficulty passing on their enthusiasm to the customer.

The Boston "Pops" Orchestra is composed of eighty-five members of the Boston Symphony, and its particular talent lies in its ability to turn from the staid and formal symphonies to a type of music requiring dash and ebullience, applying to the

latter, lighter fare a brand of virtuosity commensurate with the most exacting demands of the former. The "Pops" concerts, for fifty-four years a feature of the musical life of the Bay State capital during the Spring and early Summer months, are held in famed Symphony Hall.

Numerous recording sessions during the past few years have perpetuated a large part of the refreshing "Pops" repertoire. Ranging from Sousa marches, foxtrots, tangos, *The Carioca*, and Gershwin's *Rhapsody in Blue* to Herbert's *Dagger Dance*, Ponchielli's *Dance of the Hours*, Mendelssohn's *Midsummer Night's Dream* music, Tschaikowsky's *1812 Overture*, Verdi's ballet music for *Aida*, a MacDowell piano concerto, and the greatest of Strauss waltzes, these pieces always find a ready market. They appeal to young and old, to enthusiasts of sweet and hot jazz, to lovers of the more serious classics, to musical educators and, last but not least, to sound men who are looking for first-rate recordings of just such music for advertising or entertainment purposes.

The technical quality of the "Pops" recordings is absolutely unsurpassed. For this reason they are excellent for demonstrating the frequency and dynamic ranges possible with modern reproducing instruments. The complete list, slightly more than fifty ten- and twelve-inch (\$1.00 and \$1.50 list) discs, will be found in the Victor Catalog and quarterly supplement. Recent "Pops" releases include a thrilling reading of Ravel's *Bolero* and an album of colorful works by Tschaikowsky and Glinka (Russian), Granados (Spanish), White (American) and Edward Strauss (Viennese), and orchestrations of Negro Spirituals.

Every dealer should stock the lot. These Boston "Pops" Orchestra recordings will help the new dealer and his customers on their way to an appreciation of serious music.



PLEASES MANY PALATES—Arthur Fiedler, conductor of the "Pops" orchestra, whose fare is sufficiently varied to fit many musical tastes



NOT TOO FORMAL—Evidence that the orchestra's music appeals to cosmopolitan tastes is the fact that during concerts many sit at tables, consume wine and light refreshments



MORE THAN A HOBBY—For photographing the “X” that marks the spot the entire Beverly Hills police force has been equipped with fast Univex cameras

Getting Started with **CAMERAS**

TO radio dealers looking for a summer sideline *cameras* are an obviously good bet. And if a tentative taste of the business pleases the boss's palate to the extent of inducing him to hire photographically experienced help, it can be more than that.

Amateur photography has once more resumed the status of a major American hobby and we would say in explanation . . . if there *is* any logical way to explain periodic popularity spurts of hobbies . . . that heightened public interest is due to:

(A) The ease with which reasonably good indoor or so-called “candid” shots may now be taken.

(B) The aura of “smartness” with which miniature camera fans, particularly, have somehow managed to surround their activity, and

(C) The surprisingly small “initiation fee” for which beginners can today join the shutter-clicking fraternity.

Much depends upon the dealer's initial selection of stock and how he promotes it. As with any unfamiliar product he will, naturally, tread carefully at first and confine initial purchases to inexpensive

equipment. This being the case, the following tips concerning such merchandise should be helpful.

Three General Types

Among the miniature or “candid” type cameras proving so popular, there are three general types: (1) “Fixed focus” cameras which are virtually foolproof in the hands of even a sketchily informed beginner, provided he knows enough to avoid working too close to the subject, (2) Semi-fixed focus cameras little harder for the greenhorn to handle and permitting closer work plus somewhat greater clarity at certain critical distances and, (3) Full-focussing cameras delivering the ultimate sharpness when aimed at subjects at any reasonable distance.

The first two are “musts” and should probably constitute the bulk of initial stock. The third is desirable, even if stocked at first in lesser quantities, because many buyers of the simpler types eventually desire greater flexibility even though fixed and semi-fixed focus cameras are retained for certain varieties of pictures.

Lenses determine the ability of a

camera to take pictures with a given amount of light. Most initial camera stocks will undoubtedly include the least expensive models with lenses such as the $f/11$ or $f/8$, quite suitable for most outdoor work where light is good but useful indoors only under intense artificial lights such as photofloods or flashes. Such stocks will certainly include cameras with $f/6.3$ and $f/4.5$ lenses around which much of the current camera interest of the consumer centers, due to the combination of moderate price and light gathering ability sufficient to permit taking of many indoor pictures with the aid of illumination from ordinary lighting fixtures. Cameras with $f/3.5$ or faster lenses generally fall in classification 3, mentioned in the preceding paragraph, and permit “candid” to be shot indoors under ordinary lighting with still less illumination and even less blur due to ordinary motion.

While we are on the subject of lenses it is desirable to point out that neither the speed nor freedom from distortion of a lens may be judged by the dealer or the purchaser on the basis of physical size

(Continued on page 69)



Some FACTS About SOUND

By

H. L. SHORTT

Clarion Institute of Sound Engineers

LIKE the man who couldn't find the woods because there were so many trees, the soundman has been confused by lists of the thousand-and-one prospects for such equipment. The time for such lists is past. Everybody knows that sound is now an extensive major business. Everybody knows that the equipment is extremely flexible, providing the answer to many varied problems requiring amplification or transmission of sounds electrically.

What the soundman needs is information concerning the relative importance of different types of prospects. Such information will help him sell.

In the box on this page entitled: "How Consumers Used Amplifiers" I show the purposes for which amplifiers purchased over a long period were actually used. These facts were obtained by questioning consumers, whose names and addresses were obtained from their source of supply, and while they show that equipment went over the counter for entertainment, communication, advertising, education and research in this order do not necessarily mean that entertainment uses should be concentrated upon to the exclusion of others. The facts *might* mean

that in a lightly saturated market area the soundman's obvious course was to skim the cream available without heavy sales expense in order to quickly build up a cash position for further investment in equipment. Or, in the case of a soundman long in the business in a more highly saturated area, these same facts might point to detailed mop-up tactics among the other four prospect groups.

I have a detailed breakdown of actual purchases from which this table was prepared, including such people as students, orchestras, and roller-skating rinks; manufacturing plants, business offices and amateurs; politicians, salesmen and retail stores, but see no point in again listing what should long ago have been obvious to the field.

There are a few facts gleaned from consumer comment on the questionnaires, however, which may help soundmen develop new selling approaches. For example: It was noted that 23 per cent of all equipment purchasers who used sound in business stated definitely that it had *helped* business.

There were, also, several comments which show the way the wind blows.

Wrote one user of sound equipment, obviously proud and pointing clearly toward new business: "I have the only all-electrified band in New England!" Wrote another: "I wanted an amplifier with greater range than that of the average radio set for the best possible record reproduction." Another: "My sound system is of great assistance in plant management." Still another: "We decided we needed a system and called a man we knew."

INTERESTING and instructive sidelights gleaned while conducting the consumer survey were the figures in the box labelled: "How the Trade Sold Sound," also on this page. Amplifiers sold to the trade by one large distributor, who caters indiscriminately to any and all types of retailers interested in such equipment in an extensive area, showed that sales in the past three months had been made to servicemen, sound specialists and radio dealers, in this order.

Here again, interpretation of what such figures mean would vary with the distributor, and also with the area in which he was primarily interested in obtaining greater dis-

(Continued on page 68)

How the TRADE Sold Sound

SERVICEMEN	59%
SOUND SPECIALISTS	28
RADIO DEALERS	13
88%	OFFERED RENTALS
40%	STOCKED EQUIPMENT
17%	DEVOTED FULL TIME

How CONSUMERS used Amplifiers

ENTERTAINMENT	68%
COMMUNICATION	13
ADVERTISING	9
EDUCATION	6
RESEARCH	4



SENTINEL—Radio-Phono combination portable. Weight 27½ lbs. including batteries.

SENTINEL

Sentinel Radio Corp.
2222 Diversey Parkway, Chicago, Ill.



ADMIRAL

Continental Radio and Television Corp.
3800 Cortland St., Chicago, Ill.

MODEL 331-4F— Portable battery superhet has self-contained, concealed loop antenna, automatic volume control, on-off indicator, 5 in. permanent magnet type speaker, flat "non-catch" bakelite knobs, frequency range from 535 to 1610 kc. Shipping weight, complete with batteries 13 lbs. List \$19.95. *Radio and Television Retailing, May, 1939.*



STEWART-WARNER

Stewart-Warner Corp.
1826 Diversey Parkway, Chicago, Ill.



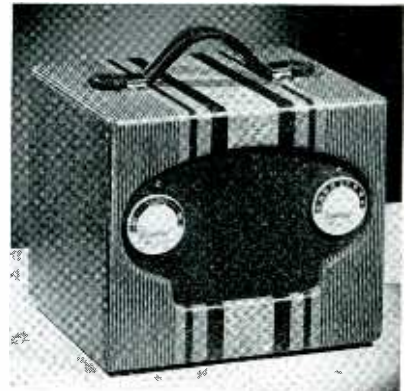
BATTERY RADIOS— For farm houses, summer cottages and homes without electricity, a table and a console model are offered in a popular price range. Low drain type tubes add to battery life. Cabined in matched walnut with attractive inlays, sets are equipped with dust-proof dynamic speaker, automatic volume control, large tuning dial and signal-type on-off indicator. Console lists in Chicago at \$39.95, table model at \$19.95, less batteries. *Radio and Television Retailing, May, 1939.*

Preview of

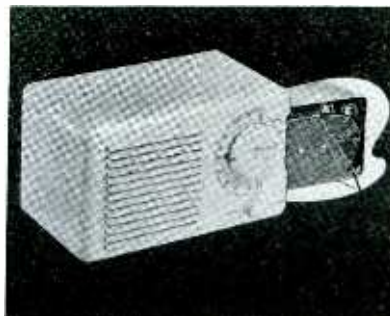
SONORA

Sonora Radio and Television Corp.
2626 W. Washington Blvd., Chicago

PORTABLE — "Playboy" model, illustrated, is distinguished by its small size, has a built-in battery pack which will give 150 hours of battery life, tunes 1720 to 535 kc. Features built-in "Sonorascope Air-Magnet", automatic volume control, P.M. dynamic speaker, a carrying weight of 9½ lbs. "Playmate" has all of the features and economy of operation of "Playboy," is a Deluxe model, has larger carrying case with hinged lid. Carrying weight 12 lb. "Playboy," Model PL-29 List \$19.95, "Playmate", Model XL-28, List \$27.95. *Radio and Television Retailing, May, 1939.*



MODEL TSA-105 — The "Cosmo" has built-in "Air-Magnet" feature which eliminates need for both aerial and ground. Other features are tuning range of 1720 to 550 kc.; operation from 110 volts a.c.-d.c.; 40 to 60 cycles; new type "half-moon" dial; 2 watts output; P.M. dynamic speaker; a.v.c.; beam power output tube. Available in modern plastic-molded cabinet in ivory or mottled walnut finish with ivory knobs. *Radio and Television Retailing, May, 1939.*



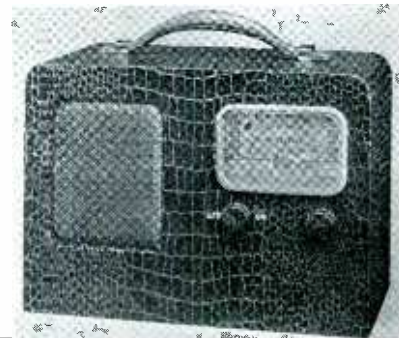
CROSLY

Crosley Corporation
Cincinnati, Ohio

PORTABLE—Model B429A, four tube superhet, has 5½ in. speaker, has batteries that give 250 hours service. Minimum battery drain is accomplished by use of new low drain 1.4 volt tubes. Receiver weighs 15 lbs. complete with batteries, requires no ground connections, operates from a high sensitivity loop antenna. An indicator on volume control knob shows when set is turned on to safeguard against waste of battery current. Covers broadcast band from 540-1600 kc. Control knobs are recessed. List \$19.99. *Radio and Television Retailing, May, 1939.*



New Products



AUTOMATIC RADIO MFG. CO., INC. offers battery operated a.c.-d.c. portable. 122 Brookline Ave., Boston, Mass.

BELMONT

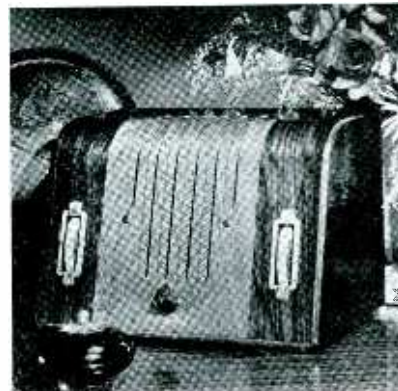
Belmont Radio Corporation
1257 Fullerton Ave., Chicago, Ill.



PORTABLE—Model 407 distinguished by low weight and unique placement of dial and control knobs, the battery portable illustrated is cased in a traveling-bag design cabinet. Width 12 $\frac{1}{4}$, height 8 $\frac{1}{4}$, depth 4 $\frac{1}{4}$ in. *Radio and Television Retailing, May, 1939.*

G-E

General Electric Co.
Bridgeport, Conn.



MODEL GB-401, table type battery radio has four-tube superhet circuit, two bands, five in. permanent magnet speaker, automatic volume control. Off and on switch, volume control, and station selector are of drum type. Cabinet is streamlined in walnut and rosewood. Suggested Eastern list price of \$21.45. *Radio and Television Retailing, May, 1939.*

WESTINGHOUSE

Westinghouse Electric Supply Co.
150 Varick Street, New York, N. Y.

PORTABLE—Model WR-675 "Carryette" with traveling case is a four tube superhet, has low-drain tubes, a.v.c., built-in loop antenna, 5 in. dustproof P.M. dynamic speaker, recessed tuning knobs, on-off indicator, weight 13 $\frac{1}{2}$ lbs. Case is rubberized, gives full protection to radio, looks like a piece of high grade luggage. Antenna is placed in end of case instead of in the back. "A" and "B" batteries are timed to need replacement at the same time, give approximately 300 hours of service. *Radio and Television Retailing, May, 1939.*



PILOT

Pilot Radio Corp.
37-06 Thirty-sixth Street, Long Island City, N. Y.



TELEVISION RECEIVER—Model T-909 is a nine in. tube receiver with 5 channels on push buttons. Controls for sound, contrast, background, vernier. Total number of tubes, excluding cathode ray tube—21, black and white image, band width is 4 mc., one stage of r.f. amplification, three stages of i.f. amplification. *Radio and Television Retailing, May, 1939.*

EMERSON

Emerson Radio and Phonograph Corp.
111 Eighth Ave., New York, N. Y.



PORTABLE—Model CT-275 is a self-powered portable 5 tube superhet. Tuning range is 530 to 1600 kc. Has automatic volume control, beam power output, permanent magnet dynamic speaker, two stages of i.f. amplification, self-contained loop antenna, acoustically constructed cabinet. List \$19.95. *Radio and Television Retailing, May, 1939.*

MISSION BELL

Mission Bell Radio Mfg. Co., Inc.
1455 Venice Blvd., Los Angeles, Calif.



PORTABLE—Model 500, a battery operated set designed to provide extra long distance ability and tone quality. A capacity coupling system to the external antenna terminal provides an efficient input circuit, thereby assuring good sensitivity when an outside antenna is used. Battery life from 250 to 350 hours, 5 $\frac{1}{2}$ in., P. M. speaker, weight 17 $\frac{1}{2}$ lbs. List \$29.95. *Radio and Television Retailing, May, 1939.*



**New York-Newark Dealers
Acclaim RCA Victor**

TELEVISION

Remember This Important Selling Point About RCA Victor Television Receivers: THEY ARE THE TELEVISION SETS BACKED BY A SEVEN-YEAR \$2,000,000 FIELD TEST!

The warm reception accorded the new RCA Victor television receivers has proved that once again RCA Victor leads—demonstrating conclusively that RCA's years of research and development in television—\$2,000,000 spent during the last seven years for extensive field tests—have all been well worth while. For RCA Victor has, as usual, produced the finest... Read the statements of the press and New York and Newark dealers. Plan now to look ahead and grow with RCA Victor!

RCA Victor Helps Dealers

NEW YORK HERALD TRIBUNE said:...
"Thousands see... television... even doubters find invention debut a success. Many to whom television had been only a name, admitted afterward that the demonstration exceeded anything they had thought possible."

NEW YORK DAILY MIRROR said:...
"... When Mr. and Mrs. America get an eyeful and earful of the television exhibits and demonstrations at the World's Fair anything may happen!"

Mr. John B. Duff, W. Wilderotter Sons, Inc., 491 Springfield Ave., Newark, N. J., said: "Six of these \$600.00 RCA Victor Television Receivers were sold in Newark less than one week after the demonstration to dealers at Radio City, New York. I sold one of them myself. The fact that all were sold sight unseen is an indication of the confidence the public has in RCA Victor merchandise."



RCA Victor Model TT-5 Television Attachment, a sensational instrument that provides television sight—while the sound is heard through radio loudspeaker. It is attached to radio by simply plugging it into television jack, an important part of RCA Victor models for the past two years. (Same jack as used for Victrola Attachment.) May also be easily attached to other modern AC sets. This television attachment reproduces a picture 3 $\frac{3}{4}$ " x 4 $\frac{3}{4}$ " in size. Other important features include direct viewing of picture, 16 tubes plus kinescope, and 5 television channels. Backed by \$2,000,000 field test.

For finer radio performance—RCA Victor Radio Tubes

Trademarks "RCA Victor," "Victrola," "Magic Eye," "Victor," "Bluebird," Reg. U.S. Pat. Off. by RCA Mfg. Co., Inc. *Prices f.o.b. Camden, N. J., subject to change without notice.

RCA Victor Television Model TRK-12. Largest RCA Victor console, this instrument reproduces a picture 7 $\frac{3}{4}$ " by 9 $\frac{3}{4}$ " in size. It features indirect viewing through mirror, has 36 tubes plus kinescope, offers a choice of 5 television channels, and has many other important points that will help make this instrument profitable for you.

RCA Victor Model TRK-9 (not illustrated) is similar to Model TRK-12, except that it is direct viewing and uses a 9" kinescope.

RCA Victor Television Receivers are backed by a \$2,000,000 field test.

Turns the Wheels of Profit . . . Everywhere Cash In on Television Now!

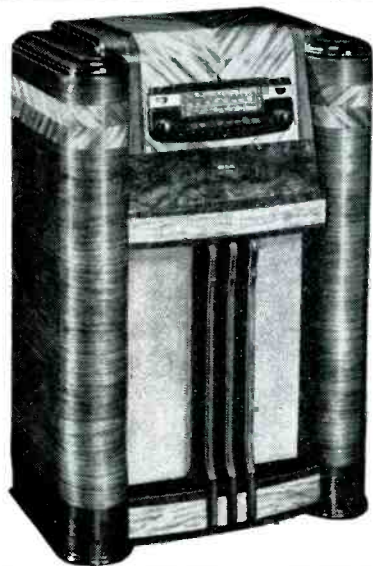
Designed for use with

TELEVISION ATTACHMENT

A Sure-Fire Sales Feature of the
New RCA Victor Radios and Victrolas!

RCA Victor "look ahead" planning has made television a sales feature of the new RCA Victor radios.

This is accomplished by using the Victrola plug-in jack—an important part of all RCA Victor sets for the past two years—in conjunction with the television attachment illustrated on the page at left. This attachment may be plugged into Victrola jack and like magic your customers have a television set. The television attachment produces the sight—the radio brings in the sound. As a result, your customers have a modern, inexpensive radio today—a modern, inexpensive television receiver when programs are available in your city. That's why it will pay them to buy now. Feature this idea—and profit!



RCA Victor Little Nipper Model 9TX-31 is designed for use with television attachment. In addition to the Victrola-Television jack, it has many other excellent sales features—plus a price that means business for you! **\$9.95***

This great eight-tube, three-band radio has Victrola-Television jack, RCA Victor Electric Tuning for 6 stations, Magic Eye, RCA Victor Metal Tubes, Victrola Push-Button Switch, 12" Electro-Dynamic Speaker and many other brilliant features housed in a glorious Modern style Cabinet Model 98K2 **\$89.95***



All Dealers can make Profitable use of this RCA Victor 3-way Display!

It doesn't make any difference whether your city has television or not! This display in your window will attract new business to your store for it graphically tells the RCA Victor "look ahead" story—enables you to cash in now on the public's tremendous interest in television! By all means get this display from your RCA Victor distributor.



Mr. Charles Johner, Willis Radio, 362 Willis Avenue, Bronx, New York, said: "I think 'Designed for use with Television Attachment' is probably one of the strongest sales stories a radio dealer has had to tell in years. And believe me, with the new RCA Victor radios so packed with value this 'extra' selling punch is going to mean rejuvenated set business for me."

Mr. Mark M. Marks, Pres. Radio Sales Corp., 357 Millburn Ave., Millburn, N. J., said: "It is a fine thing to be associated with a company like RCA Victor. Their engineers are always looking ahead—and that one virtue is going to mean volume sales for me. Thanks a million for the swell new radios and your slogan 'Designed for use with Television Attachment'."



RCA Victor

RCA Manufacturing Co., Inc., Camden, N. J. • A Service of the Radio Corp. of America

More RCA Victor Profit Wheels



This couple is inspecting glass-enclosed interior of RCA Victor Television receiver. You can capitalize on the tremendous publicity that is being given RCA Victor Television if you feature RCA Victor Radio Tubes.

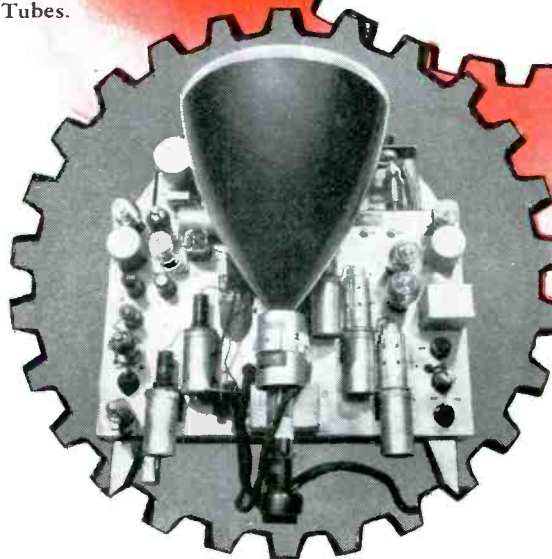
RCA Victor Radio Tubes have the Advantage of RCA's **TELEVISION** Experience

Let the radio owners in your neighborhood know you use and recommend RCA Victor Radio Tubes—the tubes built by the company that brought television to America... the tubes that are backed by the same careful research and built with the same skill that made the television dream an actual fact. The public will be impressed with this story—will come to you for RCA Victor Radio Tubes!

RCA invites you to visit
its display at the
**NATIONAL PARTS
TRADE SHOW**
Stevens Hotel, Chicago
June 14-17

Over 335 million RCA radio tubes have been purchased by radio users... In tubes, as in parts and test equipment, it pays to go RCA All the Way.

Trademark "RCA Victor" Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc.



Typical RCA Victor Television chassis shows large number of tubes used. This is going to help you boost your RCA Victor Radio Tube business because eventually all of these tubes will have to be replaced.



