



**RADIO  
TODAY**  
*and Tomorrow*



**WORLD'S FAIR NUMBER** Combined with **RADIO TRADE DIRECTORY**  
Time-Map of Radio. Looking Ahead.  
Sound and Parts Opportunities

**MARCH**

Over the hurdles

**DUMPING**

**OBSOLESCENCE**



**POOR CABINETS**

with

**PRICE CUTTING**

# Brunswick

**PERIOD-STYLED RADIO**

If you want

an **EXTRA MARKET**  
with **NEW SELLING POWER**  
and **EXCEPTIONAL PROFITS**

plus

**PROTECTION OF INVENTORY**  
**RELIEF FROM CUT-PRICE COMPETITION** and a line that **NEVER BECOMES OBSOLETE**

then we repeat

the way to get this extraordinary merchandising advantage is to **FEATURE AND PUSH**

# Brunswick

- RADIO AND COMBINATIONS IN PERIOD FURNITURE
- GOOD TWELVE MONTHS IN THE YEAR



**A** MERICAN homemakers are more furniture conscious today than ever before. They will buy higher priced radios and phonograph combinations if they are housed in period-style furniture that harmonizes with their home decorations. When they buy Brunswick radios they do not need to buy two pieces of furniture when they only require one.

That there is a definite need for radios and phonograph combinations in period-style furniture is evidenced by the tremendous amount of publicity given the Brunswick models in magazines and newspapers. (Housefurnishing editors know what the public wants and considered it news for their readers to tell them about the Brunswick radios and phonograph combinations in authentic period furniture cabinets.)

Go after every furniture-minded buyer in your market. Let them know you sell Brunswick radios and phonograph combinations in authentic period furniture commodes and tables that will harmonize with the furniture in their home.

It will pay you well to vigorously merchandise Brunswick radio and phonograph combinations—you make more profit on Brunswick than on other makes and you will definitely lift the price level in your radio department.

**LIST PRICES FROM \$49.50**

Send for Illustrated Folder

**BRUNSWICK RADIO DIVISION**

Mersman Brothers Corporation

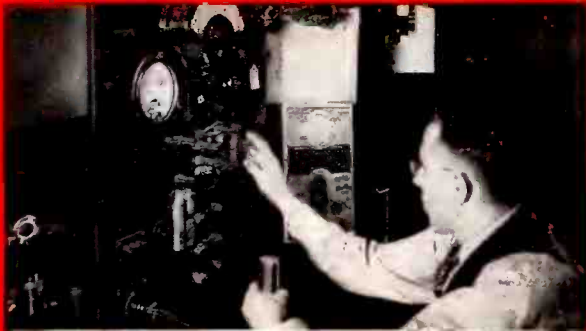
Executive Sales Offices: 206 Lexington Avenue, New York City

**Brunswick — A Dependable Name for 93 years**

# Best! by Test—



After assembly, every Mallory Vibrator mechanism is carefully checked to see that all mechanical adjustments are perfect.



After assembly, every Mallory Vibrator is tested for electrical characteristics . . . output, balance, wave form, starting voltage and steady operation on this meter-board and cathode ray oscilloscope.

## P. R. MALLORY & CO. Inc. Replacement MALLORY V Vibrators



Every Mallory Vibrator is tested for noise in a sound-proof room under actual set operating conditions.



Life test. A percentage of every production run on every type of Mallory Vibrator is tested under actual set operating conditions for 1000 hours.

**Insist on Mallory—  
Buy the best—  
They cost no more!**

Mallory Vibrators have won overwhelming preference as original equipment in the majority of auto radio receivers by "Show Down" tests. Tests and long life records have settled the question of "what vibrator to use" indisputably in their favor. Manufacturers find them better. That's why it is no wonder that Mallory Replacement Vibrators lead the field.



Only the Second Edition Mallory-Yaxley Radio Encyclopedia gives you *all* data on every Vibrator application. It covers every servicing problem—you cannot afford to be without it. Ask your distributor.

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

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

Use  
**YAXLEY**  
REPLACEMENT  
VOLUME CONTROLS

**COST-SAVER ✓  
 TIME-SAVER ✓  
 PROFIT-MAKER ✓**

*The New UTAH  
 Service-Pak*

More profitable servicing is made possible by the new Utah Service-Pak. Every active service man needs one—should have one. And it's priced so low you can't afford to be without it.

The Utah Service-Pak includes a stock of essentials and accommodations for additional parts which are basic necessities for normal radio servicing. The attractive kit, 17" x 39" x 10", is actually a complete, convenient, easy-to-keep-up miniature stock room. It provides important economies—it saves time and space—it reduces costs—it safeguards parts—it permits a perpetual inventory to be kept easily.

Make the savings provided by the new Utah Service-Pak and add them to your profits. Phone or write your jobber today—ask him to show it to you. If your jobber can't supply you, write us for complete information.

*Sold only through recognized jobbers.*

**UTAH RADIO PRODUCTS CO., Chicago, Ill.**

Cable Address—UTARADIO-CHICAGO

**DEALERS NET PRICE \$29<sup>95</sup>**  
*Including Cabinet*



***YOU SAVE***  
**33%**

**THE NEW UTAH SERVICE-PAK**

contains the following high-grade UTAH products: 35 Assorted 10 Watt Vitreous Resistors, 6 Assorted 25-Watt Adjustable Vitreous Resistors, 16 Assorted Volume Controls, 6 Volume Control Switches, 3 Assorted Chokes, 5 Assorted Audio

Transformers, 3 Assorted Universal Output Transformers, 4 Assorted Power Transformers, 1 5" Electrodynamic Speaker. And it will accommodate UTAH vibrators, condensers, etc., to complete the normal service stock.