RCA Victor RADIO TUBES

RCA MANUFACTURING COMPANY, INC., CAMDEN, N. J. • A SERVICE OF THE RADIO CORPORATION OF AMERICA

that Spell Busy Days for You...

Become an *RCA Victor* Music Merchant

Increasing RCA Victrola Sales Mean Increasing Business in **VICTOR AND BLUEBIRD RECORDS**

THINK WHAT THE RECORD BUSINESS OFFERS:

1. Low capital investment—quick turnover.
2. Cash sales—no installment risks.
3. Increased store traffic.
4. Repeat sales.
5. No trade-ins.
6. Stimulation to your instrument sales in all price brackets.

You be the one to reap the rich fruits of your own endeavors! Every sale you make of an RCA Victrola or RCA Victor Record Player inevitably means many repeat sales in Victor and Bluebird Records. Make these sales yours! Take the easy step that makes you a complete RCA Victor music merchant. Put in Victor and Bluebird Records!

Your RCA Victor distributor will gladly furnish information about basic stock and plans for quick, inexpensive installation of a Victor and Bluebird Record department. He will also tell you the complete advertising story

For finer radio performance—RCA Victor Radio Tubes

—radio, magazines, and newspapers; and show you the many sales-making plans that are yours as an RCA Victor music merchant.

More than 100,000 joined the Victor Record Society last year!

One of the great factors in the tremendous increase in Victor and Bluebird Record sales is the Victor Record Society. Most of the 100,000 members who joined last year continue to buy Victor and Bluebird Records... and thousands graduated to higher-priced RCA Victrolas.



**Victor Record Society offer...
\$22.95 value in Victor or Bluebird
Records and RCA Victor Record
Player... for \$14.95**

Special offer provides \$14.95 (list price) RCA Victor Record Player... \$7.50 in any Victor or Bluebird Records... 3 months' subscription to Victor Record Review... Victor Record Society membership... for \$14.95. RCA Victor Record Player can be attached to any modern AC radio at little or no expense, plays records with tone comparable to that of set.

Trademarks "RCA Victor," "Victrola," "Victor" and "Bluebird," Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc.

MAIL COUPON FOR COMPLETE INFORMATION

RCA Manufacturing Co., Inc.
Camden, N. J.

Please send me complete details about the merchandising of Victor and Bluebird Records

Name _____

Address _____



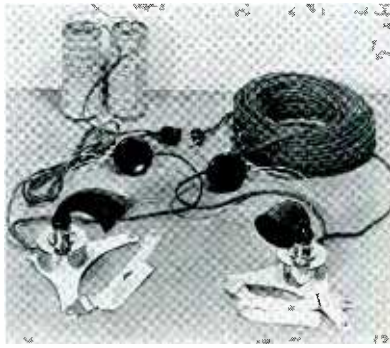
VICTOR RECORDS

RCA MFG. CO., INC., CAMDEN, N. J. • A SERVICE OF RADIO CORP. OF AMERICA

PREVIEW OF NEW PRODUCTS

STROMBERG-CARLSON Stromberg-Carlson Telephone Mfg. Co. 100 Carlson Road, Rochester, N. Y.

PORTABLE TELEPHONE SYSTEM—Model No. 100 portable telephone system is designed as an aid to installing television receivers by providing communication between technician at receiver and man on roof when best location for antenna placement is being determined. Breast plate transmitters and headset receivers allow communication and leave hands free for adjustment of apparatus. Two dry cells supply power for system. Weight 8 lbs. *Radio and Television Retailing, May, 1939.*



JOHN MECK

John Meck Instruments
164 N. May St., Chicago, Ill.

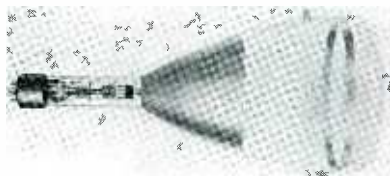


TESTER—New, lower priced Tubemaster, the Pattern 30, sells for \$24.50 complete with leatherette carrying case. Provision is made for performance tests of all tubes, including new loctal, 35 volt, 50 volt and tapped filament rectifier tubes. Meter dial is translucent and illuminated from below. Neon test will show tube element shorts and leakage, as well as testing all types of ballast units. Guaranteed for 2 years against obsolescence. *Radio and Television Retailing, May, 1939.*

DUMONT

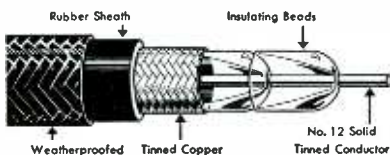
Allen B. DuMont Labs, Inc.
2 Main Ave., Passaic, N. J.

CATHODE-RAY TUBES—Additions to the company's line of cathode-ray television tubes include 5 in. and 9 in. intensifier types. Type 54-11-T, a 5 in. teletron may be obtained either with or without intensifier electrode, selling at \$30 and \$27.50 respectively. Type 94-11-T, illustrated, a 9 in. teletron is made only with intensifier electrode, sells for \$65. Both types have black and white screens as standard. *Radio and Television Retailing, May, 1939.*



BELDEN

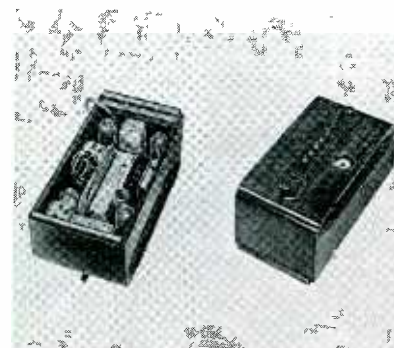
Belden Manufacturing Co.
4689 W. Van Buren St., Chicago, Ill.



COAXIAL CABLE—Transmission cable which uses air as the principal dielectric has been specially engineered for use as a transmitting antenna cable. For photoelectric and television circuits or in any other application in which low loss properties are desired. Belden 8215 consists of size 12 solid tinned copper conductor over which is threaded low loss insulating bead. Over the series of beads is closely woven tinned copper shield, sheathed in rubber and covered with weatherproofed braid. *Radio and Television Retailing, May, 1939.*

PHANTOM TUNETTE

Beverly Electric Mfg. Co.
Beverly Hills, Calif.

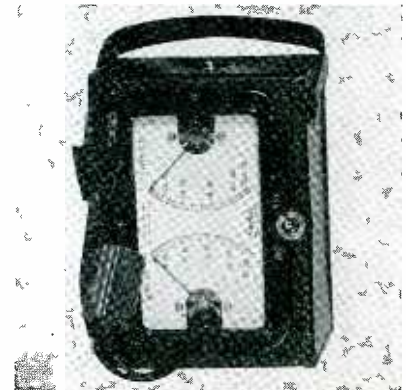


REMOTE CONTROL—Will operate one or more radios without connected wires, requiring no change in the radio. Five tubes are employed in the process of converting the incoming signal to a predetermined one not used by any station, and to which the radio is tuned. Provides 6 station push button and dial tuning with volume control. *Radio and Television Retailing, May, 1939.*

TRIPLETT

The Triplett Electrical Instrument Co.
Bluffton, Ohio

TESTER—Model 2000 portable appliance tester provides quick and accurate means of testing power consumption of radios, refrigerators, and household appliances under actual running conditions. Has a wattmeter and voltmeter—twin instrument style—with leather carrying case. Line voltage and wattage can be read simultaneously. Direct wattmeter readings are 1500 watts at 220 volts, and 750 watts at 110 volts. Dual voltmeter scale reads 150-300. List price \$29.00. *Radio and Television Retailing, May, 1939.*



OPERADIO

Operadio Manufacturing Co.
St. Charles, Ill.



P. A. SYSTEM—Model 164 mobile public address system especially designed for the small sound truck or car. An a.c.-d.c. combination, employing a vibrator as a converter and utilizing the Operadio adapter plug for change-over from a.c. to d.c. operation, or vice versa. Single speed 78 r.p.m. motor and turntable for 10 in. and 12 in. records. Features "Economizer Control" for conservation of battery supply. List \$160. *Radio and Television Retailing, May, 1939.*

THORDARSON

Thordarson Electric Mfg. Co.
500 West Huron St., Chicago, Ill.

AMPLIFIER—A streamlined 20 watt amplifier has inputs for two microphones and one Phono or r.f. tuner. All may be mixed and controlled independently. *Radio and Television Retailing, May, 1939.*





EVERY TYPE YOU NEED

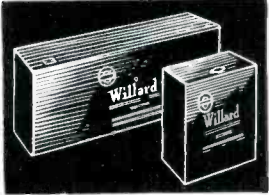


An attractively designed line of "A", "B", and "C" Dry Batteries

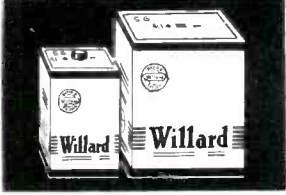
• You don't have to tell your customers that "Willard" means "Tops" in batteries. They know it! That's why Willards are easier to sell.

And whenever you sell a Willard dry battery, power pack or radio storage battery, you can rest assured that it will deliver long, trouble-free service. Why? Because we guarantee these batteries to be made of nothing but pure active materials. Because they have construction features that prolong their life. Because every battery is rigidly tested before leaving the factory. *All Willard Dry Batteries equal or exceed U. S. Bureau of Standards specifications!*

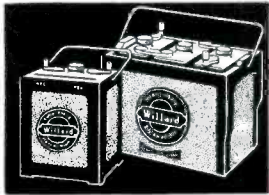
The Willard line gives you the completeness, the reputation and the quality construction for which the name "Willard" is famous! There is real money waiting for you in Willard's proposition. It contains not only a complete line of batteries but the kind of selling help that MOVES merchandise. Better write for the details today!



Power Packs finished in a shade to harmonize with the radio cabinet



New 1 1/2 volt "A" Batteries for portable sets using 1.4 volt tubes



2 and 6 volt "A" Storage Batteries for greater capacity



Dry cells for ignition, door bells, flashlights, all general purposes

WILLARD STORAGE BATTERY COMPANY
Cleveland, Ohio

Tell me about your SPECIAL Willard Battery proposition for radio dealers and how it can bring me more profit.

NAME _____

ADDRESS _____

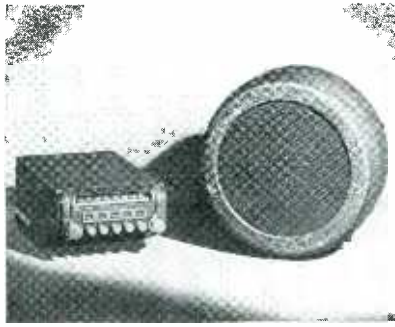
CITY _____ STATE _____

It Will PAY You to Mail This Coupon Today!

PREVIEW OF NEW PRODUCTS

RCA

R C A Manufacturing Company
Camden, N. J.



MODEL M-70—Auto radio, 7 tube two-unit radio features "instantly selective" push-button tuning of five stations. May be installed in any automobile without use of dash plates. Has 8 watts push-pull output and 8 in. speaker. List \$44.95, f.o.b. Camden, N. J. *Radio and Television Retailing, May, 1939.*

CLARION

Transformer Corporation of America
69 Wooster St., New York, N. Y.

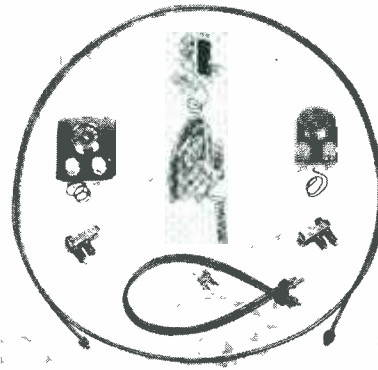


MODEL A-30 MR—Eighteen to twenty-five watt, 6 volt d.c., 110 volt a.c. mobile amplifier and system features high power at low cost. Built-in a.c. and 6 volt power supply, instantaneous change-over. Optional phono turntable and crystal pick-up, three input channels, mixing facilities, tone control and output impedances of 2 to 500 ohms. Amplifier only with phono attachment, less tubes, list \$89.80. Complete sound systems \$155.12. *Radio and Television Retailing, May, 1939.*

DUAL

Dual Remote Control Co.
505 Guaranty Bldg., Detroit, Mich.

RECORDER—Model MI-21701 records and reproduces 10 or 12 in. records at 78 r.p.m. using the outside-in method of recording. Complete with amplifier, loudspeaker and visual indicator. Portable enclosed in a sturdy carrying case, weight 37½ pounds. List \$179 complete with mike.



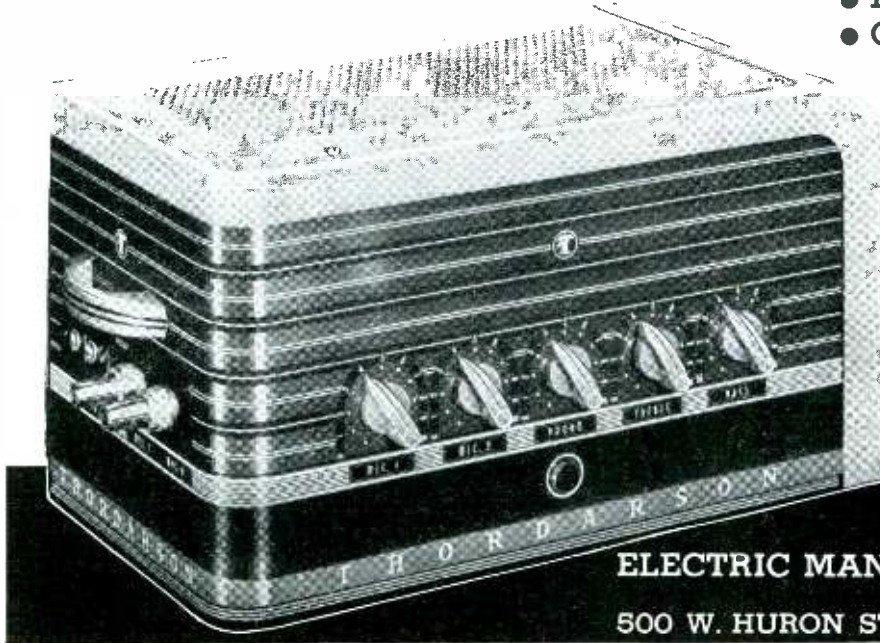
REMOTE CONTROLS—Remote controls for radio installations in autos, aircraft, seacraft. Suitable for mounting in upholstery beside the back seat of automobiles in that type of installation, the assembly includes back seat control for use with assembly's dashboard control coupler unit and flexible shaft. Pre-assembled, has interchangeable gears to fit different cars and different sets. *Radio and Television Retailing, May, 1939.*

THORDARSON AMPLIFIERS for 1939

Let your EYE and EAR decide—

**NEW 20-WATT
A Jewel in Steel**

- Quality at . . . \$
 - Beauty at . . . \$
 - Performance at . . .
 - Compactness at . . .
- # 75⁰⁰
- LIST



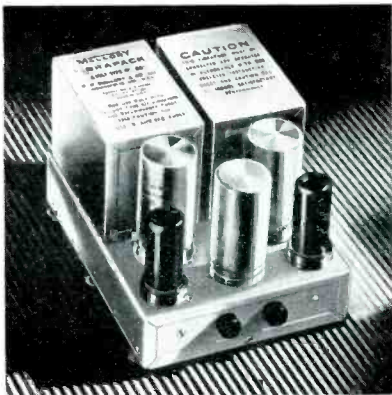
Model T-25W20

Controls: Two microphone, one phono, one treble and one bass.

See your parts distributor or write factory direct for free Catalog No. 600-D on the full line. Lists eight models including a new 28-watt mobile unit.

THORDARSON
ELECTRIC MANUFACTURING COMPANY
AMPLIFIER DIVISION
500 W. HURON STREET CHICAGO, ILLINOIS

MALLORY



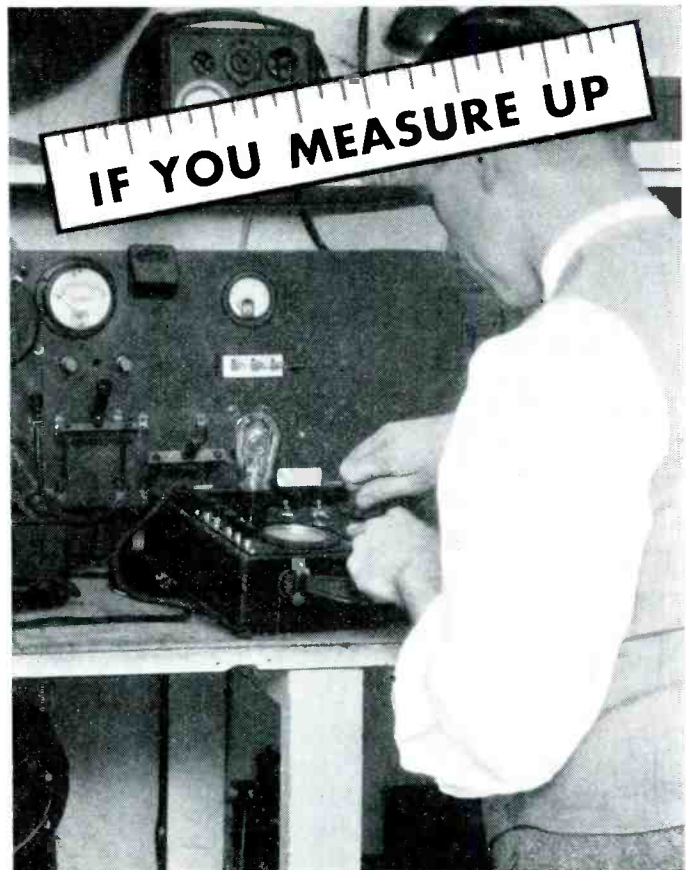
P. R. Mallory and Co., Inc.
Indianapolis, Ind.

VIBRAPACK—Three new vibrapack units have been added to the line of vibrator power supplies designed to supply B voltage to operate portable and mobile radio transmitters and receivers, public address systems, and scientific apparatus. VP-555 dual unit with rating of 300 volts at 200 ma. load, 6.3 volts input, list \$37.50; VP-557 a 6.3 volt dual unit having output of 400 volts 150 ma., list \$37.50; VP-F558 a 32-volt unit of the tube rectifier type similar to the VP-554 with 300 volt 100 ma. nominal output. List \$20.00.

SPRAGUE

PROTECTIVE CAPS—"Life-guard" Protective Caps which fit over condenser terminals insulating them so that there is no possibility of the operator making accidental contact if he feels that he has taken necessary safety precautions by turning off power supply when working on apparatus which calls for use of high voltages. Supplied free of charge with all Sprague High Voltage Transmitting Condensers, or may be had separately for use on old condensers at 25c, list, per pair. *Radio and Television Retailing, May, 1939.*

Sprague Products Co.
North Adams, Mass.



you qualify

Tung-Sol could not offer their jobbers and dealers the advantages of selective distribution were they to sell just anyone. Read these questions carefully and "If you qualify," write today.

Is yours a representative service business?

Is your location free from interference with already established Tung-Sol Agents?

Can you compete in technical knowledge and service set-up?

Can you move a reasonable tube stock every three or four months?

Are your premises adapted to use sales-producing advertising displays to advantage?

Will you maintain Tung-Sol established retail prices?

Tung-Sol Lamp Works Inc. Dept. B, Radio Tube Division
SALES OFFICES: Atlanta · Chicago · Dallas · Denver · Kansas City
Los Angeles · New York · General Offices: Newark, New Jersey

TUNG-SOL RADIO TUBES



VIDEOR sight-and-sound receivers for the home.

KINET . . . the only portable television extension.

Send for free booklet "Facts About Television".

American Television Corp.

130 W. 56th St.

New York City

PREVIEW OF NEW PRODUCTS

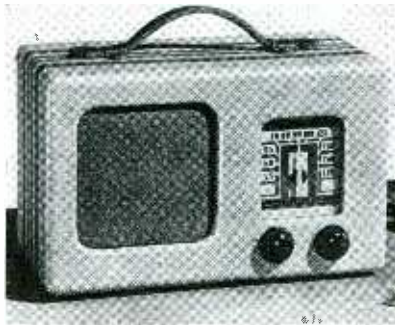
PHILCO

Philco Radio and Television Corp.
Philadelphia, Pa.



MODEL 100-T—A specially designed 1 1/2 volt farm radio with four new low drain tubes, high output speaker, single long life battery block with one plug-in connection and a.v.c. Horizontal dial makes for easier vision when tuning. Covers standard broadcasts and state police calls. Cabinet of vertical and horizontal sliced walnut with Zebrano inlays. *Radio and Television Retailing, May, 1939.*

MODEL 81-T—"Little Pal" portable radio requiring no plug-ins and no ground, weighs 9 lbs. Covered with fabricoid water-proof luggage leather. Incorporates booster antenna circuit, new type speaker and radically different circuits which cut battery drain. As a result of low battery drain, set operates from single combination A and B battery. *Radio and Television Retailing, May, 1939.*



MAJESTIC

Majestic Radio and Television Corp.
2066 W. 50th St., Chicago, Ill.



MODEL 671L—Six tube a.c.-d.c. (including ballast unit) superhet with 5/2 in electro dynamic speaker. Tuning range 535 to 1750 kc. Self-contained Hi-Q aerial, 6 tuned circuits, 2 watt output, full vision aeroplane type dial, automatic volume control, cabinet in ivory or walnut modernistic design. *Radio and Television Retailing, May, 1939.*

SCHLOSS

Schloss Brothers
801 East 135 St., New York, N. Y.



RECORD CABINET—Hep-plewhite cabinet for phonograph records holds 20-twelve pocket albums or 250 records. Finished in walnut or mahogany. Dimensions—32 1/2 in. high, 20 1/2 in. wide, 14 3/4 in. deep.

PARMAK

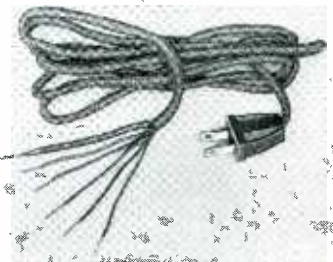
Parker-McCrory Mfg. Co.
Kansas City, Mo.



ELECTRIC FENCE CONTROLLER—Field Master Model operates from four to six months on six-volt multiple or hotshot dry battery. Special attention has been given to radio interference and shielding. Uses only one wire on light stakes. Charges all line and cross fences for the average large farm. Five models priced from \$9.90 to \$19.75. *Radio and Television Retailing, May, 1939.*

MICAMOLD

Micamold Radio Corporation
1087 Flushing Ave., Brooklyn, N. Y.



UNIVERSAL RESISTOR CORD—Unicord, universal resistor cord, is of conventional appearance except that three extra colored lead terminals are taps from the resistor. By connecting together various combinations of the colored leads, many different resistance values can be obtained, ranging from 22 to 330 ohms. *Radio and Television Retailing, May, 1939.*



HEAR YE, HEAR YE, SENTINEL'S NEW BATTERY PORTABLES ARE THE FASTEST SELLING, LOWEST PRICED IN AMERICA!

Sentinel

QUALITY RADIO SINCE 1920

**AC MODELS
FARM MODELS**

**A COMPLETE LINE
SENSIBLY PRICED**

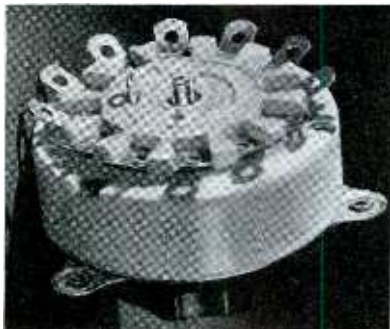
Sentinel Radio Corporation • Dept. RR • 2222 Diversey Pkwy., Chicago

PREVIEW OF NEW PRODUCTS

OHMITE

Ohmite Manufacturing Co.
4835 Flournoy St., Chicago, Ill.

TAP SWITCH—Model 412, a 40 ampere tap switch, is one of a complete new series of high amperage, heavy-duty, rotary, multi-point, selector tap switches. For circuit switching requirements for battery chargers, x-ray and diathermy equipment, tapped transformers, radio transmitters, arc welders, spot welder, ventilating fans, motor controls, etc. Model 412 is rated for 240 volt a.c. non-inductive circuit, is 4 in. in diameter, is equipped with a maximum of 12 contacts. *Radio and Television Retailing, May, 1939.*



ADVANCE—Radio "A" and "B" batteries for 1.4 volt receivers are made by Advance Battery Co., 49 Nassau St., Brooklyn, N. Y. "B" batteries have duplex socket to take both large and small 3-prong "B" battery plugs. List price for 45 volt "B" batteries \$1.50, for 1.4 volt "A" batteries \$0.50 and \$0.95.

ATR—American Television and Radio Co., 300 East Fourth Street, Saint Paul, Minn. announces 1/2 volt and 3 volt synchronous and non-synchronous vibrators for self-contained portable receivers. The efficiencies of the power supplies using these vibrators are in the order of 50 to 60% which makes feasible vibrator-operated portable receivers and eliminating expense and maintenance cost of "B" batteries. *Radio and Television Retailing, May, 1939.*

C-D—A complete line of Dykanol capacitors has been announced by the laboratories of the Cornell-Dublier Electric Corp., South Plainfield, N. J. which are designed specifically for oscillator and filter circuits in television transmitters. Claimed to remain extremely constant under all temperature and climatic conditions and to offer a wide safety range which enable them to take the heavy transient surge voltages that obtain in television circuits. Supplied with inverted mounting features and heavily insulated terminal structure. *Radio and Television Retailing, May, 1939.*

COMFORTAIR—Made by the Comfortair Engineering Company, 2919 South Wabash Ave., Chicago, Ill., a portable air conditioner requires no water pipe connection, no special wiring. Plugs into light outlet. Cooling capacity is 4000 B.t.u. per hour, equal to melting of 27 lbs. of ice per hour. When cooling is needed it cools, dehumidifies, cleans and circulates the air. When cooling is not needed, it cleans, circulates the air, and ventilates the room. Of a size which fits on a window sill, cabinets are furnished in old ivory or dark green. Also available in walnut. *Radio and Television Retailing, May, 1939.*

I C A—Universal bracket cowl auto-antennas by the Insuline Corp. of America, 25 Park Place, New York, N. Y., require no drilling of holes, no marring of the car to install. Guaranteed against rusting, made of brass tubing triple chromium plated and stainless steel rod. Spring makes positive contact and prevents "rattling" of antennas when telescoped. Prices range from \$3.75 to \$5.00, list. *Radio and Television Retailing, May, 1939.*

STANCOR—Standard Transformer Corp., 1500 N. Halsted St., Chicago, Illinois, announces an attractively priced line of matching transformers which consists of two 15 watt and two 30 watt driver transformers, two line to grid driver transformers and six modulation transformers ranging from 15 to 600 watts. All units are tapped to give a wide range of impedances necessary for present, and anticipating needs of many future tubes. Units are housed in black rubberized cases. *Radio and Television Retailing, May, 1939.*



NEW MODEL AC-DC
DUAL VOLTAGE

350 to 5000 WATT
PRECISION WORKMANSHIP

STURDY COMPACT LIGHTWEIGHT
MORE THAN 40 TYPES IN STOCK

COMPLETE ELECTRIC PLANTS

UNAN A.C. ELECTRIC PLANTS supply electricity to operate A.C. RADIO, SHORT WAVE TRANSMITTERS AND RECEIVERS, PUBLIC ADDRESS SYSTEMS, MOVING PICTURE PROJECTORS, SOUND TRUCK APPARATUS, ELECTRIC TOOLS, LIGHTS and ALL APPLIANCES.

THOUSANDS IN USE IN ALL PARTS OF THE WORLD

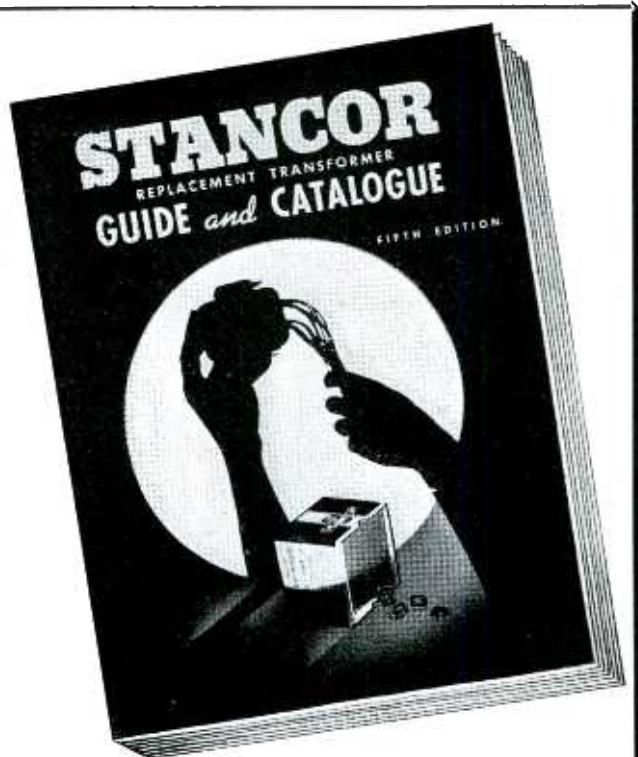
Used as STANDBY EQUIPMENT in Schools, Hospitals, Theatres and Public Buildings, for Emergencies caused by Power Line Failure due to Storms, Floods, and other Catastrophes. Save Property and Lives. Other Models for Farms, Camps, Homes.

Available in 110 or 220 Volt, AC—12, 32 and 110 Volt, DC—also Dual Voltage, AC-DC Types. Manual, Full-Automatic or Self-Starting. \$99 and up. Shipped READY TO RUN.

WRITE FOR DETAILS AND PRICES

D. W. ONAN & SONS

448 ROYALSTON AVE. MINNEAPOLIS, MINN.



READY NOW!

Get Your FREE Copy

Every Service Man should have the new 1939 STANCOR Guide and Catalog. It is the most valuable replacement transformer guide ever compiled . . . has many new features, additional items and increased listings . . . it saves time.

This new **ALL-IN-ONE** Replacement Guide and Catalog contains:

- Lists all Transformers and Choke requirements for popular radio models, including 1939 models.
- Listings from Rider manuals and original factory service notes, to assure accurate physical as well as electrical characteristics.
- Correct tube listings for all sets.
- All prices shown—no need to refer elsewhere.
- Output chart—instantly shows correct unit with any available tube—exclusive.
- The only 100% replacement transformer service.
- Additional listings to the famous Type-M Transformer line—the industry's most popular power replacement.
- Lists new Universal Motor-Winding Power Transformers—exclusive.
- Lists new complete line of Universal Output Transformers.
- Only complete uncased audio line, from 1/2" to 1" cores with all ratios available.
- Small uncased driver transformers, the hard-to-find kind.
- Exact duplicates.

Ask your jobber for your FREE copy today or write us.

STANDARD TRANSFORMER CORPORATION

1500 N. Halstead Street, Chicago



NEW PILOT PILOT—*Frank V. Goodman*, vet executive associated in past years with such firms as Sonora Phonograph and United American Bosch, has joined the Pilot Radio Corporation as sales manager to help president I. Goldberg put over an aggressive new national campaign

NAB-RMA Drive Well Under Way

RMA votes extra appropriation. Broadcasters preparing special May programs. Tie-in with Music Week urged

WASHINGTON—From headquarters of the joint NAB-RMA campaign to promote goodwill for the entire radio industry, broadcasting as well as set manufacturing and distribution, comes word that in the first special week of this year's round effort beginning April 17 dealer-distributor cooperative planning meetings were held in over 150 cities, with more than 400 broadcast stations sitting in.

NBC, CBS and Mutual staged 37 special coast-to-coast programs during the week, continued on schedules virtually as heavy throughout the remainder of April and were releasing advance program schedules continuing to tie in with the NAB-RMA drive through May to the press as this issue closed. Non-chain stations were ordering special World transcriptions designed to dramatize the human interest side of broadcasting in a serialized story to be continued weekly, and the throwing open everywhere of studios to the public wishing to see stations in operation was reported to be meeting with excellent public response.

So successful did the RMA consider early drive efforts that its Board of Directors, meeting April 26 in New York, voted what is understood to be a substantial additional appropriation to support continued promotion.

Called to the trade's attention by campaign headquarters late in April was the excellent opportunity to tie the campaign

On the Newsfront

in with National Music Week, beginning May 7. Suggested was a drive for "Tune-Up" work, including radios, pianos and other instruments.

Service Rate Raise Fails

MILWAUKEE—Renewal has been made of the contract between Milwaukee radio and appliance dealers and the Service Men's Union, Electrical Workers, No. B-1092, from April 15, 1939 to July 1, 1940.

Debate drew a provision that either side may open the agreement for reconsideration of hours or wages within the next six months. This provision was agreed upon after the Union withdrew its request for a reduction in hours from 48 per week to 40, and an increase in wages of \$5 per week. Following was the proposal debated:

	Present Scale	Proposed New Scale
Minimum weekly wage for senior servicemen	\$27.50	\$32.50
Minimum weekly wage for junior servicemen	21.00	26.00
Minimum weekly wage for apprentice servicemen	15.00	20.00
Service Men Employed by Distributors		
Minimum weekly wage for senior servicemen	\$30.00	\$35.00
Minimum weekly wage for junior servicemen	24.00	29.00
Minimum weekly wage for apprentice servicemen	17.50	22.50

The old contract which expired on April 15 provided for maximum working hours of not more than 48 hours a week, and not more than 9 hours a day with an allowance of 54 hours per week during the Christmas shopping period.

Features of the new contract provide for vacation of one week with pay to employees who have been in the service of the firm for one year or more. Employees who furnish test equipment shall receive 1 per cent weekly rental for it. Previously the Union had asked 12 days vacation and a test equipment rental of 2 per cent.

Merchandise Mart Dates Set

CHICAGO—Buyers who attend the International Housefurnishings Market at the Merchandise Mart, Chicago, June 5 to 17, will get the double attraction of a visit to one of the country's biggest studios, the National Broadcasting Company, if they will take the trouble to ask for free tickets.

RCA Ups Mullen

NEW YORK—Frank E. Mullen, former manager of the Radio Corporation of America's department of information, has been upped to the position of vice-president in charge of advertising and publicity.

New Philco Tube Policy

Places all types in four groups, establishing uniform list price for each group

PHILADELPHIA—Effective May 1 the Philco Radio & Television Corporation established a new tube policy, arranging all types in four groups, placing uniform lists on each group and establishing new distributor and dealer discount schedules.

The following tabulation shows the general setup:

No. Types	List	Dist. Price	Deal. Price
14	\$.75	\$.24	\$.30
17	1.00	.32	.40
37	1.25	.40	.50
136	1.50	.48	.60

According to C. E. Carpenter, grouping has required lowering of the list and shortening of the discount on certain types while on other types lists have gone a few pennies higher. Based on a weighted average, prices are, however, understood to be approximately the same overall as those previously in force.

Interesting is the Philco statement that the 75 cent and \$1 groupings cover 70 per cent of its total replacement tube business. Recommended to dealers is the carrying of fair stocks of tubes in these and the \$1.25 grouping, sparing purchase in the \$1.50 division except where current model requirements dictate increased stocks.

Fewer Tube Types?

WASHINGTON—A movement to reduce the number of new radio tubes introduced in the industry was ordered by the RMA Board of Directors at its meeting in New York April 26.

A special committee will study ways and means of accomplishing such reduction. W. R. G. Baker is chairman.

Phila. Storage Execs Upped

PHILADELPHIA—James M. Skinner has been elected chairman of the board at Philadelphia Storage Battery. James T. Buckley has been elected president, retaining his post as treasurer.

Sprague Buys Second Plant

NORTH ADAMS—Sprague Specialties Company has purchased a second set of factory buildings to be known hereafter as Unit 2, so doubling space available for production of condensers, resistors, push-button tuners and other products.

The new plant is located less than a mile from Unit 1, in which general offices and the Sprague Products Company headquarters will remain.

Stromberg Confab On

Distributors to see 1940 radio line, television

ROCHESTER—Gathering May 10 at the Sagamore Hotel here were Stromberg-Carlson distributors, promised a preview of the firm's 1940 line of radios and combinations plus television sets field-tested in the New York City area. Predicted, too, was a discussion of the company's work with sets capable of receiving frequency-modulated signals recently publicized in the newspapers, should such transmissions become generally available.

To television the Stromberg-Carlson "Labyrinth" tonal system will be especially valuable due to its ability to avoid vibration which might otherwise rattle delicately adjusted parts, according to radio sales manager Lee McCanne.

75 Places At Once

CHICAGO—L. L. Kelsey, radio division sales manager for the Stewart-Warner Corporation, spoke at 75 distributor's meetings spread out all over the country

on April 29 . . . by sending them recordings of his voice telling about the firm's new streamlined "Air Pal" receiver. Stewart-Warner's first-quarter radio sales showed a 300 per cent increase over the corresponding period of 1938, stated Kelsey.

Gerl Buys Sonora Phono

NEW YORK—Joe Gerl of Chicago, who originally licensed the firm to use its well-known trademark on phonographic equipment, saw it build up a successful national merchandising operation from 132-4 West 22nd Street under the management of Milton Benjamin, has purchased the Sonora Electric Phonograph Corporation and will actively participate in the firm's development.

From Gerl came word that Benjamin would continue in charge of management and sales and that special emphasis would be placed on promotion in the musical field during 1939, with improved manufacturing and sales facilities. Included in the existing line were console and table type phono-radios, record players of both the wired and wireless types and phonograph radio-amplifiers.

RSA Directors Elected

CHICAGO—Newly elected directors of the Radio Servicemen of America, selected by member balloting in Divisions holding elections this year, are as follows:

Serving until June 1942: George D. Wooley of Rock Island, Division 5; Fred Olson of Green Bay, Division 7; Joseph A. Cole of Detroit, Division 9.

Serving until June 1941: Frank L. Clark of Nashville, Division 11; Winston B. Jones of Washington, Division 13; Carl A. Rauber of Somerville, Division 15; George F. Duvall of Brooklyn, Division 17 and Norman W. Smith of Jamestown, Division 19.

Serving until June 1940: Carl Williams of Phillipsburg, Division 14; Ingvar Paulsen of Roxbury, Division 20.

All will be seated at the June 14 Board meeting.

Recently affiliating with the RSA have been chapters in Pekin, Illinois; Scranton and Stamford, bringing the total number of chapters to 57. Considering affiliation are groups in Coffeyville, Kansas; Jackson, Michigan and Wausau, Wisconsin.

G.E. RADIO & TELEVISION MEN ADVANCED AT BRIDGEPORT



PERRY F. HADLOCK (Above)—Now radio and television division manager

ARTHUR A. BRANDT (Below)—Manager of the division's merchandising services



FRED A. RAY (Above)—Just appointed manager of G.E. radio sales

HENRY A. CROSSLAND (Below)—First G.E. manager of television sales



PHILIP R. BUTLER (Above)—Manager of technical sales and service

CHARLES R. BARHYT (Below)—Commercial engineer for radio



RSA Convention Program

CHICAGO—The program of the second annual convention, Radio Servicemen of America to be held at the Stevens Hotel next month, is as follows:

Wednesday and Thursday, June 14 and 15—10:00 a.m., Meeting of board of directors, election of national officers, reports of retiring officers.

Friday, June 16—3:00 p.m., Lecture and demonstration of Facsimile by engineers from WGN. 4:00 p.m., "Test equipment for television", by Weston engineer. 7:00 p.m., Annual membership meeting, national president T. P. Robinson presiding. Presentation of reports by national officers, introduction of new national officers and directors. 8:00 p.m., "Television", discussion of installation and service problems by Albert Preissman of RCA Institutes. Includes demonstration continuing on Saturday.

Saturday, June 17—2:00 p.m., "Peak Limiting Amplifiers", by Douglas Fortune of Thordarson. 3:00 p.m., "Radio Noise", demonstration and lecture by engineer of Tobe Deutschmann. 4:00 p.m., "Modern Service Instruments", by Bruce O. Burlingame of Supreme. 7:00 p.m., "What Television will mean to the serviceman", by Sanford R. Cowan. 8:00 p.m., "Tube Developments", by a Hygrade-Sylvania engineer.

Bregle Leaves C-B

CHICAGO—Actively supervising manufacture as plant manager and treasurer of the firm until stricken by illness last fall, Ralph T. Bregle has retired from the Clough-Bregle Company.

William Meyenberg, former production manager for All-American, Carter and Silver-Marshall, becomes plant manager. Arthur R. Hall assumes the duties of treasurer in addition to those of secretary. Kendall Clough remains president in charge of engineering, with Fred Wellman as vice-president in charge of sales assisted by E. C. Carrington.

The Clough-Bregle plant, it is also learned, was being transferred to new and more favorably situated quarters at 5501 N. Broadway as this issue closed.

New Encyclopedia Out

NEW YORK—United Catalog Publishers new master encyclopedia (\$2.50), inch-thick book telling "what to buy and where to buy it", including illustrations, descriptions, specifications, prices of radio and associated equipment plus a classified directory of manufacturers, directories of trade names and trademarks, is now ready for distribution from the firm's offices at 258 Broadway.

Insuline Moves

NEW YORK—The Insuline Corporation of America has moved to larger quarters at 30-30 Northern Boulevard at Queensboro Plaza, Long Island City, where manufacturing facilities are more than doubled.



CLARION EXECS—Personnel changes just announced by Transformer Corp. of America's president *Hubert L. Shortt* include (left to right) *Roy Neusch*, now in complete charge of the firm's Clarion Institute of Sound Engineers; *G. J. Sandberg*, appointed engineer in charge of mechanical design; *N. Manicardi*, made general sales manager; *F. Dostal*, appointed chief engineer and *W. Whiteside*, new production chief

Excise Collections Up

WASHINGTON—Collections of the 5 per cent federal excise tax on radio and phonograph apparatus by the U. S. Bureau of Internal Revenue increased 52 per cent in the first quarter of 1939 ending March 31 as against the previous year, totalling \$1,332,993.99.

Oxford-Tartak Expanding

CHICAGO—The Oxford-Tartak Radio Corporation is enlarging its factory, adding additional laboratory and plant facilities to take care of an increased volume of business.

New Peerless Store

BROOKLYN—Peerless Radio Distributors of Jamaica, Long Island, has opened a branch store here at 82 Livingston Street, directly opposite Brooklyn Polytechnic Institute. It will carry a complete stock of radio parts, sound systems and amateur gear.

*Attend the National
Radio Parts Trade Show*

1939 JUNE 1939			
WED	THU	FRI	SAT
14	15	16	17

OPEN ONLY to
Jobbers, Manufacturers,
Manufacturers' Agents, and
Manufacturers' Engineers.

OPEN to Service-
men, Amateurs,
Retailers, Student
and others.

Stevens Hotel, Chicago

S-C Plans New Station

ROCHESTER—Stromberg-Carlson has applied to the FCC for permission to operate a two-kilowatt frequency-modulated transmitter here on 40,300, 41,200, 41,600 and 41,800 kc. According to vice-president Edward A. Hanover, the proposed station would be used for experimentation with high fidelity receivers designed to function on frequency modulation and so minimize static. Rebroadcasts from WHAM might furnish initial program material.

Belmont Sales Rise

CHICAGO—Sales of the Belmont Radio Corporation for the first three months of 1939 rose more than a quarter of a million dollars over the same period of 1938, according to P. S. Billings, president, totaling \$1,125,290 as compared with \$865,570.

Sales in all of 1938 reached \$5,279,064, and Billings stated that the outlook for 1939 was "decidedly promising."

Miller Wins Continental Award

CHICAGO—Irwin Miller of New Haven's Dale Radio Company won first award of \$100 in the Continental Radio and Television Corporation's competition in connection with a package deal for jobber salesmen.

Stein, Kassover Honored

NEW YORK—H. M. Stein and Sam Kassover, both prominent in trade circles here, have agreed to serve as honorary chairmen, Radios and Musical Instruments Division, United Jewish Appeal for Refugees and Overseas Needs.

50,000 H-S Feet

EMPORIUM—Hygrade Sylvania has approved plans for an addition to its plant here, giving 50,000 additional square feet of floor space. In the new quarters will be advertising, sales, accounting, administrative and engineering offices.

Television To Be At Parts Show

Transmitting and receiving apparatus will be demonstrated to trade. Attendance registrations running high

CHICAGO—From the office of the Radio Parts Manufacturers National Trade Show, Inc., comes word that television pictures are to be seen at the June trade show.

Beginning on Tuesday, June 13, and continuing through the entire duration of the Show the latest RCA television apparatus, including cameras, studio equipment and receivers, will be set up and operating. Artists of the NBC and local talent will be televised as they walk around the range of the camera in the studio. Four receivers will be in operation in a viewing room.

These arrangements have been made as an outgrowth of original plans to stage a simpler demonstration of television in conjunction with an engineering lecture. The result is, according to Ken Hathaway, that the men attending the trade show will see not "what's new in television" but "what's what in television" on a purely technical basis. The demonstration will be open to the trade only.

Simultaneously received from Show headquarters is word that the National Association of Radio Parts Distributors will meet at the Stevens Hotel at 2:30 p.m., June 13; The "Representatives" will meet at 10:30 a.m. on June 16.

Attendance at the Show is expected to top all previous records. More than 50 per cent of the total number of jobbing firms registered last year have already filled in registration blanks for this year's show.

W1XAL Transmits Tele Course

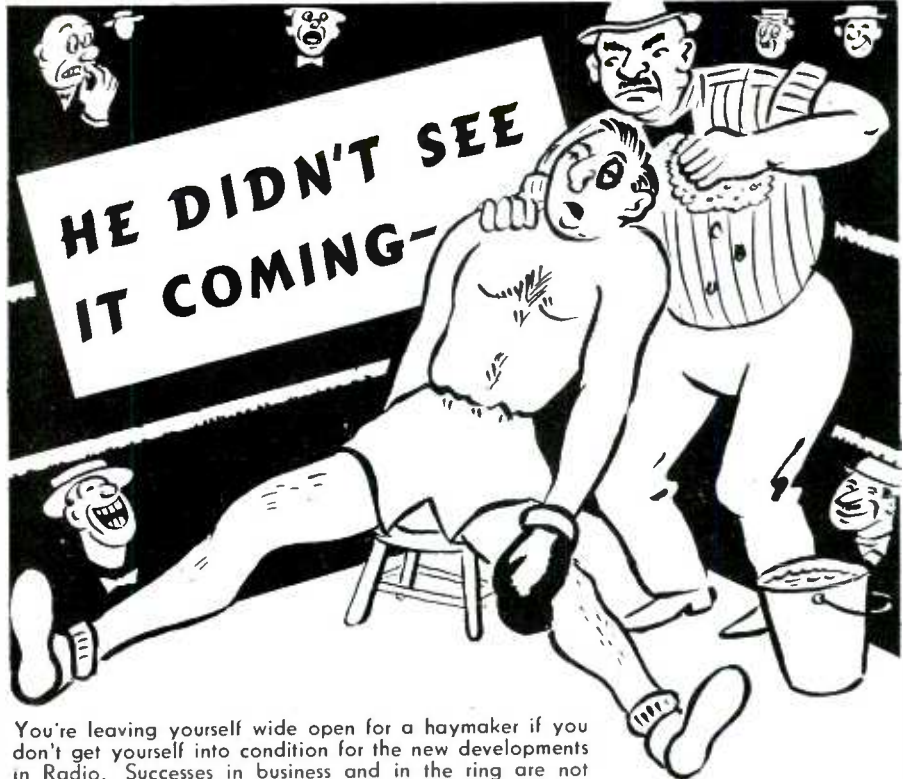
BOSTON—Shortwave station W1XAL, operated for educational purposes by the World Wide Broadcasting Foundation, begins May 15 and continues for eight consecutive weeks a broadcast course in "Practical Television" by Dr. C. Davis Belcher, assisted by chief engineer Hollis Baird.