**ASK YOUR JOBBER IF HE CAN'T SUPPLY YOU—WRITE US**



# Emerson

WORLD'S BIGGEST SELLING LITTLE RADIO



TRAVEL



LIVING ROOM



PLAY ROOM



OFFICE



BEDROOM



Now — Build PLUS  
Business with the  
Sensational  
"EMERSONETTE"

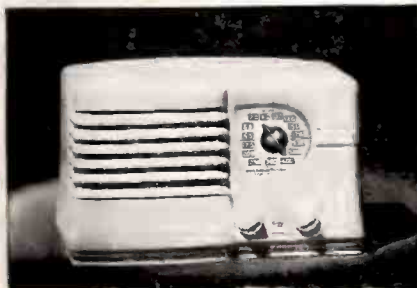


In Walnut.

Red, Green, Ivory 50¢ Extra

Making merchandising history—  
opening up new avenues to retail  
profit—stepping up business on ALL  
Emerson Models—no wonder all of  
America—including all WISE dealers—is  
going EMERSON!

Get on the bandwagon and  
watch your sales jump!



Model CH-246 (In Ivory Plaskon) • 5-Tube AC-DC Superheterodyne. (7-tube performance) • American Broadcasts and Police Calls • Electro Dynamic Speaker • Automatic Volume Control • Built-in Antenna • Streamlined ivory plaskon cabinet ..... **\$12.95**



Model CE-259—SELF-POWERED PORTABLE —For Instant Operation—Indoors and Outdoors—5-Tube Superheterodyne • American Broadcasts, Police • Automatic Volume Control • Permanent Magnet Dynamic Speaker • Built-in Antenna. Rugged case covered with durable tan and brown material. Weighs only 15 lbs. .... **\$29.95 COMPLETE**



Model BM-242—COMBINATION RADIO-AND-PHONOGRAPH. 5 Tubes (incl. ballast tube) AC • American Broadcasts, Police • Electro Dynamic Speaker • Automatic Overload Control • Built-in Antenna. Phonograph: Constant Speed Electric Motor for AC Operation • Crystal Pick-up • Plays all size records up to and including 12-in. • Hand-rubbed walnut finish cabinet ..... **\$29.95**

Ask Your EMERSON Distributor NOW for New Broadside With Complete Details of EMERSON "Multiple Sale" Proposition

EMERSON RADIO AND PHONOGRAPH CORPORATION • 111 Eighth Avenue, NEW YORK, N. Y.  
World's Largest Maker of Small Radios Cable Address: EMPHONOCO, N. Y.

# GOING PLACES FAST!



## RADIOS

NEW

### STREAMLINED FOR SALES ACTION!

ANNOUNCING THE NEW G-E

*Carryabout*

MODEL GB-400

Six  
Sizzling  
New  
Numbers



G-86



GD-600



GD-63



GD-520



GD-500



**NEW G-E WIRELESS  
RECORD PLAYER**

No Wires—No Connections to Radio

Reproduces recorded music through the loud-speaker of any radio—electrically. Operates from any location—within hearing distance of radio set. No wires—no connections to radio. Turns any radio into a modern-type radio-phonograph combination. Priced to sell in big volume.

No aerial—no ground!  
Requires no "House Current"!  
No connections of any kind!  
Light Weight—Easy to carry!



PRICED  
AT A  
NEW LOW!

Light weight—portable—a smart piece of weatherproof hand luggage. Just the thing for vacations—for beaches, mountains, boating—traveling—picnicking. For gar-

dens, porches—for any room in the house. Superheterodyne Circuit, Automatic Volume Control, Built-in Beam-a-scope. 4 Tubes. Self-contained Power Supply. 535 to 1600 k.c.

Watch the G-E "Carryabout" run away with the portable radio show.

Smart styling! Fine performance! Great value! It's sure to be a sales sensation—especially in the Spring and Summer months ahead.

Write, wire or 'phone your G-E Radio distributor for full details of the hottest G-E Radio line ever presented.

GENERAL ELECTRIC

RADIO TODAY

**BLOCKADE THE WEST ROAD!  
TWO MEN AND A WOMAN!  
BE CAREFUL! THEY'RE KILLERS!**

**WITH THE AID OF  
RAYTHEON TUBES**

## **Illinois Police Radio Blockade Cuts Crime Careers Short!**

The "radio blockades" of the Illinois State Police and police of many other states have become famous throughout the country. In Cook County, Illinois, the blockade begins in the well-equipped police station WQPC pictured below. Once the alarm is sounded, every road is blockaded immediately—cutting off all escape channels for fugitives.

Fighting crime is no game for "panty-waists." Police must be tough and efficient. Squad cars must be swift and sturdy. And radio tubes must be dependable—and ready for emergency flashes.

That's why RAYTHEONS are used by so many State Police organizations. Why RAYTHEONS are used, too, in millions of homes, in leading auto set radios, by leading Commercial Airlines, the U. S. Forestry Service, Coast Guard, Weather Bureau, etc.

Anywhere sturdiness and long life under adverse conditions are required—you will find RAYTHEONS. Yet they cost no more than the second-best tube.

RAYTHEON is your guarantee of the best turnover of any tube investment!



# **RAYTHEON**

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

**"WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS"**

# Your Lucky Stars

...YOU GET THEM ALL WHEN YOU SELL SYLVANIAS!



**COMPANY DEPENDABILITY:** Sylvania has invested vast sums in engineering brains—to insure its leadership for the future! Sylvania is one of the world's largest manufacturers of radio tubes!



**PRODUCT DEPENDABILITY:** Sylvania tubes are made of only the finest materials . . . with infinite skill and precision! And Sylvania eliminates "seconds" by destroying any tube proved imperfect!