Lasting a full hour apiece, lectures will go out each Monday evening at 8 p.m. EST simultaneously on 6.04 and 11.73 mc., will be repeated by electrical transcription at 11:30 p.m. EST on the same frequencies and again on Friday afternoons at 4 p.m. EST with the station's transmitters tuned to 11.79 and 15.13mc.

A forty page booklet of diagrams aiding the listener to follow the lectures is available for \$1 from the station, addressed at the University Club here.

RCA Tele School Working

NEW YORK—A special course in instruction to train members of the RCA Victor distributor and dealer service organizations in this area to install and adjust television receivers has been completed by 125, according to Edward C. Cahill, service manager.



You're leaving yourself wide open for a haymaker if you don't get yourself into condition for the new developments in Radio. Successes in business and in the ring are not made the night of "the fight." It's the training that counts. Be sure YOU are "ready" for the radio maintenance business of the 1940's by conditioning yourself in the basics of television, radio facsimile, the cathode-ray tube, photo electric cells, etc. You'll have to know as much about these developments as you know about a superhet—OR find the profitable part of your radio maintenance business going to better trained men.

The radio business is not a "fixed" business—it is progressing. So if you want to "be in there fighting" you had better get into training NOW! Read carefully the contents of the books described here and order today!

NEW — Out in April! "SERVICING BY SIGNAL TRACING" by John F. Rider

Use the system of servicing which is fastest—most modern—the system you can apply to all receivers regardless of age, type or make— independent of the kind of circuit or tubes used— independent of every limiting factor heretofore encountered. In this new book you learn what happens to the signal currents—the development of control voltages—and how all receivers are brought to a common servicing level. There is one thing which is common to every radio set—the signal. Read this book and you will be able to service the most complicated set with greater speed and less effort, for "Servicing by Signal Tracing" is based upon the most fundamental thing in any and all receivers, the signal.

300 pages.....\$2.00

Coming Soon! VOLUME II THE CATHODE-RAY TUBE AT WORK by John F. Rider

New applications of the cathode-ray tube during the past five years require that the 1939 serviceman know more about its operation, its characteristics and its performance.

The cathode-ray tube as the principal factor in television receiving sets is but one of the applications with which you will soon be faced. The use of the Oscillograph in industry is increasing every day in the testing of vibration, strength, engine pressure, etc. These industrial users need servicemen to maintain their oscillographs. You must be up-to-date on this vital subject. Watch for date of publication.

VOLUME I THE CATHODE-RAY TUBE AT WORK by John F. Rider

This book has established itself as a standard work. It is the most complete and practical book ever written on the subject. If you want to be ready for television you must have the facts contained in this book. This is the only book on the subject written especially for servicemen. Get it today! 336 pages—Over 450 illustrations.....\$2.50

THE OSCILLATOR AT WORK by John F. Rider

Eliminate guess work—KNOW! This new book tells all about oscillators that you use as a signal source—those in a receiver

or a wireless record player—in fact all oscillators. It not only explains the theory by means of simple illustrations, diagrams and curves, but gives you the practical facts—so you can combine theory and practice. Out in May—Place Your Order Now.

"An Hour a Day With Rider" Books—60c Each

- On AUTOMATIC VOLUME CONTROL
- On RESONANCE AND ALIGNMENT
- On D-C VOLTAGE DISTRIBUTION IN RADIO RECEIVERS
- On ALTERNATING CURRENTS IN RADIO RECEIVERS

AND DON'T FORGET "You Need All Nine RIDER MANUALS"

Stop tussling with baffling service problems. You need and will eventually buy Volume IX. Why wait! Get it and start benefiting from this vast storehouse of essential circuit data today.

Volume	Price	Covering
IX.....	\$10.00.....	1938-39
VIII.....	10.00.....	1937-38
VII.....	10.00.....	1936-37
VI.....	7.50.....	1935-36
V.....	7.50.....	1934-35
IV.....	7.50.....	1933-34
III.....	7.50.....	1932-33
II.....	7.50.....	1931-32
I.....	7.50.....	1920-31

RIDER BOOKS
For Servicemen who want to be "Ready"

JOHN F. RIDER, Publisher, 404 FOURTH AVE., NEW YORK CITY

Latest Parts Show List

CHICAGO—From Ken Hathaway of the National Radio Parts Trade Show comes the following list of exhibitors contracting for booth space up to and including May 6:

Aerovox Corporation
 Alliance Manufacturing Company
 Alpha Wire Corporation
 American Condenser Corporation
 American Emblem Company, Inc.
 American Microphone Company, Inc.
 American Phenolic Corporation
 American Radio Hardware Company
 American Television & Radio Company
 Ampere Electronics Products, Inc.
 Amperite Company
 Arcturus Radio Tube Company
 Astatic Microphone Laboratories, Inc.
 Audak Company
 Barker & Williamson
 Belden Manufacturing Company
 Birnbach Radio Company
 Billey Electric Company
 David Bogen Company, Inc.
 L. S. Brach Manufacturing Company
 Wm. Brand & Company
 Brush Development Company
 Bud Radio, Inc.
 Carron Manufacturing Company
 Centralab, Inc.
 Cinaudagraph Corporation
 Clarostat Manufacturing Company, Inc.
 Consolidated Electric Lamp Company
 Continental Carbon, Inc.
 Continental Electric Company
 Cornell-Dubilier Electric Corporation
 Crowe Name Plate & Manufacturing Company
 Tobe Deutschmann Corporation
 Drake Electric Works, Inc.
 Eastern Mike-Stand Company
 Hugh H. Eby, Inc.
 Electric Soldering Iron Company
 Electronic Design Corporation
 Electro-Voice Manufacturing Company
 Garrard Sales Corporation
 General Cement Manufacturing Company
 General Industries Company
 Edwin I. Guthman & Company, Inc.
 Robert M. Hadley Company
 Hallcrafters, Inc.
 Hammarlund Manufacturing Company, Inc.
 Hickok Electrical Instrument Company
 Howard Radio Company
 Hygrade Sylvania Company
 Hytron Corporation
 Indiana Steel Products Company
 Insuline Corporation of America
 International Resistance Company
 Jackson Electrical Instrument Company
 Jefferson Electric Company
 Jensen Radio Manufacturing Company
 J. P. D. Manufacturing Company
 E. F. Johnson Company
 Ken-Rad Tube & Lamp Corporation
 Kenyon Transformer Company, Inc.
 Lectrohm, Inc.
 Lenz Electric Manufacturing Company
 P. R. Mallory & Company
 Melssner Manufacturing Company
 Millon Radio & Television
 Muter Company
 National Company, Inc.
 National Union Radio Corporation
 Ohmite Manufacturing Company
 Oxford Tartak Radio Corporation
 Park Metalware Company
 Par-Metal Products Corporation
 Parts
 Philmore Manufacturing Company, Inc.
 Pioneer Gen-E-Motor Corporation
 Precision Apparatus Company
 Premax Products Div., Chisholm-Ryder
 Presto Recording Corporation
 Quam-Nichols Company
 Radiart Corporation
 Radio-Jobber News
 Radio Manufacturing Engineers, Inc.
 RADIO and Television RETAILING
 Radiotechnic Laboratory
 Radio Today
 Radio Weekly
 Raytheon Production Corporation
 RCA Manufacturing Company
 Readrite Meter Works
 John F. Rider
 Rola Company
 Radio Speakers, Inc.
 Service Instruments, Inc.
 Service
 Shure Brothers
 Simpson Electric Company
 Solar Manufacturing Corporation
 Sprague Products Company
 Standard Transformer Corporation
 Star Machine Manufacturers, Inc.
 Supreme Instruments Corporation
 Thordarson Electric Manufacturing Co.
 Triad Manufacturing Company, Inc.
 Trimm Radio Manufacturing Company
 Triplett Electrical Instruments Co.
 Triumph Manufacturing Company
 Tung-Sol Lamp Works
 United Catalog Publishers Company
 United Transformer Corporation
 Universal Microphone Company, Ltd.
 Utah Radio Products Company
 Ward Leonard Electric Company
 Ward Products Corporation
 Earl Webber Company
 The Webster Company
 Weston Electrical Instruments Corp.
 Wilcox-Gay Corporation
 Wincharger Corporation
 Wirt Company

PROMINENT MEMBERS OF EXPANDING FARNSWORTH ORGANIZATION



E. H. VOGEL — Vice president in charge of sales. Former GE radio department executive who joined the Farnsworth Television & Radio Corporation late last month



J. P. ROGERS—Vice president and treasurer. Leaves the Crosley Corporation, for which he had been v.p. since 1934. Before that with U. S. Radio & Television



F. B. OSTMAN—Manager of service activities. Successively with Grebe and RCA-Victor. Active in field during latter firm's 1936 television field tests



B. RAY CUMMINGS—Vice president in charge of engineering. Had been executive vice president for Farnsworth Television, Inc. Formerly with GE and RCA

Many New Farnsworth Appointments

High-powered staff gathered as firm shapes design, production, merchandising plans

FORT WAYNE—From president E. A. Nicholas and vice-president E. H. Vogel of the Farnsworth Television & Radio Corporation, with headquarters here and additional facilities at Marion, Indiana, comes the following list of executive appointments:

J. P. Rogers, treasurer of the Associated Simmons Hardware Company of St. Louis prior to 1929, later treasurer of U. S. Radio & Television and until this month vice-president of the Crosley Corporation since 1934, becomes vice-president and treasurer of Farnsworth Television & Radio Corporation. He will

make his home and headquarters at Marion.

B. Ray Cummings has been made vice-president in charge of engineering, had been for the past year and a half vice-president of Farnsworth Television, Inc., of Pennsylvania. Before that was with RCA-Victor.

J. H. Pressley, in 1929 chief engineer for U. S. Radio & Television and later vice-president of that firm, in 1933 and 1934 chief engineer for Zenith and then with Philco on auto radio research, becomes chief engineer on receiver design.

Madison Cawein, New York television consultant at one time senior Hazeltine engineer and later full time consultant with F. A. D. Andrea, has been made director of television receiver design.

R. C. Jenkins has been made factory superintendent. For the past five years superintendent of receiver production at GE and before that with RCA in a

similar capacity.

F. B. Ostman, at one time service manager for Grebe and later with RCA Manufacturing in a similar capacity, is now service manager for Farnsworth Television & Radio Corporation.

E. J. Dykstra has been made district sales manager. Was Sentinel sales manager in 1926, then joined the Transformer Corporation of Chicago as general sales manager and for the past three years has represented Zenith in the middle west.

E. H. McCarthy is a special factory representative for the firm. Was with Columbia Graphophone in 1919, later with Grigsby-Grunow, Hygrade Sylvania, Gibson and General Electric.

Dean A. Lewis is another special factory representative. Successively with RCA, Magnavox and Stewart-Warner.

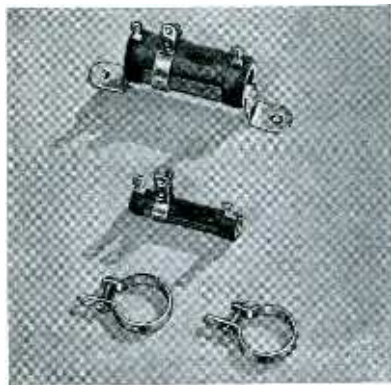
Robert E. Kane is also a special factory representative. Has been with Sherman-Clay, Victor, RCA, and leaves the position of eastern division manager at Motorola.

To talk about television at the National Electrical Wholesaler's Association convention in Hot Springs, is vice-president E. H. Vogel of Farnsworth, who will take the platform on the afternoon of May 23.

Three DuMont Applications

PASSAIC—The Allen B. DuMont Laboratories Incorporated, already operating a television transmitter here, has filed

LONG-LIVED



Wire Wound Resistors

A new high in resistor values! Both fixed and adjustable types. Wound on ceramic tubes and protected by a baked cement coating which is non-hygroscopic and non-absorbent. Four ratings in each type cover nearly all service, replacement, and experimental requirements for amplifiers, receivers, and transmitters. Design of movable bands for adjustable units allows setting for exact resistance requirement. One or more bands may be used. *Ratings:* Fixed—5, 10, 20 and 50 watts. Adjustable—10, 25, 50 and 75 watts.

See Them at Your Parts Jobber's Today!

CONSOLIDATED
WIRE AND
ASSOCIATED
CORPORATIONS

514 S. Peoria St. Chicago, Ill.

applications with the FCC for additional licenses, one for a portable mobile transmitter in a truck designed to relay remote pickups back to main transmitters, another for 1 kw. at the New York offices on the top floor of 515 Madison Avenue and a third for a station in the National Press Building at Washington.



BACK in 1928—Pilot Radio's president I. Goldberg (right), as he looked at the time the firm operated short-wave television transmitter W2XAL

Cincinnati Sees Television

CINCINNATI—The first demonstration of modern television occurring here took place on the top floor of the Carew Tower April 26 when the Crosley Corporation gave a special showing of its experimental transmitting and receiving equipment to the press. The Carew tower is the tallest structure in town, standing 574 feet in height.

For several months Crosley engineers have been engaged in remodelling the top floor, constructing studios, control rooms and observation rooms. Application for permission to operate 1000-watt video and audio transmitters has been filed with the FCC.



JOINS HYTRON—Vinton K. Ulrich, former technical and service editor and more recently managing editor of "Radio Today," who has resigned to accept an appointment as advertising and sales manager of the Hytronic Laboratories Research and electronic division of the Hytron Corporation at Salem, Massachusetts



EXACT-Duplicate REPLACEMENT CONDENSERS

● Having pioneered the exact-duplicate idea for years, AEROVOX is happy indeed to have it universally accepted today. And doubly so because, having refused to take the easier way of so-called general-utility types, AEROVOX has built up a really complete line backed by the most extensive listings in use.

Fit RIGHT

Because exact needs of standard sets in use have been critically studied, AEROVOX exact duplicate units readily fit in place of original condensers. No jamming. No taping. No sloppy wiring. You save time and trouble.

Work RIGHT

Because electrical as well as mechanical considerations have received thorough attention, AEROVOX replacements not only duplicate but usually excel the performance of the replaced units. You need fear no return calls to "make good."

Look RIGHT

Last but not least, an AEROVOX replacement restores the radio chassis to its original "new" status. Set owner is satisfied the job has been done right. That means a fair price—and a real profit.

Ask Your Jobber to show you the latest AEROVOX replacement chart and pick out the required unit for that set. Ask for our catalog. Or write us direct.

AEROVOX
CORPORATION
NEW BEDFORD, MASS.
IN CANADA: AEROVOX CANADA Limited Hamilton, Ont.

First Television Schedule

NEW YORK—Following is the first regularly scheduled week of television broadcasts presented by NBC early this month; over the Empire State Building's W2XBS.

April 30: (12:30 to 4:00 p.m. EDST) President Franklin D. Roosevelt, Mayor Fiorello H. LaGuardia, Grover Whalen and others at opening ceremonies of New York World's Fair.

May 3: (8:00 to 9 p.m.) Fred Waring and his Pennsylvanians; Richard Rogers, composer; Hart, at the piano, accompanying Marcy Westcott of "The Boys From Syracuse"; Marjorie Clark and Earl Larimore in "The Unexpected"; The Three Swifts, jugglers; A relay from the New York World's Fair and Walt Disney's "Donald's Cousin Gus."

May 5: (8:00 to 9 p.m.) Mitzi Green; Josephine Huston in "The Choir Rehearsal"; Musical piece by Clare Cummer; Ray Post demonstration of a Lie Detector and The Novello Brothers, comedy whistlers.

In addition to the above, considered regular schedule broadcasts, special programs designed to permit demonstration of television to World's Fair visitors, were transmitted periodically on May 1 from 11:00 a.m. to 4:00 p.m.; May 2 during a similar period; May 3 between 4:00 and 8:00 p.m.; May 4 between 11:00 a.m. and 4:00 p.m. and on May 5 between 4:00 and 8:00 p.m.

Belmont Designing Televisor

CHICAGO—From president P. S. Billings comes word that the Belmont Radio Corporation, working on television since early 1938, will develop a set for the retail market "just as soon as conditions warrant." Said Billings: "Although there has been considerable publicity on the coming of television, we have found that there are numerous obstacles yet to be overcome before it becomes practical for the public."

Servicemen See DuMont Demo

NEW YORK—Four-hundred servicemen jammed the auditorium of the Electric and Gas Association Building here April 10 to see new DuMont television receivers, cathode-ray tubes, antennas, test transmitters and oscillographs.

Leonard F. Cramer, general sales manager, introduced Dr. Goldsmith, who heads his firm's research activities, Norman C. Hall of the engineering staff and O. J. Morelock of the Weston Electrical Instrument Corporation.

GE Shows Televisors At Fair

BRIDGEPORT—The General Electric company, in its New York World's Fair exhibit, is giving an opportunity to be televised as well as to see regular television broadcasts coming in via air received by its new home model equipment.

A television camera has been set up, together with a portable transmitter, for such room to room demonstrations.

Baird Tele Expert Here

NEW YORK—Ian C. Javal, commercial director of the British Baird Television,

Ltd., arrived April 28 on the Aquitania, bringing with him \$150,000 worth of theater television equipment, cameras, screens and home sets.

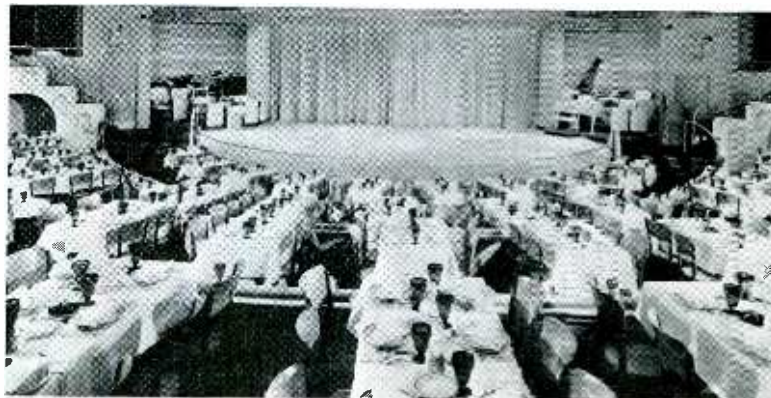
Twelve Gaumont British theaters in and around London use the Baird equipment.



TELEVISED STYLE SHOW—One of the several "look in" points at Bloomingdale's large New York department store, during a style show televised elsewhere in the building and transmitted to the various departments by wire, using American Television Corporation equipment



TUESDAY, THURSDAY TELE TALKS—Every Tuesday and every Thursday Stromberg-Carlson shop foremen and workers who will be engaged in television manufacturer gather for an hour's instruction in the intricacies of the new art by company engineers



WHERE RMA'S BANQUET WILL BE HELD—Holding all business meetings at the Hotel Stevens, where the National Radio Parts Show takes place next month, the RMA will nevertheless stage its Banquet and Cabaret here in the Terrace Casino of the Morrison Hotel on the evening of June 14, preceded by a cocktail party in the adjoining Monte Carlo Bar

PARMAK
ELECTRIC FENCER



Mr. Radio
Dealer:

ELECTRIC FENCING is a companion industry to radio. Huge demand—wanted by every modern farmer—Six million farmers need it. A fast selling—big profit spring and summer business for you. More than 60,000 farmers, dairymen, stockmen, use PARMAK World's Largest Seller. Write for our BIG PROFIT EXCLUSIVE territory plan for radio dealers.

PARKER-McCRORY MFG. CO.

2609-15 Walnut St. Missouri
Kansas City

Mr. Serviceman
SOUND IS HOT TODAY
LAFAYETTE P.A. HOTTEST!



THEY'RE SELLING sound systems hand-over-fist today. Theatres, dance halls, ball parks, cafeterias, churches, plants—all want Public Address. Get in—and add Lafayette, the BIG profit line to your line!

LAFAYETTE GIVES YOU 3 complete lines to sell. Hit every price bracket with Lafayette's Economy, Standard and new DeLuxe models. Lafayette famed performance, Lafayette engineering experience, Lafayette amazing low prices make selling easy. Any way you take it, Lafayette has appeal!

FIND OUT how much lower Lafayette prices are. Find out how complete this line is. Send for FREE book today. Earn more money, full-time or spare, selling Lafayette streamlined P.A.! The most complete line of sound equipment in the world.

LAFAYETTE RADIO CORPORATION
Dept. 74EP9
100 Sixth Ave., New York, N. Y.

LAFAYETTE
p. a. sales division
NEW YORK ATLANTA CHICAGO

Radio Speakers Moves

CHICAGO—Radio Speakers, Inc., of which Henry Forster is president, is now manufacturing its speakers in a new and enlarged plant at 221 East Cullerton Street, with executive offices at the same address. Sales for the first quarter are reported best in the firm's history for a similar period.

Southeastern Supply Formed

NORFOLK—Formed here for the distribution of radios, electric refrigerators, beverage coolers, heaters, ranges, water pumps and other items, Southeastern Supply Corporation of 128 West Olney Road is headed by Thos. D. Boone, president and treasurer, Thos. B. Phillips, vice-president.

Mr. Phillips will shortly open a branch in Richmond, directing its activities himself.

Cise's \$5

NEW YORK—To members of the Clarion Institute of Sound Engineers, sales manager R. Neusch, of the Transformer Corporation of America, in a recently mailed letter offered \$1.50 for accepted photos illustrating Clarion installations, \$5 each month for the picture considered best.

Suggested were prints 5 by 7 inches or larger, inclusion of engineers or salesmen in the shots, combining of sales or installation idea with human interest. Address, 69 Wooster Street.

Distribution News

UTAH—Frank E. Ellithorpe, who has represented this firm's Utah Carter Parts Division in Chicago for the past two years, has been transferred east to develop Atlantic seaboard sales, will establish headquarters at 56 W. 45th Street, New York City.

HOWARD—Jim Schoonmaker of 2312 Griffin St., Dallas, has been appointed factory rep on the Howard communications receiver line in Texas and Oklahoma.

UNIVERSITY LABORATORIES—New rep covering Canada is Allen T. R. Armstrong, of 414 Bay Street, Toronto. New England will henceforward be covered by Henry P. Segal, of 235 Pine Street, Gardner, Massachusetts.

ANDREA—Trilling and Montague of Philadelphia has taken on the distribution of Andrea television sets and kits in this area, will shortly organize a school for the training of television servicemen, using the kits as a practical tool for instruction.

ADMIRAL—Recently appointed distributors include The Walter Tips Company of Austin, Texas; Williamsport Radio Supply of Williamsport, Penna.; Radio Service Laboratory of New Hampshire, Portland and Manchester.

• Your best safeguard against obsolescence is a Triplett push button tube tester . . . because it permits individual connections for each element.

TRIPLET



Model 1615
\$63.34

**Push Button
Tube Tester
DYNAMIC MUTUAL
CONDUCTANCE**

- ★ Tests All Receiving Tubes Including the new 1.5 Volt and 50 Volt Series; the Small Octal Base Tubes; and the OZ4 and Other Gaseous Rectifiers.
- ★ Ballast Tube Continuity Test.
- ★ Separate Test for Diodes and Rectifiers.
- ★ Separate Gas Test and Conclusive Neon Shorts Test.
- ★ Illuminated Dial and GOOD-BAD Scale.
- ★ Chart Scroll. . . . New Up-To-Date Scrolls Can Be Obtained at any Time on Nominal Exchange Cost Basis, Easily Installed.

NOW is the time to study tube testers seriously—Triplett's Model 1615 contains sockets that will accommodate all type receiving tubes, including local (no adapters). Individual connections for each tube element permits push button control to be set correctly regardless of what filament arrangement is used or at what pin point other elements are terminated. Why take a chance when this additional safeguard costs so little?

Model 1615 is a True Dynamic Mutual Conductance Tube Tester with direct GOOD-BAD tube reading scale. . . Dealer Price \$63.34
Model 1616—Same as Model 1615 but includes push button Volt-Ohm-Milliammeter. Uses plug-in type rectifier. . . . Dealer Price \$73.34
See the New Triplett 1939-40 Line at the June National Radio Parts Trade Show Booths 403-405

SEE YOUR JOBBER •
• WRITE FOR CATALOG

The Triplett Electrical Instrument Co.
205 Harmon Ave., Bluffton, Ohio

Please send me more information on
 Model 1615; Model 1616.

Name

Address

City..... State.....

All Set for TELEVISION



CONTROLS

★ CLAROSTAT television controls are geared to critical requirements of video reception. Composition-element type for high resistance values (1000 ohms to 5 megohms); wire-wound type for lower values (1 to 100,000 ohms). Either type provided with insulating sleeve of 2000 or 5000 v. insulation to ground. Meet Underwriters' test at stated voltages.

RESISTORS

★ CLAROSTAT power resistors have gained widespread acceptance particularly among builders of dependable equipment. These familiar green cement-coated resistors are to be found in television transmitters, receiver power supplies, oscillographs, etc. Comparative tests invited. In 10 to 200 watt ratings; any resistance; fixed, tapped and adjustable. Competitively priced.

★ Ask

your local CLAROSTAT jobber to show you these power resistors and latest controls. Ask for new Service Manual.



Look us up at Booth 620-22 Hertz Ave., in June.



BOGEN—The Radolek Company of Chicago has been appointed distributor in northern Illinois and Indiana for this firm's sound equipment. A complete line of amplifiers, recorders and accessories will be featured.

STEWART-WARNER—R. H. Kyle & Company, of Charleston, has been appointed radio distributor in the West Virginia area.

Dealer Helps

AMPLIFIER, TRANSFORMER DATA—Thordarson Electric Manufacturing Company of 500 West Huron Street, Chicago, offers a catalog giving complete details concerning a new line of amplifiers ranging in size from 8 to 75 watts, including a 6 volt d.c.—110 volt a.c. mobile job. Also ready is a new supplement to the Thordarson Replacement Transformer Encyclopedia No. 243, covering receivers listed in Rider's Manual Vol. IX.

ESSENTIALS OF RECORDING—This is the title of a 22-page booklet just released by the Allied Radio Corporation of 833 West Jackson Boulevard, Chicago. Tells, in non-technical style, what the markets are, what equipment is needed for various jobs, describes available equipment, includes interesting dope on volume level indicators, data about impedance matching. Costs 10 cents plus postage from Chicago to your shop.

TELEVISION HANDBOOK—The Allen B. Du Mont Laboratories, Inc., of Passaic, N. J., has just published a 38 page booklet entitled: "The Television Salesman's Hand Book." Describes the firm's organization, gives a brief history of the art, tells how modern television systems work, gives useful data about selling, contains 25 typical consumer questions and the answers plus complete specifications on Du Mont television receivers and a glossary of common television terms.

NEEDLE DISPLAY—RCA Manufacturing Company has a new all-steel display unit, electric lighted, designed to contain and sell phonograph needles. Holds 500 packages.

REMINDERS, RECORDS—Hygrade Sylvania has devised a combination job record card, customer invoice and guarantee, promotion follow-up card for radio servicemen, to be called the "3-in-1" form. Has to be seen to be appreciated. With dealer imprint, sells at cost for \$1.50 per 100 sets, \$2.50 per 250 or \$4 per 500.

TEST PREVIEW—The Approved Technical Apparatus Company of 57½ Dey Street, New York, has just published a booklet entitled "Preview of ATA Test Apparatus", giving pictures, specifications, prices of its complete line.

NOW FOR THE BIGGER JOBS

Get your share of the profits from the higher priced intercommunication installations. The market is wide open for hotels, department stores, hospitals, offices at the low prices we ask for this excellent 2-way system.

Demonstrate our Model 143 to these prospects. 4 speakers on each substation and up to 10 substations adaptable. No other system can offer these features. More stations means more profit for you! \$10.00 with 50 ft. of wire.



Master Station

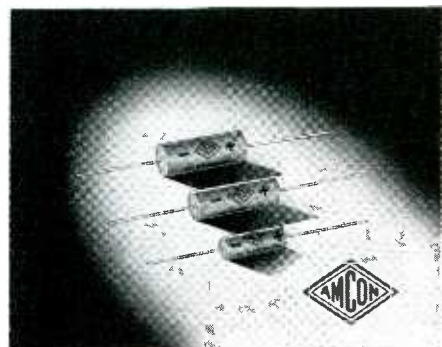
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\$47.50

complete with wire ready for installation



Remote Station

Write for catalogue showing all new models.
REGAL AMPLIFIER MFG. CORP.
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Americans'

THE SMALLEST MIDGET WITH
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ALL STANDARD CAPACITIES
ALL WORKING VOLTAGES

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CONDENSER CORPORATION
2508 So. Michigan Ave., Chicago, Ill.

SERVICE MEN

Here is a soldering iron designed especially for your use. Note the features listed below and remember that "High Heat" means high value for you.

FEATURES

3/8 IN. COPPER TIP

125-WATT ELEMENT WOUND WITH NICHROME ON AMBER MICA WITH NICKEL PLATED SEAMLESS HOUSING

BAFFLE PLATES KEEP HANDLE COOL

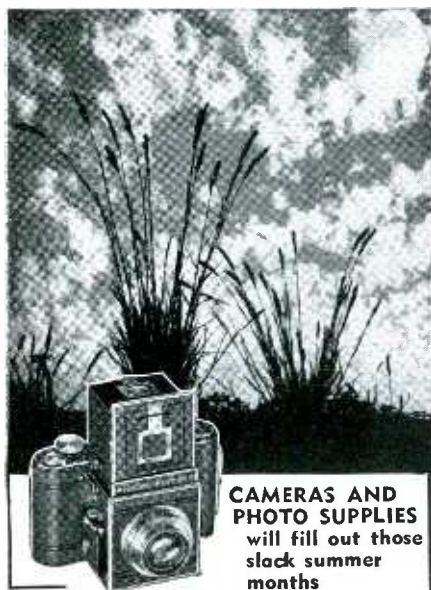
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6 FT. CORD UNBREAKABLE PLUG



No. 325 SPECIAL (Complete with Stand) \$4.50 List
See Drake Soldering Irons at your parts jobber's or at the Radio Parts Trade Show.

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INC.
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will fill out those slack summer months

"RADIO'S IDEAL COMPANION LINE"

Inquiries from responsible radio dealers who are interested in adding cameras and accessories to their regular line are invited. When writing advise if you are now carrying photographic equipment—and mention the lines you carry.

We offer a complete line of cameras and photo supplies and the benefit of our long experience is available to interested dealers. Address Dept. RR-3 on your business stationery.

A complete line of cameras for the dealer.

KORELLE REFLEX
2 1/2" x 2 1/4" - 12 or 120
WELTINI, Coupled
35mm., 18 or 36 exp.
WELTUR, Coupled
1 5/8" x 1 1/4" - 2 1/4" x 1 1/4" in.
WELTI
35mm., 18 or 36 exp.
WELTAX
2 1/4" x 2 1/4" - 1 5/8" x 2 1/4" in.
GARANT
2 3/4" x 3 1/4" - 1 3/4" x 2 1/4" in.
WATSON Candid
35mm., 18 or 36 exp.

Burke & James, Inc. 225 W. Madison St. CHICAGO, ILL.

CAMERAS ET. AL—Burke & James, Inc., of 223 W. Madison St., Chicago, has just released its catalog No. 339, available free to dealers interested in photographic equipment and containing 80 pages of pictures, descriptions, prices on just about everything of interest to photographers. Write for copy, mentioning **RADIO and Television RETAILING**.

VIBRATOR GUIDE—A complete and up to date vibrator guide, containing recommended replacements for all makes and models of auto-radios and battery-operated household receivers, is now available through *Mallory-Yaxley* parts distributors. Twenty pages, including a cross-reference of Mallory types by make and model of receiver, base diagrams and external views showing prong and lead arrangement, helpful information on vibrator servicing and testing with oscilloscope pictures.

TUBE LISTING—The *Ken-Radio Tube & Lamp Corporation* of Owensboro, Kentucky, has just published a bulletin containing a complete receiving tube list complete with characteristics and notes concerning interchangeability.

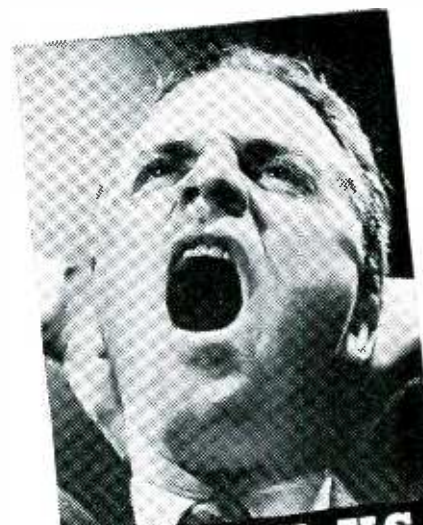
RECORDING BLANKS—Complete information, including prices, regarding "Duralite" recording blanks may be obtained by reading a new four-page folder available from *Musicraft Records, Inc.*, 12 West 47th Street, New York.

SOUND BOOSTER—New promotion piece just released by the *Transformer Corporation of America*, through the Clarion Institute of Sound Engineers at 69 Wooster Street, New York, consists of a two color Duo-Tone poster depicting various equipment uses. Eleven by 23 inches overall.

TRANSFORMER GUIDE—A new edition of the Replacement Transformer Guide published by the Standard Transformer Corporation of 1500 N. Halstead St., Chicago, is ready. Known as the fifth edition, it lists both exact duplicates and universal replacement transformers for all popular radio models up to and including 1939 models as well as generally useful technical data on other servicing subjects.

PORTABLE BATTERY GUIDE—To help dealers select batteries which will fit the many new portable radios the *Burgess Battery Company* of Freeport, Illinois, has prepared a folder listing 70 different set models and showing the battery types required to operate them. Free to dealers on request.

PARTS CATALOG—The *Freed Transformer Company* of 72 Spring Street, New York, has just released an eight page catalog listing specifications, prices, on its line of transformers, chokes, i.f. coils, condenser blocks. Includes specialty items of interest to serviceman, amateurs and experimenters and also exact replacement items.



PARDON US
...if we refuse to get excited about aerials with **ANTI-RATTLERS**. You see, anti-rattlers are rather old stuff to Radiart. We introduced ours way back in **DECEMBER, 1937**

...and **REMEMBER!** Last **FEBRUARY**, Radiart introduced Type **CB-1**, the **COWL BRACKET AERIAL** that requires **NO DRILLING** of finished body surface. Just remember the date when imitations come out as "revolutionary" discoveries!

And back in January, a little dash of color started a style sensation: **RADIART'S JEWEL TRIM COWL AERIALS** are sweeping the country. Watch for the imitations!

BUT, you'll make **MORE MONEY** with the Leader
THE RADIART CORPORATION
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RADIOS

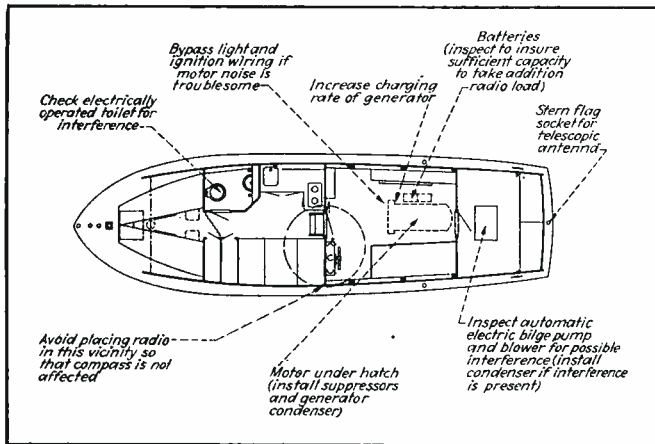


FIG. 1. A few pointers that will aid in proper installation of radio apparatus. All equipment and leads should be securely fastened to avoid damage by vibration.

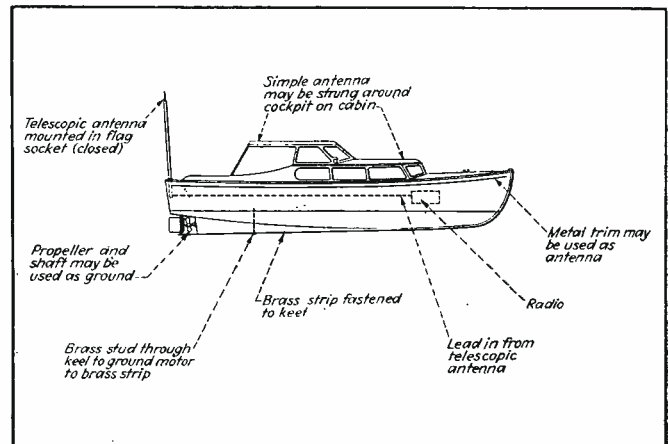


FIG. 2. Antenna and ground systems which will give satisfactory operation for boat radios. A ground need only be used when motor interference is troublesome.

INTRODUCTION of efficient, compact and light battery portables this year makes every boat, from a canoe to a diesel yacht, a radio prospect. They are ideally suited for all boats since no antenna or battery connections are required. Excellent reception may be had on the boat or at a party on shore. When repairing or installing a built-in radio, it will be well to bring along one of these portables. Their versatility is a lure few boatmen can resist.

The auto radio is probably the most universally used radio to be found aboard the average boat. This is as to be expected since the majority of boats have 6 to 12 volt d.c. supplies. In addition, the sets are compact and have excellent signal pickup, requiring only a small antenna.

One radio type, probably overlooked by most boatmen, is the farm radio. Although not usually as compact as the auto radio, it offers a considerable saving in power consumption; its total drain seldom exceeds 2 amperes as compared to 5 or 6 amperes of the auto radio. Since most radio operation will take place at anchor and the motor cut, this becomes an important factor.

Special Equipment

Ship telephones are fast finding a definite place in pleasure boating since their advantages are many. A typical installation is shown in Fig. 5. Actually, these units consist of a small pretuned transmitter and receiver.

For a small charge, contact may be had with any land telephone through harbor receiving stations. Likewise,

RECENT surveys show a ready market for radios and radio service among pleasure boats in this country. A breakdown by types indicate that there are 750,000 speedboats and utilities types, 200,000 cruisers, 250,000 sailboats with motors, 100,000 sailboats without motors, 38,000 documented yachts (over 45 tons), 450,000 outboards, 100,000 canoes, and 1,000,000 rowboats.

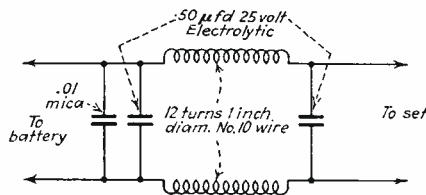


FIG. 3. Filter circuit which will reduce motor noise when installed in the battery leads between set and battery.

direct communication may be had with the Coast Guard in case of emergency. This is a very desirable feature. On still another channel, one may hold conversation with other boats.

Small systems of this type are on the market today for less than \$200. More elaborate systems are also available at higher prices. Installation charges on such equipment will bring a fine price to the man properly equipped.

Installation Problems

Properly installed, any radio in a boat should give as satisfactory serv-

ice as can be expected on land. Several factors, however, should be considered if optimum results from the radio and the boat are to be achieved. These are illustrated in Fig. 1. Explanation of these will follow.

Usually, a good antenna for broadcast reception and weather reports is not hard to construct on a boat. In sail boats, this may take the form of an insulated metal guy or a wire running parallel to the mast. In cruisers and runabouts, an insulated wire tacked under the deck or cockpit roof will suffice. When installing this type, avoid running the antenna near or parallel to lighting or ignition wires. This will help keep down motor noise.

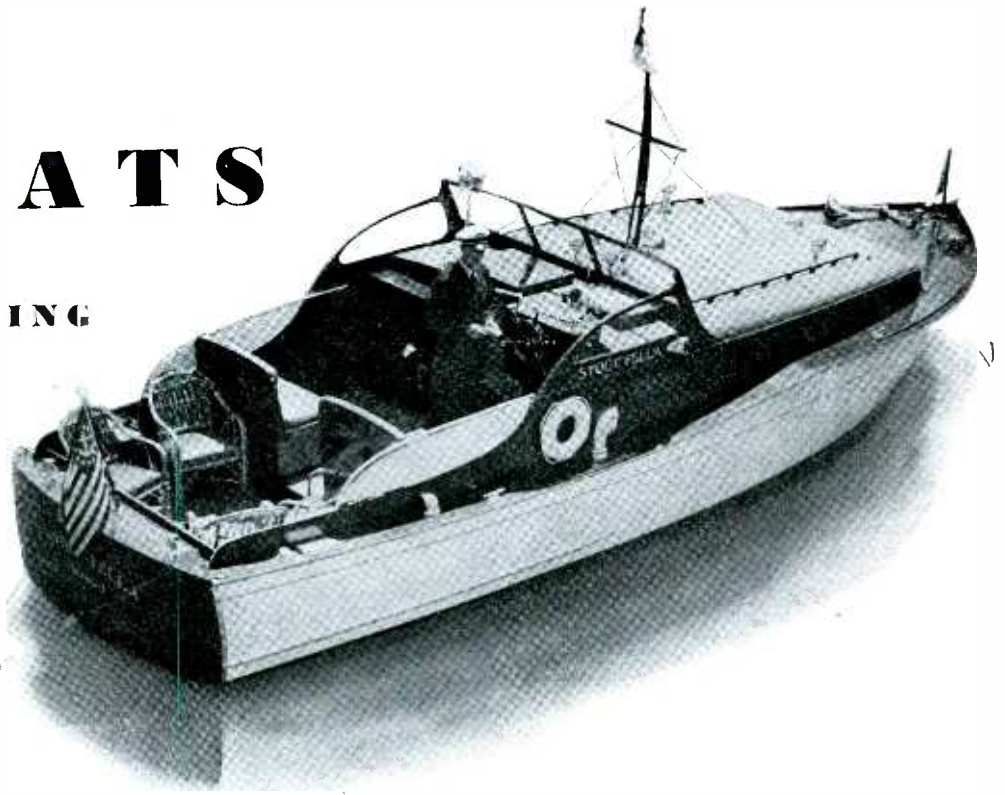
Often the short mast usually found on most cruisers makes an excellent antenna when connection is made to the bracing wires. Still another possibility would be to use the half-round metal trim which runs around the hull. Make sure the various sections are bonded together, otherwise the effectiveness will be reduced. It is not recommended that the antenna be installed in the bilge since this is subject to a great deal of moisture and will be near ignition wiring. Also signal pickup will be reduced since the capacity of the antenna to the water will be high.

A more elaborate antenna system, unnecessary for normal broadcast reception, but essential for a ship telephone, would consist of a 25 to 30 foot telescoping mast supported on the mounting shown in Fig. 4. Several types of these masts are on the market and are available in plated steel and monel. For the radio-minded yacht-

for BOATS

By C. A. NUEBLING

Technical Editor



man they make an excellent short wave antenna.

Constructed of 3 or 4 telescopic sections, they may be raised or lowered at will. In the closed position they may be removed from the socket and easily stowed, or they may be left in the socket and used as a flag staff. For trolling, they could be converted into an outrigger, although for such use it is recommended that a forward guy be installed to take any heavy pulls.

In making connection from the telescopic antenna to the set, use a well insulated lead suspended on small insulated standoffs. Keep this lead as far as possible away from the ignition and lighting wires. Do not, in any case, let it drape haphazardly in the bilge.

Noise and Power Wiring

A common failing in boat installations is wiring with too small a conductor. It really is surprising what 20 feet of number 14 or 16 wire can do to the performance of an auto type radio when connected in the power circuit. It is imperative that a wire heavy enough to carry the current

drawn, with practically no voltage drop, is used. Don't run less than number 5 wire on 6 and 12 volt installations if efficiency and maximum results are desired. Better yet, a small version of the battery cable, as used on automobiles, is available. This would be ideal.

Heavy wiring not only allows the radio to work properly, but prevents the vibrator from sticking and greatly contributes to low noise level. Low impedance in the battery circuit prevents vibrator hash from feeding back into the filament circuit and causing noisy reception.

A word about generators and batteries: Naturally, the ampere-hour

rating of a battery determines the amount of power available. It is rather embarrassing, to say the least, to be anchored in a peaceful cove listening to a popular dance orchestra, only to find that the motor won't turn over when its time to weigh anchor. You can't walk home from a boat ride!

Therefore, see to it that the battery is in good condition and the generator working properly. Set the generator charging rate well up to take care of the additional drain of the radio. Better still, install a separate battery that may be switched over when needed; or, to go the whole hog, install a separate generator and battery, then you can't go wrong.

Noise from ignition will be found to be similar to auto installations. Suppressors on all plugs and distributor will usually remedy this. In most cases a single suppressor on the distributor will reduce noise to a satisfactory low level.

Don't forget a generator condenser! A .5 or .25 mfd metal cased unit mounted on the generator frame will do the trick. Sometimes a similar condenser will be necessary on lighting wires and coil or ammeter leads. This will have to be determined by experiment.

If noise still persists to any degree, check to see if the motor is grounded through the propeller shaft. Inspect the flange coupling between the motor or reverse gear and propeller shaft. Often insulating shims are used to "line-up" the coupling. If poor contact is suspected at this point, bond the flanges with a jumper; taking care not to disturb their alignment.