**PROFIT DEPENDABILITY:** Sylvania quality is your insurance against kick-backs—and that means *dependable* profits for you! Sylvania gives you a full line of powerful sales-promotion items—to help you help your business!

The success of any retailing business depends largely on the brand-merchandise sold. That is why it's so important for radio tube retailers to feature a line that offers *3-way dependability*—dependability in company, product, and above

all, in **PROFIT**. You need *full measure* on each.

Take stock . . . then take Sylvania. For you get "all three" if you sell the Sylvania line—not only company and product dependability—but **PROFIT DEPENDABILITY**, too!

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

**SELL SYLVANIA**  
SET-TESTED RADIO TUBES

• D E P E N D A B L E A L L W A Y S •



# FINCH

**FIRST**  
**in FACSIMILE**  
**and proven leadership!**



The **SYSTEM** is **PROVED**—  
**STATIONS** are **ON THE AIR**—  
The **MARKET** is **READY**—

*for*

**MANUFACTURING**  
**BROADCASTING**  
**MERCHANDISING**

*Under license by Finch Telecommunication Laboratories, Inc.*

## FINCH Firsts

**FIRST** to open the **NEW** field for **HOME** and **NETWORK** facsimile broadcasting.

**FIRST** system placed in actual operation by a **MAJORITY** of the **MAJOR** facsimile broadcasting stations.

**FIRST** to **PERFECT** automatic, **FULLY VISIBLE, CONTINUOUS FEED HOME RECORDERS** requiring neither liquids nor carbon transfer sheets.

**FIRST** and only company to **DEVELOP** an **AUTOMATIC, SELF-SYNCHRONIZING METHOD** which permits home facsimile recording in **ALL AC** or **DC POWER AREAS** or for **BATTERY OPERATION**.

**FIRST** to **OPEN** the **NEW** field for facsimile broadcasting in **AIRCRAFT, POLICE** and **OTHER MOBILE SERVICES**.

**Facsimile is HERE . . . NOW!**  
**and FINCH is the Dominant System!**

The **FINCH FACSIMILE SYSTEM** is the choice of the **nation's** leading broadcasters, communication companies, manufacturers and foreign governments. They prefer it—and pay a premium to get it.

One reason for **FINCH** superiority is this: it is the only system that can be operated on **ANY POWER SUPPLY—AC, DC OR BATTERY**. This is due to its automatic, self-synchronizing system. The farmer with his windpower gets the same fidelity of reproduction as the city man with his house current.

**FINCH** enables you to enter this tremendous new field—at the very start—with proven equipment. Remember, **RADIO** had to await the growth of broadcast stations. And **TELEVISION** is still awaiting actual transmission. But **FACSIMILE** is on the air **NOW**—transmitted by fifteen broadcast stations throughout the nation, using **Finch** equipment.

Facsimile brings to the home what our great newspapers have had for years—pictures by radio. Also news bulletins, sketches, comics, advertisements—anything printable. Amazing as the progress has been, Facsimile is only on the threshold of its great place in modern life. This is the time to start—and **FINCH** is the system to **START WITH**. Write for complete information, demonstration, etc.

### Facsimile Broadcast Stations Using the Finch System

Call Letters	Location	Frequency	Owner	Power Watts
WLW	Cincinnati	700 Kc	Crosley Corporation	50,000
WOR	Newark, N. J.	710 Kc	Bamburger B'casting Co.	50,000
WGN	Chicago, Ill.	720 Kc	WGN Inc.	50,000
WHO	Des Moines, Ia.	1000 Kc	Central B'casting	50,000
WSM	Nashville, Tenn.	650 Kc	Nat'l Life & Ins. Co.	50,000
KSTP	St. Paul, Minn.	1460 Kc	Nat'l Battery B'casting	25,000
WWJ	Detroit, Mich.	920 Kc	Detroit News	5,000
WSA1	Cincinnati, O.	1330 Kc	Crosley Corporation	5,000
WCLE	Cleveland, O.	610 Kc	Cleveland Plain Dealer	500
WHK	Cleveland, O.	1390 Kc	Cleveland Plain Dealer	2,500
WGH	Newport News, Va.	1310 Kc	Hampton Roads B'casting	250
W8XAN	Jackson, Mich.		Sparks-Withington Co.	
W2XBF	New York City	42.6 Mc	W. G. H. Finch	1,000
W2XUP	New York City	25.7 Mc	Bamburger B'casting Co.	100
WXNU	Cincinnati, O.	26. Mc	Crosley Corporation	1,000
W8XNT	Cincinnati, O.	31.6 Mc	Cleveland Plain Dealer	100
W10XGU	Miss Facsimile, Cruiser	31.6 Mc	W. G. H. Finch	250
W10XDF	Plane NC9746	31.8 Mc	W. G. H. Finch	15 and 30

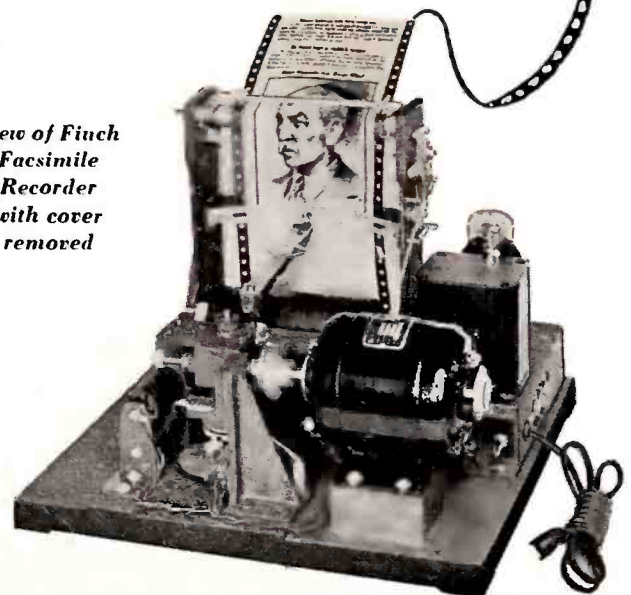
### FINCH TELECOMMUNICATION LABORATORIES INC.