(Continued on page 58)

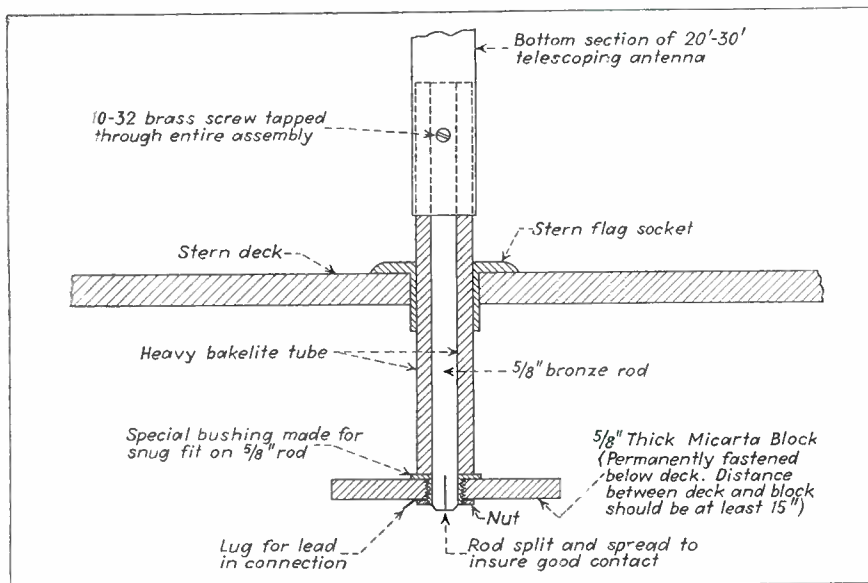
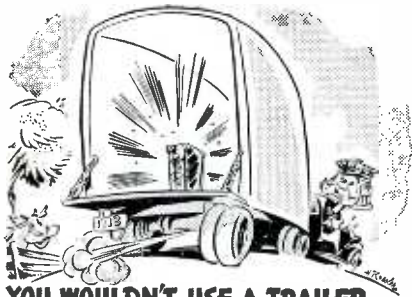


FIG. 4. Insulated support for mounting telescopic antenna in stern flag socket. Only non-corrosive metals should be used in its construction.



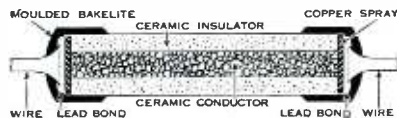
YOU WOULDN'T USE A TRAILER TRUCK TO TRANSPORT A TRUNK

Just doesn't make sense . . . just as little as it make sense to use a large resistor when a small Centralab Axial Lead Resistor will do the trick. It isn't size that counts . . . for most resistors in radio sets actually carry less than ¼ watt load. High chassis temperatures and humidity cause break-down . . . not moderate overload. That is why inserting a LARGE resistor is NOT the answer to a replacement problem.

Centralab Ceramic Resistors ARE the answer. Type 710 is conveniently small, yet fully insulated. Moderately rated as ½ watt it will carry normal overloads. Solid ceramic . . . humidity and temperature proof . . . priced so low you can well afford to keep a stock on hand.

TYPE 710, rating ½ watt, size ⅜ x ⅝ inch. List Price 60c for five.

TYPE 714, rating 1 watt, size ¼ x 1 inch. List price \$1.00 for five.



Center ceramic core, and ceramic jacket fired together to form a single shockproof unit. Pure copper covers resistor end for wire lead contact.

VISIT the 1939 National Radio Parts Trade Show, June 14 to 17, at Stevens Hotel, Chicago.

OLD MAN CENTRALAB
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AXIAL LEAD RESISTORS

DIV. OF GLOBE UNION, INC.
MILWAUKEE, WIS.



FIG. 5. Typical ship telephone installation on a 44 foot cruiser. Small transmitter sends signal to shore, receiver picks up shore signal, completing the circuit. Preset frequencies simplify operation.

A more effective ground would be to run a strip of brass about ¼ inch wide and ⅛ inch thick the entire length of the keel (Fig. 2). This should be securely fastened so as not to rip loose. Connection to the motor can be made by a long brass stud through the keel. While this grounding system is the ultimate, it has the disadvantage that it may only be installed when the boat is in drydock.

Ordinary noise may be prevented by the above methods. In severe cases, or where special short wave equipment is used, it is sometimes necessary to insert a filter in series with the battery and equipment. Such a filter is shown in Fig. 3 and should help materially where noise is being transmitted through the battery leads.

Where ignition or generator noise is radiated and picked up in the antenna system, a shielded motor compartment may be necessary.

Many boats are equipped with sound insulated motor compartment. If such is the case, shielding would be relatively easy. Tack copper screening over the entire inside of the box. Be sure to bond control cables and gas lines to the shield, otherwise noise might develop from vibration. If a hinged cover or hatch is used on the

compartment, see to it that good contact is obtained around the edges. The screening should be connected to the motor at several points or to an external ground as described previously. Fortunately, few installations will require shielded motors.

Positioning Equipment

On small boats whose journeys never take them out of sight of land, radio equipment may be located anywhere convenient. On larger boats, operating in open waters, where the pilot must rely on his compass, the problem is a little more complicated. Exact location will vary with the boat construction and the owner's personal taste. Always try to keep the equipment as far from the compass as conveniently possible. Vibrator supplies and speakers have a surprisingly strong magnetic field that could convert any careful skipper into a reasonable facsimile of Corrigan.

Direction finding equipment (radio compass) is still another radio angle. Several battery models are available for small boats which are relatively inexpensive. Installation of permanent types, naturally, would follow the same rules outlined above for permanent radios.

New... SMALLER 15c SIZE IN FLASHY BOX

In every family where records are enjoyed, you'll find a demand for the sensational RECOTON liquid Record Renewer that cleanses, lubricates and protects—2-oz. bottle 50c, or this handy 15c bottle, powerfully displayed as illustrated at left.

Ask for samples of SUPERIOR and ACOUSTIC hi-fidelity needles

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- Uses Attractive Triplet Direct Reading Instrument, 3" Size. (GOOD - BAD) Scale.
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Model 431.....\$15.90
New Model 432

Always Kept UP-TO-DATE

Readrite
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* Complete in Quartered-Oak Case

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READRITE METER WORKS, Bluffton, Ohio

Write for Catalog
Section 520, College Dr.



A GOOD NAME GOES A LONG WAY

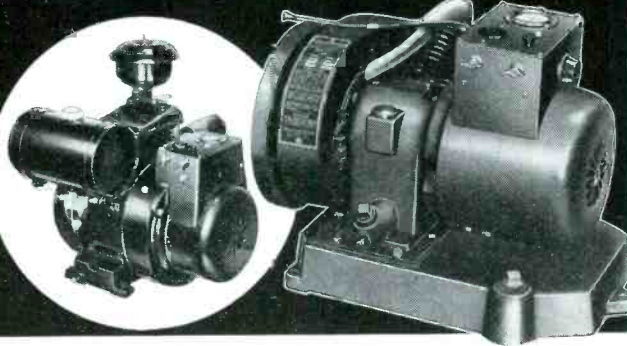
Ken-Rad has the experience, the resources and the plant equipment to make dependable Ken-Rad Radio Tubes your best choice.

Ken-Rad Tube & Lamp Corp.
Owensboro, Ky.

KEN-RAD
DEPENDABLE RADIO TUBES



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Electricity for Farms . . . Homes

"GOLD CROWN"—HEAVY DUTY POWER PLANT. Available as follows: 32 or 116 volts D.C., also 110 and 220 volts A.C., 600, 1000, 1500 watts and up. Electric starting, air or water cooled.

"BLUE DIAMOND"—COMBINATION A.C.—D.C. POWER PLANT. All New "2-in-1" electric plant supplying 300 watts, 110 volts A.C. 60 cycles; also 200 watts, 6 volts D.C.; 250 watts, 12 volts D.C. or 325 watts, 32 volts D.C. Electric starting.

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Please send me literature, price sheets and other information about the New "PINCOR" GOLD CROWN and BLUE DIAMOND Power Plants.

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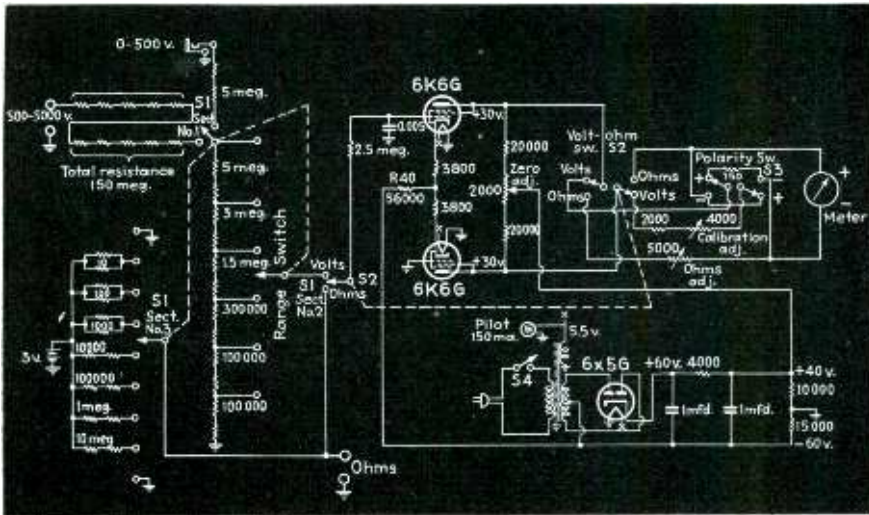
BELL SOUND SYSTEMS, Inc.
1183 Essex Avenue, Columbus, Ohio

Bell's New 1940 Line of Sound Equipment

More brilliant than ever in performance, it's the most complete line on the market — and the most strikingly modern in design! Send for your free copy of this valuable catalog today.

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Export Dept. 5716 Euclid Ave., Cleveland, Ohio





Electronic Volt-ohmmeter

Designed for very wide voltage and resistance ranges, the Volt-ohmmyst by Service Instruments makes use of a push-pull electronic vacuum tube voltmeter circuit.

Unlike the conventional balanced voltmeter, the 2-6K6G tubes are linked by means of a common high resistance R40. Because of this coupling, any change in the input voltage to the grid of the upper 6K6G changes the cathode bias on the other tube, and as a result, the change in plate current of one tube is simultaneously duplicated in reverse in the other tube. The differential voltage thus developed across the load resistors in the plate circuit is applied to the meter, which is calibrated in terms of the voltage applied to the input, and in terms of the resistance measured when used as an ohmmeter.

In addition to the push-pull action, a high degree of self regulation is obtained as a direct result of the high value of coupling resistance R40. This is analogous to the regulating effect secured through the use of self-bias resistor, but because R40 is approximately 100 times larger than the common cathode resistances in conventional circuits, the self-regulating action is correspondingly increased.

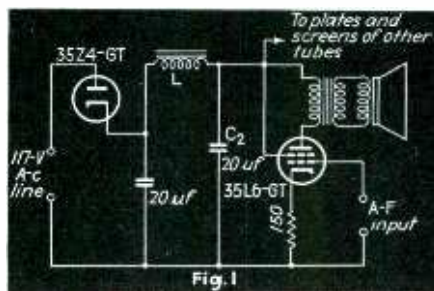
At the same time the excessive loss of sensitivity normally experienced when using such a high cathode resistance is eliminated because of the balanced nature of the circuit. A controlled amount of inverse feedback to obtain independence of tube characteristics is secured by means of separate resistors in each cathode.

A principal factor limiting the maximum input resistance of a d.c. vacuum-tube voltmeter has been the problem of reducing grid current and

so-called "contact potential" error to a low value. The tube types used, high cathode resistance, and low plate voltage contribute greatly to stable operation.

The ohmmeter circuit utilizes the vacuum-tube voltmeter described above to measure the ratio between the voltage across the unknown resistance and one of 7 standard resistors. The seven resistances range from 10 ohms to 10 megohms.

Voltage measurements may be made from .05 volt to 500 volts. The input resistance is constant at 16 megohms on all ranges up to 500 volts. On all other ranges the input resistance is 160 megohms. Resistance measurements include all values from .1 ohm to 1000 megohms.



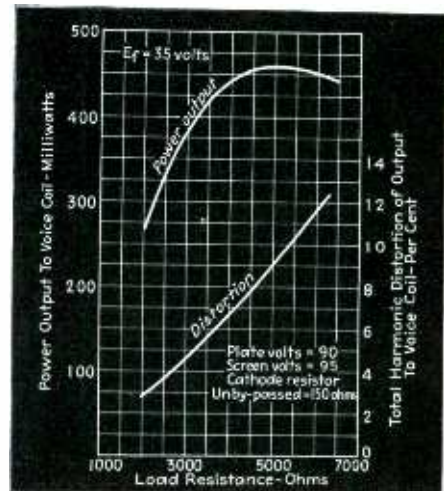
Operation of the 35L6-GT

In many of the new receivers, the 35L6-GT is operated with an unby-passed cathode-bias resistor. Because the inverse feedback provided by this unby-passed resistor reduces distortion, the load resistance can be made larger than the value recommended for fixed-bias operation without caus-

ing distortion to become excessive. At the same time, the larger value of load resistance may give an increase in power output. A bulletin by RCA shows how the power output and distortion of a 35L6-GT vary with the load resistance in a typical ac-dc receiver using an unby-passed cathode-bias resistor.

Fig. 1 shows the power-supply circuit of the receiver on which measurements were made. The d-c output voltage across C_2 , with a line voltage of 117 volts, was 100 volts. Power output and distortion were measured in the secondary of the output transformer which had an efficiency of 65 per cent.

It should be noted that the plate and screen voltages supplied to the 35L6-GT are less than the maximum rated value of 110 volts.



The power output and distortion curves are shown in Fig. 2. These curves were taken with an unbypassed cathode-bias resistor of 150 ohms. Measurements indicate that this is approximately the optimum value. It can be seen that power output increases with load resistance for values up to about 4500 ohms and that further increases in load resistance cause increased distortion but little increase in power output. It is, therefore, recommended that, for operation in the circuit of Fig. 1, the load resistance be 4000-5000 ohms.

Audio Frequency

WHEN NEAT SOLDER connections are desired, mark the area each side of the desired connection with lead pencil. The solder will not adhere to the pencil mark.

Midget Auto Radio

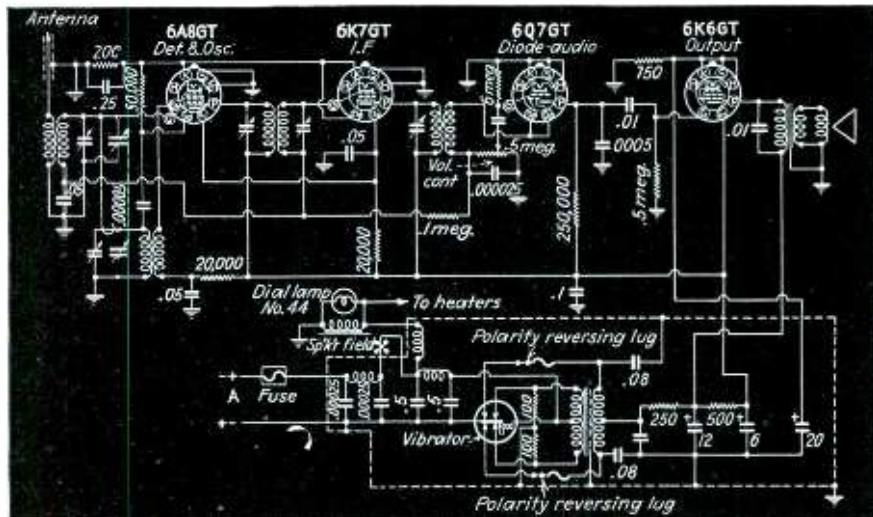
Measuring only $6\frac{1}{8} \times 7\frac{1}{2} \times 4\frac{1}{2}$ inches, a new 4 tube auto radio brings compact sets into the auto field.

Operating as a straight superhet, a 6A8GT acts as converter; 6K7GT as i.f.; 6Q7GT as diode detector, avc and first audio, and a 6K6GT as output. A synchronous vibrator supplies plate voltage.

Interesting, is the fact that a resistance capacity filter is used in the power supply. This makes for low cost and compactness as has its introduction into small home sets. The filter is shown at the lower right of the schematic.

The antenna input circuit is arranged for low capacity input. Although other types may be used, a cowl or hinge type is recommended.

The compactness of the set permits installation in almost any part of the car. A clamp is provided for mounting directly on the steering column under the steering wheel. This greatly simplifies installation and provides ease of servicing.



6K6-GT—Power amplifier pentode by RCA. Base connections are: 1-open, 2-heater, 3-plate, 4-screen, 5-grid, 6-open, 7-heater, 8-cathode.

Heater Voltage.....	6.3	6.3 volts
Heater Current.....	0.4	0.4 amp.
Plate Voltage.....	180	250 volts
Screen Voltage.....	180	250 volts
Grid Voltage.....	-13.5	-18 volts
Plate Current.....	18.5	32 ma.
Screen Current.....	3	5.5 ma.
Load Resistance.....	9000	7600 ohms
Amplification Factor.....	150	150
Distortion.....	10	10 per cent
Power Output.....	1.5	3.4 watts

7A4—General purpose loctal triode by Sylvania with characteristics similar to the 6J5G.

Heater Voltage.....	7.0	7.0 volts
Heater Current.....	0.32	0.32 amp.
Plate Voltage.....	90	250 volts
Grid Voltage.....	0	-8 volts
Plate Current.....	10	9 ma.
Plate Resistance.....	6760	7700 ohms
Mutual Conductance.....	3000	2600 umhos
Amplification Factor.....	20	20

7E6—Loctal duodiode medium-mu triode by Sylvania.

Heater Voltage.....	7.0	7.0 volts
Heater Current.....	0.32	0.32 amp.
Plate Voltage.....	250	250 volts
Grid Voltage.....	0	-9 volts
Plate Current.....	9	9 ma.
Plate Resistance.....	8500	8500 ohms
Mutual Conductance.....	1900	1900 umhos
Amplification Factor.....	16	16

7C7—Loctal triple grid amplifier and detector by Sylvania similar to the 6W7G and 6J7G.

Heater Voltage.....	7.0	7.0 volts
Heater Current.....	0.16	0.16 amp.
Plate Voltage.....	100	250 volts
Screen Voltage.....	100	100 volts
Grid Voltage.....	-3	-3 volts
Suppressor.....	Connected to Cathode	
Plate Current.....	1.8	2.0 ma.
Screen Current.....	0.4	0.5 ma.
Plate Resistance.....	1.2	2 megohms
Mutual conductance.....	1225	1300 umhos

New Tubes

IN6G—Diode power output pentode by Sylvania for battery portable use. Characteristics of the pentode section are:

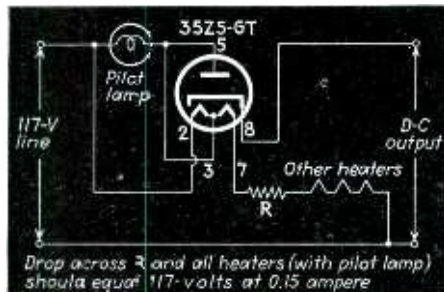
Heater Voltage.....	1.4	1.4 volts
Heater Current.....	.05	.05 amp.
Plate Voltage.....	90	90 volts
Screen Voltage.....	90	90 volts
Grid Voltage.....	-4.5	-4.5 volts
Plate Current.....	3.1	3.1 ma.
Screen Current.....	.6	.6 ma.
Plate Resistance.....	300,000	300,000 ohms
Mutual Conductance.....	800	800 umhos
Load Resistance.....	25,000	25,000 ohms
Power Output.....	100	100 mw.

1Q5G—Battery beam power output pentode by Sylvania.

Filament Voltage.....	1.4	1.4 volts
Filament Current.....	0.1	0.1 amp.
Plate Voltage.....	90	90 volts
Screen Voltage.....	90	90 volts
Grid Voltage.....	-4.5	-4.5 volts
Plate Current.....	9.5	9.5 ma.
Screen Current.....	1.6	1.6 ma.
Mutual Conductance.....	2100	2100 umhos
Load Resistance.....	8000	8000 ohms
Power Output.....	270	270 mw.
Total Harmonic Distortion.....	7.5	7.5 per cent

6J7-GT—Triple grid detector amplifier by RCA. Base connections are: 1-shield, 2-heater, 3-plate, 4-screen, 5-suppressor, 6-open, 7-heater, 8-cathode, cap-grid.

Heater Voltage.....	6.3	6.3 volts
Heater Current.....	0.3	0.3 amp.
Plate Voltage.....	100	250 volts
Screen Voltage.....	100	100 volts
Grid Voltage.....	-3	-3 volts
Plate Current.....	2	2 ma.
Screen Current.....	0.5	0.5 ma.
Amplification Factor.....	1185	1500 approx.
Plate Resistance.....	1	1.5 ohms



35Z5-GT—High vacuum halfwave rectifier by RCA with heater tap for .150 ampere pilot light as shown in diagram. Characteristics are:

Heater Voltage.....	35	35 volts
Heater Tap Voltage.....	7.5	7.5 volts
Heater Current.....	0.150	0.150 amp.
Plate Voltage.....	125	125 volts
Output Current With Pilot Connection.....	50	50 ma.
Output Current Without Pilot Connection.....	100	100 ma.

HY615—A triode by Hytron with characteristics somewhat similar to a 6J5 with lower interelectrode capacities. Miniature glass bulb, grid and plate leads brought out through caps on top, isolantite octal base, metal base shield.

Heater Voltage.....	6.3	6.3 volts
Heater Current.....	0.15	0.15 amp.
Overall Length.....	2 3/16	2 3/16 inches
Overall Diameter.....	1 9/16	1 9/16 inches
Grid-Plate Capacity.....	1.8	1.8 uuf
Input Capacity.....	1.4	1.4 uuf
Output Capacity.....	0.6	0.6 uuf
Plate Voltage.....	250	250 volts
Plate Current.....	20	20 ma.
Grid Current.....	4	4 ma.
Amplification Factor.....	20	20
Mutual Conductance.....	2200	2200 umhos
Plate Resistance.....	10000	10000 ohms
Oscillator Power Output at 300 mc.....	2.5	2.5 watts

Attend the National Radio Parts Trade Show

1939 JUNE 1939

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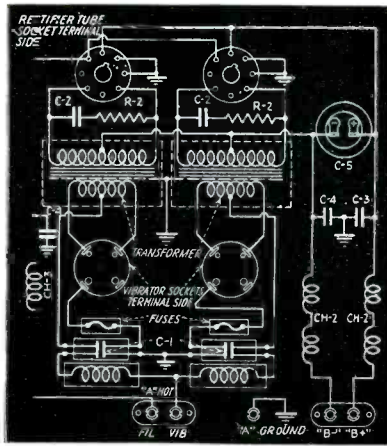
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Dual Vibrator Supply

Two rectifiers and vibrators in the diagram herewith supply 400 volts at 150 ma. in the case of model VP-557, and 600 volts at 200 ma. for model VP-555 Vibrapack by Mallory. Good regulation and long vibrator life are claimed through the use of dual components.