1819 BROADWAY, NEW YORK

Circle 6-8080

Plant and Aircraft Laboratory, Bendix, N. J.

*View of Finch  
 Facsimile  
 Recorder  
 with cover  
 removed*



# ...A Duck Can't Fly on One Wing!

nor can a dealer operate satisfactorily on *one special!*



Go after ALL pocketbooks with the Crosley complete line of "SPECIAL" Shelvadors.  
 Why limit yourself with ONE 6 ft. Special or last year's models when countless prospects are thinking in terms of new refrigerators in 3, 4 and 5 ft. sizes for a little over a hundred dollars.

**It Takes a Full Line to Get a Full Response!**

REACH, INTEREST and EXCITE every refrigerator prospect with the fact that CROSLY SHELVADORS are the MOST they can buy for their money whatever their ideas or requirements.

**"CROSLY IS THE**

**CROSLY  
 LINE OF  
 SPECIAL  
 SHELVADORS  
 GETS THE  
 PROSPECTS  
 IN '39**

6 cubic feet

**\$132.50\***

The Crosley "SPECIAL" is a line of SPECIALS—not just one model—the lowest priced electric refrigerators in the industry! The step to longer profit in higher priced models is simple, easy and logical. The Crosley "REGULAR" and "DELUXE" lines complete a perfect merchandising picture—definitely offering the correct step-up in pricing—in features—in appearance—in performance and quality and in larger capacities on any competitive price level. Get ALL prospects in your store with LOWEST PRICES. Sell them in your store with the industry's BEST VALUES.

**LINE FOR '39"**

5 cu. ft.  
**\$122.50\***

3 cu. ft.  
**\$99.50\***

4 cu. ft.  
**\$112.50\***



\*DELIVERED AND INSTALLED... 5-YEAR PROTECTION PLAN \$5.00 ADDITIONAL... PRICES SLIGHTLY HIGHER IN SOUTH AND WEST

**THE CROSLY CORPORATION**  
 POWEL CROSLY, Jr., Pres. CINCINNATI



Presenting  
**SPARTON**  
 Classic Radios  
 with a Sensational New  
**MERCHANDISING PLAN**

It is only human to desire those things which are thought to be rare. The connoisseur of fine literary work is forever seeking limited editions extant to add to his coveted collection of fine books. Thus, Sparton Classic Radios make their debut as

**LIMITED EDITIONS**

giving them a prestige created by rarity of design, materials and craftsmanship—and by the limitations of production which make them definitely LIMITED EDITIONS—a series of models offered for only one season at the most—never to be shown again in the exclusive Sparton line. Each Sparton model featured in this Classic line will be tagged, LIMITED EDITION with pertinent information printed thereon, giving the nature of the woods used in its construction, the source of the woods, type of chassis and number of tubes,

**BEAUTY IS GIVEN MOTION**  
 By the Swirl of Rare Imported Woods

These superb cabinets were designed by Sparton craftsmen using combinations of New Guiana wood with Zebra wood inlay from British Guiana; Brazilian Rosewood, dark in color with heart-figured grain; Satinwood from East India, yellowish brown in color with a satiny lustre; rare quartered mahogany with beautiful mottled grain, and fine walnut, warm brown in color combined with dark overlay—the most highly prized cabinet woods blended by skilled artisans to form modern versions of period themes in perfect harmony with today's decorative modes.

**New Features**

Sparton Classic Radios embody the ideal of perfection in sound reproducing instruments from the carefully engineered superheterodyne chassis to the fine speaker which makes audible Radio's Richest Voice. All are full range superheterodynes using the New Type Bantam Tubes.

**Amazing LOW PRICES**

Despite the exclusive styling of SPARTON Classic Radios they are priced to compete with the lowest priced models of conventional design.

**With or Without Underwriter Approval**

**Write TODAY for INFORMATION**

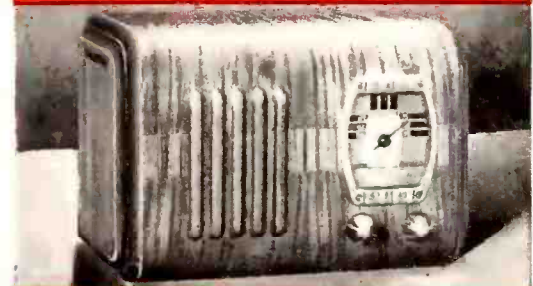


**UNIQUE**  
*Free*  
**DISPLAY**



**MODEL 510 DR**

Cabinet of Brazilian Rosewood with Satinwood inlay—concealed grill—5-Tube, AC-DC superheterodyne with AVC—dial light—4-inch electro dynamic speaker—5 1/2" high—4 5/8" deep—8 3/4" wide.



**MODEL 510 DG**

Cabinet of New Guiana wood with Zebra wood inlay—concealed grill—5-Tube AC-DC superheterodyne with AVC—dial light—4-inch electro dynamic speaker—6" high—5" deep—5 3/4" wide



**MODEL 510 W**

Cabinet of solid walnut—two-tone with dark walnut overlay—concealed grill—translucent dial scale—5-Tube, AC-DC superheterodyne with AVC—4-inch electro dynamic speaker—5 1/2" high—5" wide—4 5/8" deep.

Note how the display dramatizes Sparton Classic Radios by linking them with simulated books whose rarity is inferred by the words, LIMITED EDITION. Observe, too, that the simplicity of the display accents the artistry of the Sparton cabinets, revealing the cordiality of rare woods made glamorous by hand-finishing that coaxes the glowing beauty of the woods to the surface. This display is given FREE with your first order for Sparton Classic Radios.

**The SPARKS-WITHINGTON Co., Jackson, Michigan**

# TWO NEW PHILCO PRODUCTS

... new opportunities to profit with Philco!

## Amazing New **CONSERVADOR** ELECTRIC REFRIGERATOR

**Patented SHELF-LINED INNER DOOR**  
gives 26% more quickly usable space

A refrigerator that *has what it takes to sell!* An amazing new feature—the shelf-lined Inner Door—gives 26% more quickly usable space . . . twice the convenience . . . the first refrigerator ever built where you *really use*, easily and naturally, *all the space you buy*. In addition, every worth while feature of any good refrigerator.

Get the complete story from your distributor, including details of Philco's big national advertising and merchandising campaign that will bring Conservador Refrigerator buyers to your store! A part of the Philco All Year 'Round plan.



## **YORK COOL-WAVE** PORTABLE AIR CONDITIONERS

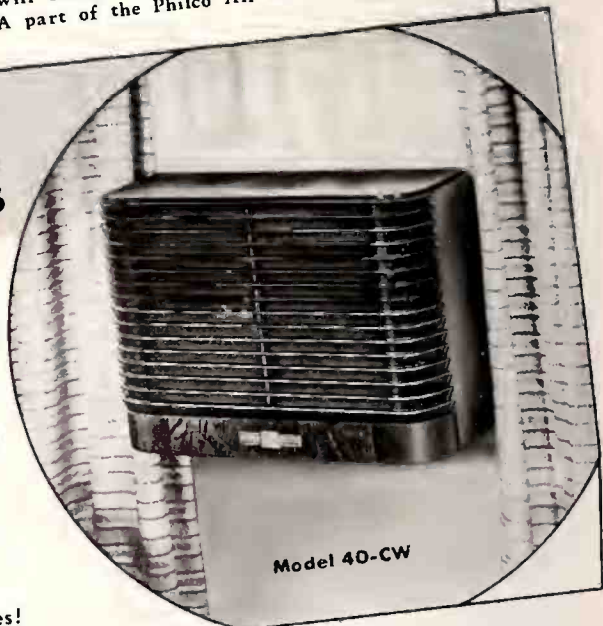
York, leader in air conditioning, and Philco, leader in appliance merchandising, combine to bring you a new business—air conditioning, as low in price and as easy to install as a good radio! Portable, "package unit" air conditioners for every size room—as little as \$150, or \$15 down! Quickly and easily installed . . . no wiring, plumbing or technical knowledge needed.

A sensational profit opportunity! **NO TRADE-INS . . . full profit . . . every home and office in your community a live, eager prospect.**

Philco backs York Cool-Wave with powerful advertising and merchandising . . . a part of the Philco All Year 'Round program.

to sell  
for only  
**\$15**  
DOWN!

Easily installed  
in homes and  
offices in less  
than 30 minutes!



Model 40-CW

For full details write, wire or phone your Philco distributor now.  
Or address Philco Radio & Television Corporation, Philadelphia, Pa.



# PHILCO ALL YEAR 'ROUND

# RADIO TODAY

Including TELEVISION TODAY

MARCH, 1939

## Radio - - - Public Benefactor No. 1

*In the days of ancient Rome, men counted it a privilege to be citizens of the Roman Empire. "Civis Romanus sum" was a phrase which indicated the highest distinction of the day.*

*And a similar distinction falls upon all the men in Radio — whether they supply the programs, or furnish the sets with which millions listen.*

\* \* \*

*Every radio man feels instinctively a pride in his part in radio's great achievements. Every radio man knows, too, that his very vocation assumes a certain glamor among all with whom he comes in contact.*

*For radio has proven itself without parallel as a public benefit. It has educated and entertained millions. It has elevated public taste. It has summoned new worlds of fine music to city tenements and remote villages.*

*It has speeded news, and brought stirring world events to the most isolated listeners, even before the chancelleries of Europe knew the next turn in international affairs. It has supplied vivid drama, — both stage and real. It has saved lives, at sea and in the air. It has opened new social frontiers. It has provided powerful new tools for social betterment. All this it has done at little or no direct cost to those served most.*

\* \* \*

*Meanwhile radio advances to new fields of usefulness and service. New undiscovered lands of radio possibilities remain to be opened up. Radio's public benefits expand and expand.*