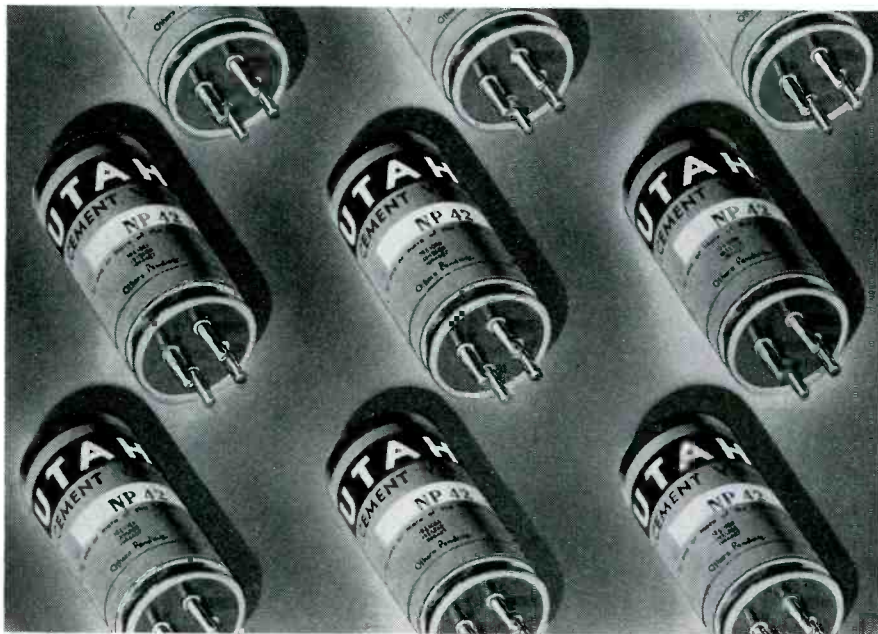
Designed for radio transmitter and public address service where high voltage tubes are employed, both units are provided with heater type rectifiers which permit satisfactory operation over wide current values. A separate heater circuit with an independent terminal is provided so that



the rectifier tubes may be kept heated during the entire period of service, and instant power available for break-in operation.

A high voltage input condenser is used to accommodate surge voltages. This, plus an additional filter choke and output condenser will satisfactorily filter the supply.

A minimum load of 25 ma. is recommended at all times to limit output voltage and protect the rectifier tubes and filter condensers.



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MU-2

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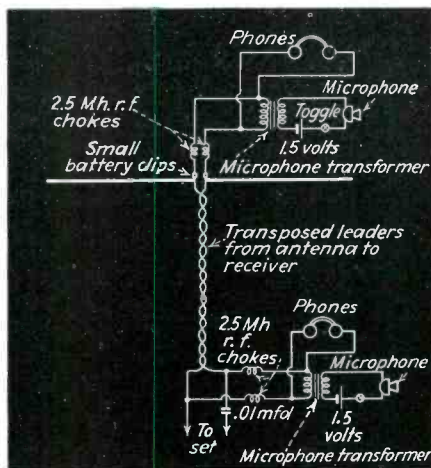
New MULTI-UNIT Crystal Microphones provide maximum amplification with greatly reduced feedback tendencies and cannot be acoustically overloaded. Combine performance, flexibility and beauty. Complete with interchangeable locking connector and 25-ft. cable. MU-2 \$29.50. See your Astatic Jobber or write for literature.

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Television Telephone

The problem of orienting television dipoles to avoid ghost images caused by echo signals is often complicated by the fact that the antenna is situated on the roof, far from the receiver. Lack of communication between these two points often results in confusion and much time wasted. A novel telephone circuit is shown herewith which establishes constant contact between the receiver and antenna.

The necessary equipment is housed in two separate boxes. Each box contains a mike transformer, battery, switch and provision for plugging in a pair of earphones and a mike. In addition, two leads, twisted together, run from the box. At the end of each lead is a 2.5 mh. r.f. choke which allows audio to pass but prevents r.f. from flowing into the telephone circuit. On the other end of each choke is a small battery clip so that connection may be made to the antenna transmis-



sion line at the set end, and to the center of the antenna at the antenna end.

The leads from the chokes to the transmission line should be short, otherwise the antenna balance may be upset. A .01 mfd condenser, in series

with the transmission line at the set, prevents pickup coil in the receiver from shorting the line to audio signals. Thus the transmission line becomes a telephone line also.

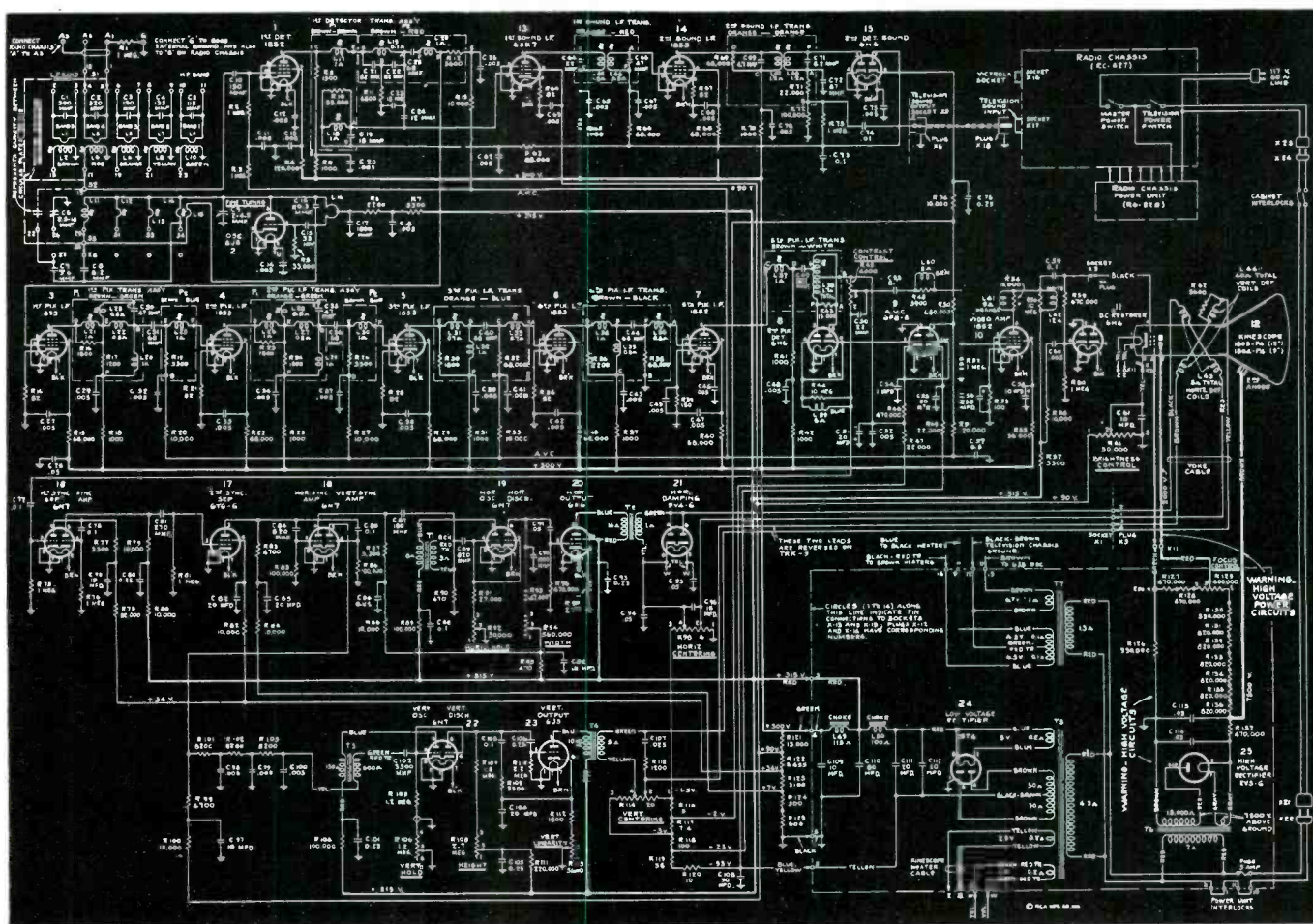
Video Lingo

AXIS—In television, the horizontal plane is called the X axis, the vertical plane the Y axis.

COAXIAL CABLE—A special low capacity cable for conveying television signals with as little loss as possible.

CONTRAST CONTROL—A control on the receiver adjusting the contrast between highlights and shadows of the picture.

DEFLECTION (ELECTROSTATIC)—A system where the motion of the spot in producing the picture is controlled by static action of the deflection plates.



TELEVISOR—Schematic of the RCA TRK-9 (9 inch) and TRK-12 (12 inch) 5 band sight and sound television receiver. Beginning top left to right first row of tubes make up the sound receiver, second row the pix receiver; third and fourth rows are pix control circuits. Note high voltage warning at lower right, also cabinet interlock switch at upper right which turns power off when cabinet back is removed.

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DEFLECTION (MAGNETIC)—A system where the spot in producing a picture is controlled by magnetic fields.

DEFLECTION PLATES—Plates mounted inside a cathode-ray tube providing electrostatic deflection of the electron beam.

DEFLECTION (COILS)—Coils mounted externally about the cathode-ray tube producing a magnetic deflection of the electron beam.

DIPOLE—An aerial composed of two separate rods, each a quarter-wave long.

DOUBLE IMAGE—Where two images appear separately on the screen, one of the sweep circuits is adjusted to half its correct speed. If the horizontal is at fault, the images will appear side by side; conversely if the images are vertically displaced the vertical sweep is at fault.

FIELD—In the RMA Television System there are two fields to each frame. In other words each picture is comprised of two fields scanning alternate lines.

FRAMING—One complete picture, thirty of these a second are thrown on the screen.

FRAMING CONTROL—A control for centering the picture.

FOCUSING CONTROL—A control on the receiver to bring out definition; it actually controls the width and sharpness of the individual lines on the cathode-ray tube.

GHOST—An unwanted image in the picture usually caused by signal reflection.

GUN (CATHODE-RAY)—The structure or mount inside the cathode-ray tube that produces, accelerates and focuses the electron beam.

HORIZONTAL TEAROUT—This term describes the breaking up of the upper part of the picture, either to the right or left. The cause is usually poor low frequency response in the sweep or video amplifier.

INTERLACING—This refers to the technique of dividing the frame into two fields with displaced lines to eliminate flicker.

LINEARITY—Means uniform rate of motion. This is required as the picture will be distorted in non-linear portions.

MODULATION—A process of applying the video signal to the modulating or control electrode of a cathode-ray tube so as to produce the lights or shadows of a picture.

PARAPHASE—A term used in television and English books which is equivalent to the American "push-pull."

PIX—Pertaining to the picture or video circuits.

REFLECTORS—Additional rod or rods placed near the antenna to reinforce signals.

SAWTOOTH—A saw shaped wave of electric current or voltage employed to scan or sweep a cathode-ray tube.

SCANNING—The action of an electron beam in tracing lines across the screen.

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TRICKS

AIRLINE 33

Intermittent. . . . Weak contact spring on back of three gang condenser permits end-play in rotor.

AIRLINE 203

Dead. . . . Test the condenser and resistor located behind the volume control. Replaces resistor with 500 ohm 1 watt unit and condenser with .25 mfd 400 volt type.

AIRLINE 211

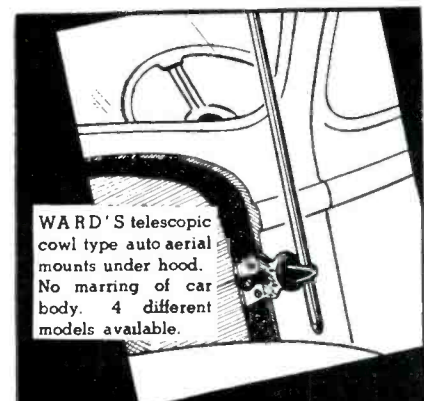
Distortion. . . . Replaces defective resistor in plate circuit of 34 detector with 40,000 ohm unit.

A.K. 55

Inoperative. . . . Look for a small piece of broken antenna wire wedged in between antenna terminal and chassis.

A.K. 84

Oscillation . . . check 60,000 ohm grid resistor on 27 oscillator for change in value.



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A.K. 165

Weak, oscillation, crosstalk. . . . Look for open bias resistor on 57 mixer. This is a wirewound pigtail type.

A.K. 206, 376

Incorrect dial calibrations at the low frequency end. . . . Readjust broadcast trimmer located at rear of chassis. This adjustment is rather difficult to find on the chassis.

A.K. 435

Intermittent noise replace 20,000 ohm 2 watt carbon resistor supplying screens of 6A7 and 6K7.

ATWATER KENT 317, 337

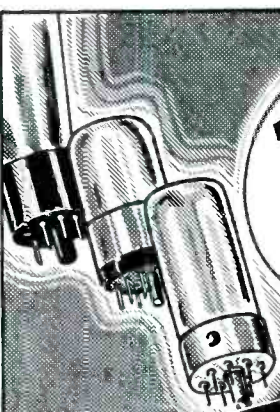
Intermittent and weak on low frequency end of dial. . . . Check plate resistor in oscillator circuit of 6A8. If defective replace with 30,000 ohm unit.

A.K. 812

Erratic operation, noise, intermittent. . . . Broken or loose connection to the .00145 mfd condenser located inside oscillator coil shield.

ARVIN 618

Hum. . . . Check for high resistance contact of lug riveted to chassis at 6Q7 socket.



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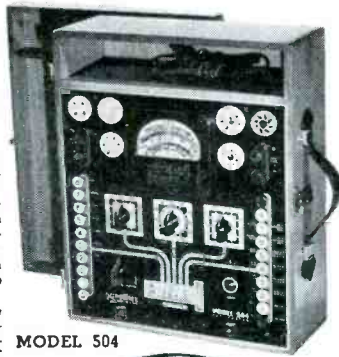
SUPREME completely guarded against tube tester obsolescence due to roaming tube base terminations as soon as it was possible by including in every SUPREME tube tester an OBSOLESCENCE FREE FILAMENT RETURN SELECTOR—the first in the field with complete assurance against obsolescence due to roaming tube terminals.

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BOSCH 31, 32

Fading, distortion . . . open circuiting 2 megohm resistor in screen of second detector.

AMERICAN BOSCH 150A

Vibrator hash. . . . Reroute switch leads on rear of volume control away from vibrator wiring.

BOSCH 604

Distortion. . . . Check 12 mfd bypass on 43 cathode.

CLARION 480

Weak, distortion, tunalite action poor. . . . Excessive bias on 56 first audio.

CLIMAX 1936 BATTERY MODELS

Weak and noisy. . . . Replace first i.f. coil with new 456 kc. unit.

COLONIAL 32AC

Oscillation, instability on high frequencies . . . open 35,000 ohm carbon resistor (pink) from screen of first r.f. to chassis.

COLUMBIA C800A

Oscillation. . . . Check spray shield on tubes for contact with base prongs.

FIRESTONE R1431

Dead in upright position, satisfactory operation when up-side-down. . . . Look for burned braided lead in vibrator can.

FORD PHILCO FT6

Intermittent low volume . . . replace buffer condenser across rectifier plates. (Resistor in series with this condenser).

GENERAL ELECTRIC (RADIO-FORTE)

If tuning motor seems to lose power, look for weak 60 mfd. electrolytic across motor winding.

HALSON AW6

Distortion, hum . . . candiom resistor shorted to frame. Insulate frame from chassis.

HOWARD 200

Dead . . . look for shorted .1 mfd 200 volt condenser from 6K7 screen to chassis.

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April 21, 1939

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F. E. Smolek
Service Manager

SERVICE INSTRUMENTS, INC., 404 Fourth Avenue, New York City
FOREIGN DIVISION, 145 W. 45th Street, N. Y. C., Cables — "Servicin"

**Bigger Profits for You
IN SELLING SOUND WITH
Clarion EQUIPMENT**

The big money in Sound is being made by members of the Clarion Institute of Sound Engineers. C.I.S.E. is a merchandising plan designed to help you! Find out today how you can join . . . remember, it costs nothing.

The System behind the Plan



In Clarion you have 1939's outstanding line of Sound equipment—modern, streamlined, thoroughly engineered and dependable. Clarion "Unified" Sound systems are compact, easy to install, ready-to-operate.

How Clarion Plan works for you

To anyone qualifying, C.I.S.E. offers

- 1 Direct factory purchasing power . . . meet all competition!
- 2 Exclusive sales territory . . . no one can "muscle in" on you!
- 3 Free engineering and consulting service—no job too big or too complicated for the C.I.S.E. members.
- 4 Competition-smashing prices!



Eye-compelling window streamers identify you as the recognized C.I.S.E. member in your territory . . . deliver customers to your door. It's the No. 1 value in P.A. today—and your biggest chance to profit!



SEND for new FREE Clarion catalog. Discover the profit-possibilities in P.A. when you sell under the C.I.S.E. banner. NOW—mail coupon for your copy! Get the money-making Clarion story FREE!

**CLARION INSTITUTE OF SOUND ENGINEERS
69 WOOSTER STREET, NEW YORK CITY**

**CLARION INSTITUTE OF SOUND ENGINEERS
69 WOOSTER ST. NEW YORK, N.Y.**

RR539
Please send a C.I.S.E. application immediately. This, in no way obligates me of course.

Name

Address

City..... State.....

TRY THESE ON TUBES

(Continued from page 25)

replacing tubes regularly on every home call, for what ever purpose.

4. Replacement of every weak tube tested and not just the worst in order to hold the quotation down.

5. Do not sacrifice tube sales because you wish to charge for repairs.

6. Use a sticker giving your name and date of sale on every tube.

7. Through window display, house canvassing and direct-mail, encourage the public to bring tubes to you for testing and then be sure you have up-to-date testing apparatus.

8. Secure the name of each person who buys tubes from you and follow up for replacement business at least once a year.

9. Don't ever sell used radio tubes. Destroy them at once.

10. Make it a practice to carry a complete stock of all types.

SOME FACTS ABOUT SOUND

(Continued from page 33)

tribution as well as the kind of distribution he wanted.

The comment of retailers questioned again provided interesting reading and several quotations which may conceivably serve to guide the industry's thinking into profit-producing channels are here reproduced.

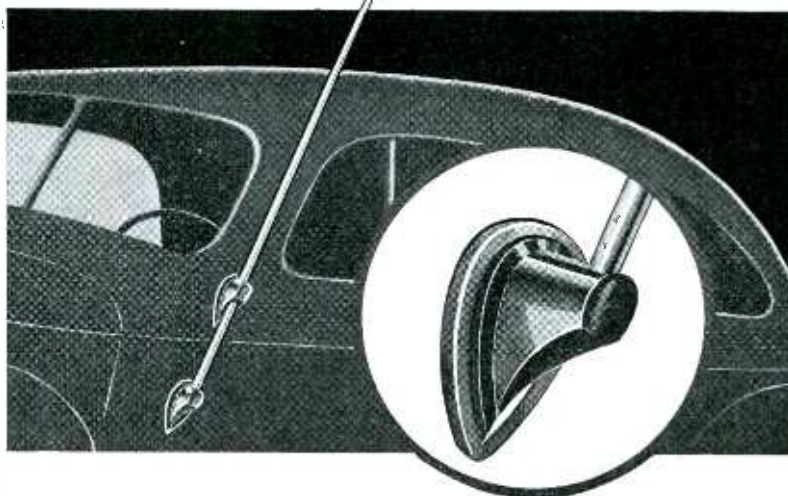
Said one retailer: "I buy sound equipment for sale to people who want the best possible record reproduction." Said another: "Sound systems are widely needed, but too many prospects want to rent them for \$5 a week." Another: "Wherever there are people, amplifiers can be sold." Another: "I am not well enough financed to get into sound in a big way." Another: "We satisfy as we amplify."

Not surprising was the result of a questionnaire analysis which indicated that 88 per cent of all these retailers selling sound were renting as well as selling. Rentals are one approach to sales. Even less surprising, was the indicated fact that only 40 per cent of the concerns contacted maintained stock other than their demonstration or rental equipment. Clearly, many retailers need help with their financing. Con-

*Brach
Introduces*

**RADIO'S SMARTEST
COWL AERIAL**

DESIGNED FOR BEAUTY AND EFFICIENCY



SPECIAL FEATURES

- ★ Beautiful new streamline design
- ★ Gleaming chrome plated — Admiralty Brass
- ★ Velvety smooth noiseless action — permanently lubricated
- ★ Vibrationless — exclusive anti-rattle design
- ★ Approved and recommended by leading car manufacturers



L. S. BRACH

**MANUFACTURING
CORP., NEWARK, N. J.**

sidered unfortunate, but still not a shock, was the indicated fact that only 17 per cent devoted full time to sound. While sound is an excellent sideline for allied fields, its potentialities warrant establishment of specializing departments in many stores, as well as an increase in the number of men concentrating on it alone, in the writer's estimation.

GETTING STARTED WITH CAMERAS

(Continued from page 32)

of the "glass". In general, the layman must take the manufacturer's word for both.

Shutter speed determines the ability of a camera to "stop" motion, take a picture quickly enough so that in the split second during which the film is exposing the subject does not move far enough to cause objectionable blurr. For normally lighted average snapshots, speeds of between 1/25 and 1/75 second are usually sufficient, and practically all modern inexpensive cameras likely to appeal to radio dealers in other respects include such shutter speeds. Many in the intermediate price groups have shutters which work as fast as 1/200, sufficiently speedy to stop all but extremely fast moving objects passing the photographer at acute angles, shots not ordinarily attempted by the layman anyway.

Cameras having shutter speeds above 1/200 need not necessarily be included in sample stocks but may be given early consideration, as they are frequently desired by more advanced workers who wish to be able to stop virtually any motion, no matter how extreme. Equipment providing shutter speeds slower than 1/25, and "time" exposure provisions for opening the shutter and then closing it mechanically any time later, is perhaps even more useful, in that the user of such equipment may take pictures in poor light even though his lens is relatively slow by holding subject and camera still for comparatively long periods and so obtaining enough exposure.

Accessories Too

While the dealer just getting into the business need not at first invest in accessories for cameras, there are a few that sell quite as readily as the new and popular cameras themselves.

Simple exposure charts which tell the beginner where to set the lens

"aperture" adjustment and the shutter speed for typical pictures are a great help in getting decent shots from the very first and are usually supplied with new cameras, sometimes included as integral plates fastened to camera backs. "Visual extinction" exposure calculating devices cover a somewhat wider range of pictures, further improve exposure accuracy and are available for as little as \$1.50. They are frequently built right into cameras. And as soon as the dealer gets a toe-hold in the business he will surely wish to investigate the more expensive but highly accurate exposure meters of the photocell type.

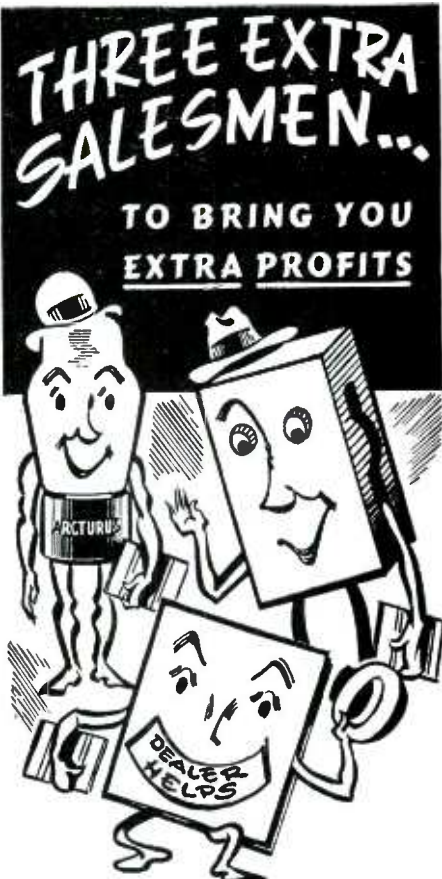
The saleability of carrying cases that make new cameras easy to lug around inconspicuously is obvious. Such cases should be stocked in limited quantity from the start.

A medium yellow "filter" which can be fastened over the lens to put good looking skys and clouds in outdoors shots instead of those deadly flat white expanses should sell well if explained, and other filters can be added later.

Range finders which permit the photographer to measure distance optically without pacing it out, and so assure better focussing, are a logical early step after initial camera stocks start to move. They are available at moderate prices as accessories and somewhat higher for use in connection with certain cameras as "coupled" types which automatically focus the lens in one operation when optically set for correct distance. Some new cameras in the intermediate price brackets have them built-in.

Flash bulbs which permit the photographer to get good shots of even fast moving subjects in poor light are another saleable accessory, along with their holders. Coupling devices that set off such flashes when the shutter is clicked and so properly synchronize light and shutter are available, even built right into certain new camera models. Photoflood lamps that burn very brilliantly for about 2 hours and so may be manoeuvred around the room for indoor shots are also useful, along with holders, reflectors, clamps and stands.

Many other accessories such as lenses with which those supplied in the camera may be replaced for special types of work like wide-angle, magnification of distant subjects, soft-focus portraits, extreme



THREE EXTRA SALESMEN..
TO BRING YOU EXTRA PROFITS

MR. ARCTURUS TUBE MAKES FRIENDS AND KEEPS 'EM!

The husky chap that everyone likes! High quality ARCTURUS TUBES in your customers' sets keep 'em happy—they'll call the man who recommended "those good tubes" the next time they need service!

MR. ARCTURUS * EQUIPMENT DEAL GIVES YOU MODERN EQUIPMENT!

The "Santa Claus" of the family brings you EXTRA PROFITS in the form of valuable modern shop and store equipment! The ARCTURUS EQUIPMENT DEAL offers you Lower Down Payments, Low Tube Requirements, Standard Tube Prices, Immediate Delivery of the equipment you select!

MR. ARCTURUS DEALER HELPS BRINGS IN NEW CUSTOMERS!

Depend on this one to keep the place "humming"! Tested merchandising material to attract new customers and bring the old ones back again and again!

GET ACQUAINTED
with the three Arcturus Boys—cash in on Radio's finest and fairest Equipment Deal . . . "Go Arcturus" for Extra Profit! Just mail the coupon, we'll do the rest!

(*Offer good in U.S.A. only.)

ARCTURUS

ARCTURUS RADIO TUBE CO., Newark, N. J. R-19
Without cost or obligation, send my copy of the ARCTURUS DEALER HELPS Folder and details of the ARCTURUS EQUIPMENT DEAL.

Name.....
Street.....
City.....State.....
 I am a dealer I am a serviceman. My
jobber is.....

For your convenience this coupon can be pasted on a penny postcard



PRESTO OFFERS NEW LOW-PRICED DISC for Sound Recording

Here is a new disc that should double or triple your business in Presto recording equipment and supplies. It's the new PRESTO MONOGRAM DISC, now ready for immediate delivery.

LOW COST—List prices lower than any recording blank now on the market.

SIZE	THICKNESS	LIST PRICE (Carton of ten)
6"	.048"	\$2.50
8"	.048"	4.00
10"	.048"	6.00
12"*	.048"	7.50

* Ready June 15th

HIGHEST QUALITY—Coated with Presto "Q" compound, same as the famous PRESTO GREEN SEAL DISC used by leading broadcasting stations and recording studios, assuring wide response range and negligible surface noise.

PRICE PROTECTION—Sold under fixed price agreements to give you a real profit.

ORDER SAMPLES TODAY. ASK FOR DETAILS OF VALUABLE DISTRIBUTOR FRANCHISES NOW AVAILABLE

PRESTO RECORDING CORP.
242 W. 55TH STREET NEW YORK, N. Y.

close-ups of small objects, are also obtainable when the dealer considers expansion of stock desirable. The constant desire of camera fans for accessories, and better cameras is, in fact, one of the advantages of the photographic equipment business.

Goes On And On

Primary purpose of this article is to get the beginner started, and the foregoing text should be sufficient for this purpose. There is much more potential photographic business, however, and just to show its possibilities for expansion a few items for people who want to do their own developing, printing and enlarging will be mentioned.

Development of the smaller films such as those used in most new popular priced cameras of the miniature variety may be easily accomplished without a dark room. It's all done in tiny light-tight "tanks" selling for as little as \$3, commonly with ready-mixed liquids which may be used right out of the bottle in which they are purchased without any dirty work whatever.

A new combination developer and fixer just placed on the market reduces the need for critical temperature control, eliminates one complete operation and virtually eliminates the possibility of "burning up" films by leaving them in the developer too long. You merely use this one "bath", then wash with plain water.

Time clocks of every conceivable variety do everything but think for you.

Contact printers and fixed-focus enlargers are available in such simple-appearing cases that miniature and semi-miniature negatives may be printed or blown up by the layman with a single evening's experience. Variable focus enlargers are available to beginners for as little as \$10 and are not difficult to manipulate.

Projectors are available at low cost for the man who wants to take full-color pictures and then throw them up on a screen to amaze his friends.

Special electric irons for fastening prints in albums when using proper adhesives have a universal appeal to photographic fans.

These are just a few of the obvious photographic appurtenances. And where *Still* photography leaves off the *Movie* cameras start all over again.

JIM QUAM Says



It won't be long now before the Chicago Radio Parts Show rolls around again. Somehow we always look forward to that time, not only because it gives us a chance to show you our latest development in speakers, but also because we can again meet some of our many friends in this radio business, friends that we see all too seldom.

Our booth this year is No. 728, and we want to extend you a cordial invitation to visit us there. We'll have some new things to show you, of course, so make it a point to stop in.

QUAM-NICHOLS CO.
33rd Place & Cottage Grove CHICAGO 1674 Broadway NEW YORK



it costs no more to test 50-75-100 volt tubes

Here's another big RCP value for the serviceman! RCP's new Model 308 tube tester is designed to test all the newest tubes, including the 50-75-100 volt filament jobs, as well as locals, single ends, OZ4, and other cold cathode rectifiers. Noise test. Hot interelement short and leakage check. Line voltage indicator on meter. And best of all, this new, up-to-the-minute RCP instrument costs no more than other, less advanced tube testers. See Model 308 at your jobber's today, or write for free catalog that tells the complete story..... **\$16.95**



Now at new reduced price—RCP's Model 701 Signal Generator. Direct reading, full vision AC all wave, 400 cycle sine wave modulation. Provides for unmodulated and externally modulated signal. Coil, attenuator and R. F. circuits individually triple shielded. Continuously variable from 25 kc. to 90 mc..... **\$25.95**



RADIO CITY Products Co.
88 PARK PLACE NEW YORK CITY

INDEX TO ADVERTISERS, May 1939

	Page
Aerovox Corp.	51
American Condenser Co.	54
American Television Corp.	43
Arcturus Radio Tube Co.	69
Astafic Microphone Laboratory, Inc.	62
Automatic Radio Mfg. Co.	66
Bell Sound Systems, Inc.	59
Belmont Radio Corp.	Back Cover
Beverly Electric Mfg. Co.	13
Brach & Co., L. S.	68
Burke & James, Inc.	55
Centralab: Div. Globe Union, Inc.	58
Cinadagraph Corp.	64
Clarion Institute of Sound Engineers.	68
Clarostat Mfg. Co.	54
Consolidated Wire & Assoc. Corps.	51
Cornell-Dubilier Elec. Corp.	67
Crosley Corporation.	72, Inside Back Cover
Drake Electric Works, Inc.	55
Farnsworth Television & Radio Corp.	4, 5
General Electric Co.	6
Hygrade-Sylvania Corp.	14
Ken-Rad Tube & Lamp Corp.	59
Lafayette Radio Corp.	53
Majestic Radio & Television Co.	3
Mallory & Co., Inc., P. R.	Inside Front Cover
McGraw-Hill Book Co.	64
Meissner Mfg. Co.	9

	Page
National Union Radio Corp.	29
Onan & Sons, D. W.	45
Parker-McCrory Mfg. Co.	53
Philco Radio & Television Corp.	10
Pioneer Gen-E-Motor Corp.	59, 66
Presto Recording Corp.	70
Quam-Nichols Co.	70
Radiart Corp.	55
Radio City Products Co.	70
Radio Corporation of America.	24
Raytheon Production Corp.	7
RCA Manufacturing Co.	36, 37, 38, 39
Readrite Meter Works.	57
Recofon Corp.	59
Regal Amplifier Mfg. Corp.	54
Rider, John F.	49
Sentinel Radio Corp.	44
Service Instruments, Inc.	67
Solar Manufacturing Corp.	57
Standard Transformer Corp.	45
Supreme Instruments Corp.	65
Thordarson Electric Mfg. Co.	42
Transformer Corp. of America.	68
Triplett Electrical Instrument Co.	53
Tung-Sol Lamp Works, Inc.	2, 43
Utah Radio Products Co.	62
Ward Products Corp.	65
Willard Storage Battery Co.	41

SEARCHLIGHT SECTION

Classified Advertising

Classification	Page
BOOKS	71
CATALOGS	71
EMPLOYMENT	71
RADIO STOCKS	
Allied Radio Corp.	71
Burstein-Applebee Co.	71
Midwest Appliance Parts Co.	71
Mostow Co., The	71
New York Radio Supply Co.	71
Victory Manufacturing Co., Inc.	71
Williams, Inc.	71

Although Radio and Television Retailing takes every precaution to insure accuracy, we cannot assume responsibility for an occasional change or omission in the above index.

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SEARCHLIGHT SECTION

FILM GRAPH

Newly Patented Sound on Film Instantaneous Recorder & Reproducer used for making "Talkies" and general Recording. 112 minutes of recording can be made on a single roll of 100 feet of film costing only \$3.85. No Other Cost. Few Good Territories Left. Address J. M. Kuhlke, Sales Manager Miles Repro. Co., Dept. RR, 812 B'way, New York.

TELEVISION CYCLOPEDIA

Defines and explains all television terms now used and gives actual applications. Covers in detail every phase of modern cathode-ray television. Every radio man, dealer, amateur, and student of television needs this new book. It will simplify TELEVISION for you. Compiled by M. N. Beitman. Only \$1.00 postpaid.

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3727 West 13th St. Chicago, Illinois

EVERYTHING IN RADIO!
Our immense stock of radio sets, parts and supplies enables you to purchase your radio needs on one order! You will find all you need in this big book which is FREE for the asking. Practically every order is shipped the next day it is received. Write for Catalog and the next day it is received. Write for Catalog and the next day it is received. Write for Catalog and the next day it is received.

BURSTEIN-APPLEBEE CO.
1012 1/2 McGee St. Kansas City, Mo.

WHILE THEY LAST MYSTERY WIRELESS RECORD PLAYER

NO CONNECTIONS WITH RADIO



Astatio Crystal Pickup, Self starting, direct drive, constant speed motor. Handsome Walnut Cabinet. Quantity limited. We cannot mention manufacturer's name at this low price.

\$9.37 ea.
In lots of three \$8.88 ea.

NEW YORK RADIO SUPPLY CO.
152 W. 42 St., N. Y. C.

New "SEARCHLIGHT" Advertisements

must be received by the 31st of the month to appear in the issue out the following month.

Address copy to the
Departmental Advertising Staff

Radio Retailing
330 West 42nd St., New York City

MOSTOW PAYS SHIPPING CHARGES!

in the United States

All Orders of \$75.00 or More
Shipped Free of Charge.

All Orders From \$25.00 to \$50.00
Mostow Pays One-Half Shipping Charges



SEND FOR OUR NEW CATALOG OF
SENSATIONAL VALUES

THE MOSTOW CO.

Distributors of
Cameras—Photo Supplies—Projectors
MERCHANDISE MART, CHICAGO, ILL.
100% Wholesale We Protect the Dealer

1929 • CELEBRATE • 1939 WITH US OUR 10th ANNIVERSARY

Write for Our 8-Page Bulletin of 50 Grand Values on vacuum cleaner, washing machine, iron replacement parts and other electrical appliances. Quality Best Money Can Buy. A useful 6-inch ruler FREE with each bulletin. 1929 10 years of successful merchandising 1939

Midwest Appliance Parts Co.
Manufacturers-Factory Representatives
and Distributors
2722 W. Division St. Chicago, Ill.

AUTO ANTENNA

CLOSE OUTS—Discontinuing manufacture of auto antenna. Less than 1/2 manufacturing costs. Bullet Hinge Type Rust-proof satin finish Per. Dz. \$1.75; Flex-Rod Hinge Type Ass'd. color fittings Per. Doz. \$2.75; Deluxe Running Board all rubber covered Per. Dz. \$6.50.

Terms: F.O.B. Chicago, Net Cash with order or C.O.D.
Victory Manufacturing Co., Inc.
2021 S. Michigan Avenue Chicago, Ill.

RADIOS for the SERVICE MAN and SERVICE DEALER

R.M.S. Super Radios, Compacts—attractive discounts—also PHILCO PARTS and TUBES—Send 10c in stamps for Philco Parts Catalogue and Wholesale Prices.

WILLIAMS, INC.

PHILCO HEADQUARTERS
804 S. ADAMS ST. PEORIA, ILL.

Everything in Radio
AT LOWEST PRICES!



62
NEW
SETS

IN ALLIED'S SPRING CATALOG!

Just Out! ALLIED's new catalog, with your every radio need at lowest prices! 60 new "Knight" Radios, with ideal price leaders featuring Push-Button Tuning and "Air Magnet" built-in aerials, at remarkable prices. Models for Portable, AC, AC-DC, 1 1/2, 6 and 32 volt, battery and auto operation, as low as \$5.95! New record players, phonographs, and phono-radios. Over 14,000 parts, books, tools; new P. A. systems, 8-65 watts; amateur gear, Kits, and complete recording equipment. Get ALLIED's Spring Catalog—Radio's Complete Supply Guide! Let it save you time and money! It's FREE—just send coupon.



14,000 PARTS



NEW P. A.



FREE CATALOG

ALLIED Radio Corporation,
833 W. Jackson Blvd.,
Dept. 18-E-9, Chicago.

Send me, Free, your Radio and Parts Catalog for Spring.

Name

Address

HOME REFRIGERATION REVOLUTIONIZED!

Crosley now presents a Refrigerator
for the replacement market that gives women a
good excuse to discard their old models

Crosley provides two-temperature and air conditions in two compartments of the newly developed FREEZORCOLD Shelvador. In one compartment a uniform below-freezing temperature is maintained—a dry sharp cold that keeps fresh meats or game as long as family needs demand—enables women to buy frozen foods at “Special” sales and store until wanted—keeps ice cream firm and solid—permits them to make and store ice cubes against the biggest kind of a party—makes possible a full larder AT ALL TIMES for unexpected guests.

This is not a Refrigerator with a Partition in it

Fast-frozen foods are rapidly becoming a definite part of the American diet—primarily because of convenience, for they are now in nearly every grocery store. There is no waste in their use.

Game and fish are two foods hard to keep in the home because of limitations of available refrigeration—but NOW in the sub-freezing compartment of FREEZORCOLD a temperature is provided that's low enough to retard physical change in these delicacies for many days.

Pie dough is a delicate material—prepared best when

FLAME-FREEZE SHELVADOR

Modern Refrigeration for Homes without Electricity

Farm and country homes beyond the power lines can now enjoy economical food protection with the matchless convenience and beauty of Crosley Flame-Freeze Shelvadors. Produces refrigeration from inexpensive kerosene heat at a cost of only a few cents a day.

No Flame when owner's away appeals to remote homes

There is plenty of room for food. Enjoy ice cubes and desserts even on hottest days. There are absolutely no moving parts—nothing to get out of order, and you can depend upon its unflinching service for many years to come.



CROSLEY TWO TEMPERATURE FREEZORCOLD SHELVADOR

utensils and ingredients are very cold. The FREEZORCOLD SHELVADOR enables the delighted cook to prepare materials at temperatures heretofore unavailable in the kitchen. Once made, her shortened dough can be kept over a long period of time—in any quantity in the FREEZORCOLD freeze compartment. Ice cream is not only easily made in this freeze compartment, but can be kept indefinitely. No more running down to the store just before meal time to get the ice cream home in right condition. Also, you can make and store many pounds of ice cubes.

THE CROSLEY SHELVADORS

are a perfect “step up” line of refrigerators. Beginning with the 3 ft. “SPECIAL” at \$99.50 you can lead the prospect through the lowest priced quality refrigerators on the market to the “REGULAR” fully equipped line which matches competition’s “Stripped” models in price on up through the “DELUXE” Shelvadors of which there is nothing finer at any price, and into the NEW and UNMATCHABLE FREEZORCOLDs in 4 models.

New Low Temperature with high humidity provides improved food preservation heretofore unknown in the home

The second compartment is moist, air conditioned cold storage to hold cooked foods, vegetables, fruits, etc., at the peak of their perfection. “So you retard the drying out of food in electric refrigerators?” exclaim excited housewives. Yes, because the drying out of the natural juices in the food is retarded. Thus vegetables remain prime for days, chilled delightfully crisp in the cold humid air, retain-

2 temperatures in 1 refrigerator

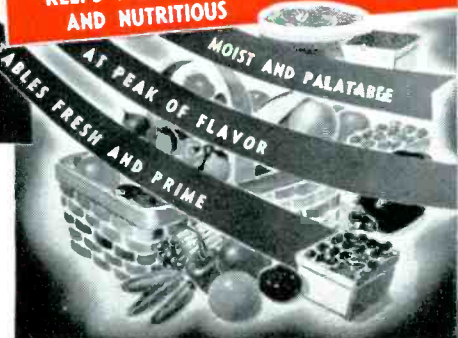
UPPER COMPARTMENT
SUB-FREEZING COLD
 KEEPS MEAT, FROZEN FOODS,
 GAME, FISH, PIE DOUGH, ICE CREAM



MEAT FROZEN UNTIL YOU WANT IT
 GAME AND FISH FROZEN FOR SAFE KEEPING
 BUY FROZEN FOOD SPECIALS - KEEP SAFE UNTIL WANTED
 FROZEN FOODS



LOWER COMPARTMENT
MOIST COLD
 KEEPS FOODS FROM DRYING OUT,
 KEEPS THEM FULL FLAVORED, FRESH
 AND NUTRITIOUS



LEFTOVERS
 KEEPS COOKED FOODS
 HIGH HUMIDITY KEEPS VEGETABLES FRESH AND PRIME

ing their original vitamins—keeping moist and garden fresh with no discoloration for days longer than ever before. Leafy vegetables are preserved without wilting or shrinkage in the drawer-type super-moist crisper.

Cooked foods are held at their appetizing peak for incredibly long time. The moist cold is the secret. The air in the humid cold chamber circulates constantly over the WET coils, providing the kind of air conditioning food preservation must have to produce maximum results. This high humidity is accomplished by the use of a special radiator-like chilling unit which does not frost like the conventional type evaporator.

This new development accomplished without adding one moving part

This outstanding advancement has been accomplished without adding one single moving part to the Shelvador refrigerator. These new refrigerators are efficiently and carefully manufactured in the new Crosley factory—probably the finest plant of its kind in the world. A

**FREEZORCOLD
 FEATURE**

ONLY \$15

**... TO \$20.00 MORE THAN
 COMPARABLE REGULAR
 AND DELUXE
 SHELVDORS**

background of long experience, unsurpassable engineering talent and skilled craftsmanship produce quality in every part that goes to make each guaranteed Crosley refrigerator.

This new FREEZORCOLD PLUS the SHELVDOR is refrigeration's greatest sales possibility today

You may think the Shelvador an old story—but if you stand in the Crosley exhibit at the New York World's Fair and see the thousands of women examine, study and enthuse over the Shelvador which to them is *new*, your enthusiasm will be revitalized and you will realize that the Shelvador still has a great and fertile market.

**FREEZORCOLD SHELVDORS
 4 Models**

6 ft. Regular	7½ ft. Regular
6 ft. Deluxe	7½ ft. Deluxe

THE CROSLY CORPORATION

POWEL CROSLY, Jr., President Home of WLW—"the Nation's Station"—70 on your dial CINCINNATI
 See the Crosley Building at the New York World's Fair

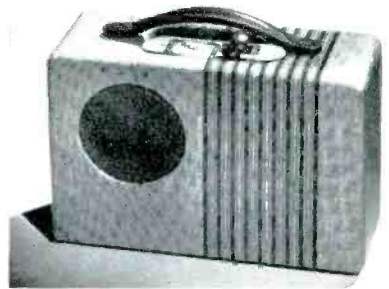
BELMONT *announces* TELEVISION



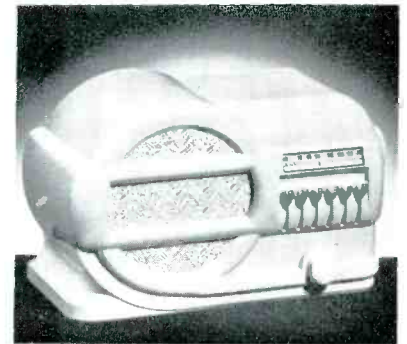
BELMONT takes pride in announcing this Television Receiver, entirely designed and engineered in Belmont Laboratories. Expert engineering, careful design and precision manufacturing combine to produce high quality in this contribution to the newest advance in Radio arts.

and these fast-selling BELMONT RADIOS

MODEL 407—Unusual—different—a truly compact, portable battery radio—weighs only 10½ pounds complete with batteries. Sensationally small size—width 12¼ in., height 8¼ in., depth 4½ in. Completely self-powered—no aerial or ground needed. Easy to carry wherever you go . . . on trains, in hotels, camping, boating, on the beach . . . anywhere indoors or outdoors. Exceptionally low battery drain insures long battery life. Five inch dynamic speaker. Tunes American broadcast—540 to 1650 KC.



MODEL 519—No aerial or ground needed with this attractively designed 5-tube AC-DC Superhet. Features built-in antenna—latest 150-milliamper tubes—six-station automatic tuning—illuminated dial. Offers AVC—P. M. dynamic speaker—and tunes American broadcast—540 to 1650 KC. Available in walnut bakelite or ivory finish. Size—6½ in. by 10 in. by 5¼ in.



BELMONT TELEVISION RECEIVER

Model X-466

Every latest development in Television has been incorporated in this handsome De Luxe instrument. Indirect vision reproduction through mirror attached to cabinet lid. Features a picture size of 7½ by 10 inches—30 tubes excluding picture tube—and offers a choice of 5 television channels with automatic push button control.

A 12-inch picture tube is used.

Also included is a powerful all-wave radio receiver with automatic tuning.

Handsome period cabinet finished in two-toned walnut. Size—height 37 inches, width 45 inches, depth 18 inches.

Five pre-tuned push-buttons allow choice of five separate television stations. Through close cooperation with television transmitter engineers, this instrument has been designed to give unusually natural sight and sound reception.

BELMONT RADIO CORPORATION

1257 FULLERTON AVENUE, CHICAGO, ILL.

Cable address: *Belrad*



MODEL 635—Neither antenna nor ground needed with this amazingly powerful 6-tube AC-DC Superhet. Uses new 150-milliamper tubes—built-in loop antenna—5-station automatic tuning—illuminated airplane type dial—covers American broadcast (540 to 1650 KC). Offers AVC, 5 in. dynamic speaker and beam power output. Available in walnut bakelite or ivory finish. Size 7¼ in. by 11 in. by 5½ in.