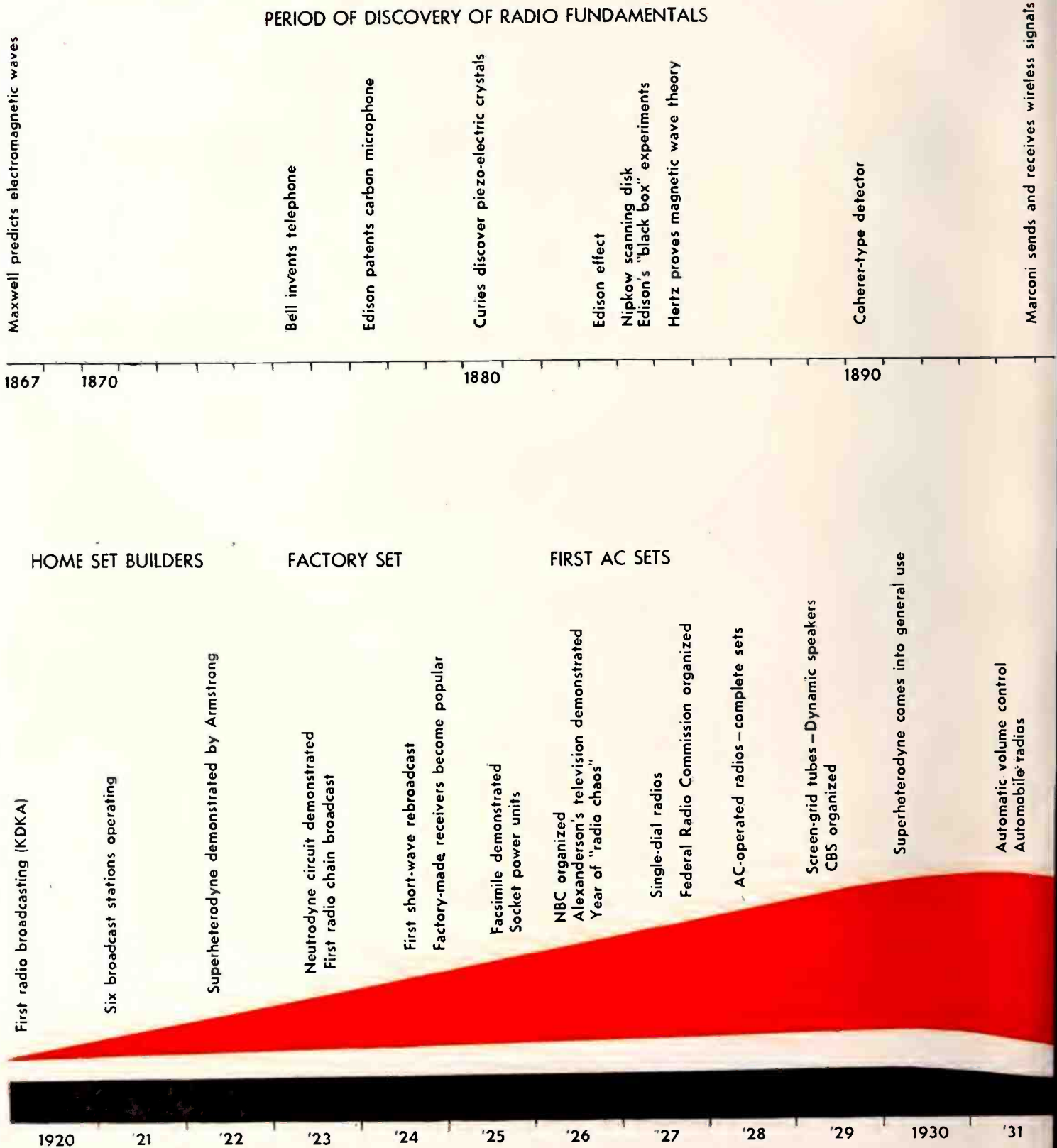
*Measured by any yardstick, radio is the twentieth century's supreme gift to mankind.*

*Radio is Public Benefactor No. 1.*

Yesterday

# RADIO

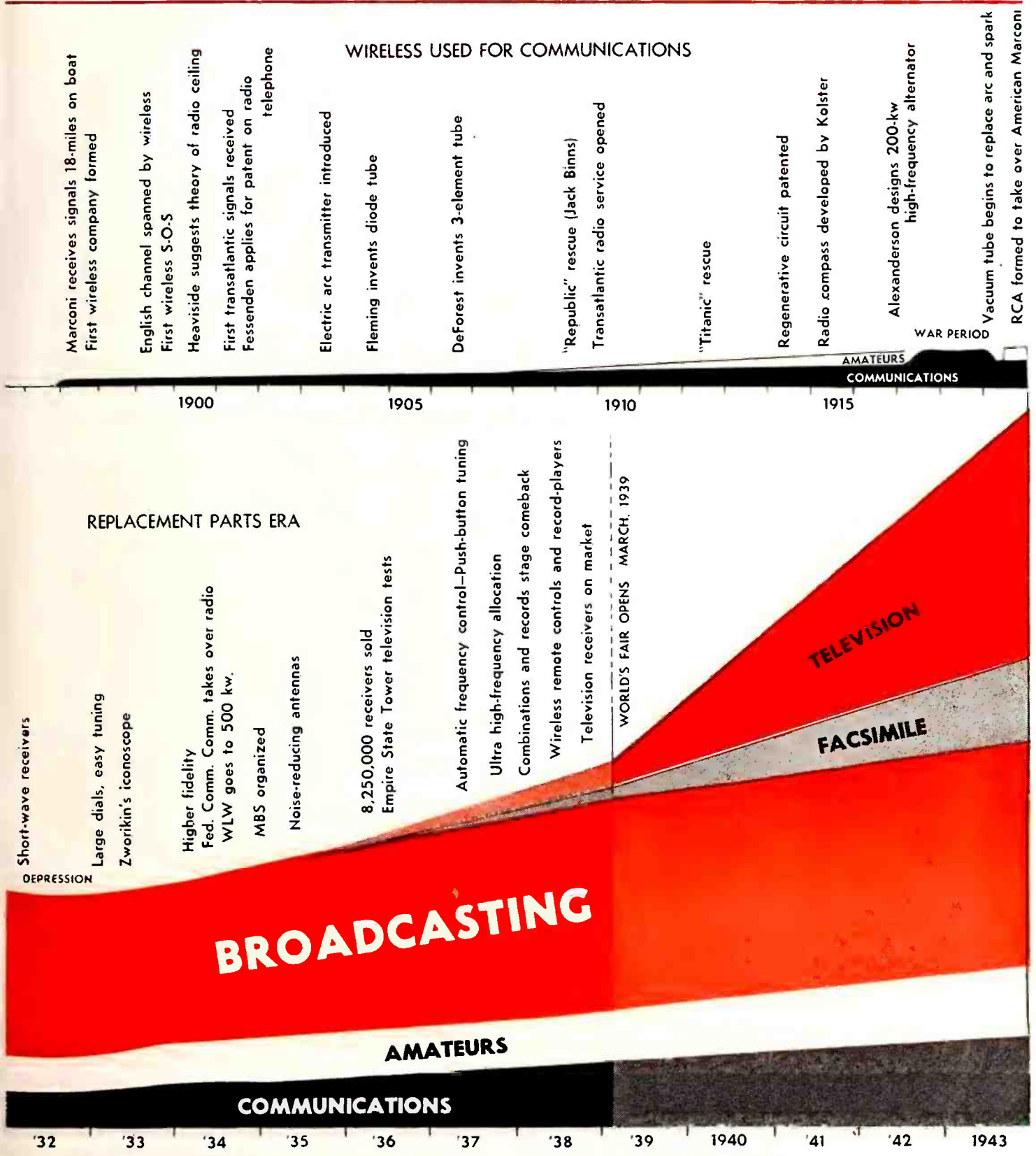
## A Chart Tracing the History of Radio, Its Progressive Inventions,



# TODAY

# Tomorrow

## Its Major Developments, and Its Great Promise for the Future



# Radio Looks Back

*Early days of wireless. Inventions and patents. Broadcasting predicted. KDKA starts. Radio chaos. AC sets. Production troubles. New improvements. "Radio is free!"*

Winter's bite was in the air as two young men huddled 'round a telegraph key that frosty noon thirty-seven years ago. Outside the modest cabin a huge kite bobbed in the breeze, holding aloft its thin strand of wire. Within, two pounding hearts made the only noise.

Suddenly the wireless circuit whispered and the young man clamped a telephone receiver to his ear. He listened carefully, tensely, as three brief vibrations ticked in his ear. He kept on listening, afraid to believe what he had heard. Then he passed the earpiece to his companion.

"Do you hear anything, Kemp?" His voice trembled in spite of his efforts to make it casual.

Kemp held the phone to his ear.

"Yes!" he exclaimed. "Three dots! Why, that's England!"

Such was the scene on Dec. 12, 1901, when Guglielmo Marconi and his assistant, G. S. Kemp caught the first trans-oceanic wireless signals in a small cabin near St. Johns, Newfoundland. Next day, the world knew that words had been transmitted through thin air, and marvelled, even as cable companies shivered with fear and forced the Canadian government to oust Marconi from the land.



Dr. Lee de Forest today. The radio inventor at his home in Los Angeles.

Behind the young Italian scientist were years of hard work in experimenting. Further back was the discovery of electro-magnetic waves by Heinrich Hertz—the phenomena that led to wireless. And there was Thomas Edison's work in lamp-flament emission, which was to lead to James Fleming's "valve" and Lee de Forest's three-element tube.

That was Marconi's first victory, and he was confident that wireless held a great future. Calmly he packed up his equipment and went to Maine to continue his experiments with the crackling "bug" that flung messages into the air. But even Marconi could not dream of things to come in wireless and its successor, radio. For nineteen years wireless progressed steadily, and then streaked like a comet to make household radio possible—and change the life of the world.

## PIONEERS OF RADIO

But between Marconi and radio in the home were many men, many inventions, millions of dollars, heart-break and hard work.

Reginald Fessenden, brilliant, un-commercial scientist spent two million dollars and years of patient toil developing the heterodyne circuit, the continuous spark transmitter and other inventions. From the Schenectady laboratory of General Electric in 1907 came the high-frequency alternator, invented by a sturdy Scandinavian genius, Ernest W. Alexanderson, a discovery that made wireless something more than a confusion of roars and squeals. There was Lee de Forest who fought the new science's problems and patent battles over his amplifying tube with equal gusto. In 1910 he was broadcasting Caruso's voice, and six years later he was to send out election returns from the Bronx, and the voice of Vaughn de Leath. Another prober into wireless secrets was Edwin H. Armstrong, whose discovery of the "feed back" or regenerative principle in 1912 made possible the advancement of radio.

David Sarnoff, too, was in the vanguard of radio pioneers. Starting in 1906 as an office boy with the American Marconi Company, he rose steadily in the wireless world, and in 1916 had the temerity to forecast home radio. Along these lines he wrote to his boss, Edward J. Nally,

general manager of the wireless company:

"I have in mind a plan of development which would make radio a 'household utility' in the same sense as the piano or phonograph. The idea is to bring music into the house by wireless. . . . The receiver can be designed in the form of a 'Radio Music Box,' supplied with amplifying tubes and a loudspeaking telephone. The box can be placed on a table in the parlor or living room, the switch set accordingly and the transmitted music received. There should be no difficulty in receiving music perfectly when transmitted with a radius of 25 to 50 miles."

## SARNOFF'S VISION

Not only did Sarnoff call the turn years ahead of time, but with remarkable accuracy. He figured sets to be sold at \$75 would yield \$75,000,000 over a period of three years. Actually, RCA got that amount during its first three years of manufacturing home receivers.

The Sarnoff prophecy was slowed in fulfillment by the World War. But when hostilities had faded, radio spurred ahead. In 1919, the General Electric Company was about to sell some of its Alexanderson alternators to the British Marconi Company when U. S. Navy officials, Admiral W. G. H. Bullard and Commander Stanford Hooper, prevailed on them not to sell even though the business meant much in the post-war depression. These Navy men got the ear of Owen Young, legal generalissimo of the electrical firm and convinced him of the need of keeping American supremacy in wireless.

## BROADCASTING STARTS

Out of these events came the formation of the Radio Corporation of America on Nov. 20, 1919, with Edward Nally as president. At first, RCA confined itself to communications business; it was the rival Westinghouse Electric that initiated broadcasting to the home. Dr. Frank Conrad started it all with his programs on 8XK. He built up such a group of listeners that the Horne Department Store in nearby Pittsburgh advertised the sale of receivers. Convinced by this event that home radio was on the way, Westinghouse's Vice



President Harry P. Davis agreed to the construction of a radio station—KDKA. When, on Nov. 2, 1920, people tuned in on the Pittsburgh wave-length to learn—hours ahead of newspaper stories, that Harding had defeated Cox for the Presidency, home radio was launched in a big way.

Then began the mad scramble. Before KDKA there had been perhaps a half-dozen manufacturers of radio components and some 30,000 amateurs and experimenters. By the end of 1921, 60,000 sets had been sold, and in the next twelve months some 1,500 manufacturers jumped into the business and sold the staggering number of 1,500,000 sets for a total of \$60,000,000.

### EVERYBODY'S BUSINESS

Chaos was a mild word for the situation. Everyone sold radios—plumbers, florists, drug and candy stores, blacksmiths, and even undertakers clamored for sales franchises. In 1922 and 1923 as the UV199 and UV201-A tubes emerged to push the crystal sets into the background, the U. S. went radio mad.

Broadcasting, too, was making great strides. From the rate of two stations per month on August 1, 1921, the number mounted to 99 new ones per month on May 1, 1922, at an approximate cost of \$50,000 each. And this despite the fact that broadcasting then offered no source of revenue. First station to be licensed by the Department of Commerce was WBZ of Springfield, Mass., on Sept. 15, 1921. Soon followed WEAJ, owned and operated in New York City by the American Telephone & Telegraph Co., and WJZ, a third station of Westinghouse.

There were other important firsts: the first broadcast of a fight—the Jack Dempsey-Georges Carpentier tussles at Boyle's Thirty Acres in New Jersey as announced by Major J. Andrew White. The first experiments, again by Dr. Conrad, in short-wave broadcasting. The first infringement suit brought by RCA to establish its right to license manufacturers—against the A. H. Grebe Co. The first chain broadcast—Jan. 4, 1923, linking WEAJ and WNAC of Boston.

### OVERPRODUCTION

While Secretary of Commerce Herbert Hoover was trying to stabilize broadcasting by assigning wave-lengths in 1923, the radio industry still was at sixes and sevens. Installation buying moved in. But the trade cycle went something like this: new models in the fall with such enthusiasm on their reception that manufacturers overproduced; slump in sales for the early part of the year to be followed by cut prices in the summer. Tremendous quantities of sets were dumped in this manner. . . . Despite the commercial chaos, radio



Edwin H. Armstrong, "feed-back" and superheterodyne inventor, with Dr. W. R. G. Baker of GE, tests new frequency modulation.

continued to boom. The neutrodyne circuit and Armstrong's superheterodyne, introduced in 1924, skyrocketed sales.

Besides there was too much in the air to be missed. During 1925 and 1926 stations continued to improve and grow more powerful. The New York Philharmonic Society was put on the air by Steinway Piano Co. Atwater Kent astonished fellow radio manufacturers by sponsoring an hour of singing by Metropolitan Opera stars. And on Nov. 21, 1926, the National Broadcasting Company was formed, and better programs at once resulted.

A year later, when the dynamic speaker and the house current radio made their bow, Byrd was detailing his exploits in the Antarctic via short waves to Westinghouse in Pittsburgh. And by that time, radio

sales had grown from \$2,000,000 in 1920 to \$500,000,000 and there now were 700 radio stations. But the number of manufacturers had shrunk to 542.

In 1929, the screen grid tube appeared to give radio sales a shot in the arm, and also saw the formation of the Columbia Broadcasting System. By the next year, NBC and CBS boasted 200 stations in their nation-wide chains. In 1933 NBC moved into spacious studios at Rockefeller Center, which soon became known from coast to coast as Radio City. WLW chose 1934 to try out its new power of 500,000 watts, and everyone predicted a rise of super-stations.

### SALES HIT 8 MILLION

As the upturn came in business, radio sales got better, and in 1935, RCA set aside a million dollars for television experiments. The next year, 1936, saw radio reach a high point with the sale of 8,250,000 sets in twelve months.

Although by 1937, the number of radio manufacturers had been cut to some 150, improvements in sets went right ahead. There were such things as automatic frequency control and push-button tuning to intrigue buyers. But that was rivalled in 1938 when wireless remote controls and record players, and even television receivers were put on the market.

Today, Radio looks back on a brief, hectic but astounding history. From a thing for the laboratories and experimenters, it has become a household necessity. There are some 41,000,000 sets in use, and broadcasters spend about \$180,000,000 a year to provide programs for these sets. While the printed and spoken word is censored and changed to totalitarian will in other countries, American radio has emerged untrammelled and free.



David Sarnoff and the late William Marconi, during the latter's visit to America. The Italian pioneer of wireless died in Rome, July 20, 1937.

# Radio Opportunities Ahead

*Radios everywhere. Pocket receivers. Office radios.  
Facsimile and television. Personal wavelengths.  
Universal communication. Extending other senses.*

Purchase of a new radio was far from the mind of Joe Doakes as he left his office on a fall day in 1941. Joe's gray matter was concerned only with the fact that the World Series and a business trip to Boston conflicted.

Joe liked baseball, but he wanted his job, too. All of which didn't stop him from muttering under his breath at such ill luck. Thinking dolefully of a world in which business cut such a wide swath out of pleasure. Doakes turned into Larry Mahon's radio shop, figuring on hearing an inning or so before catching his train.

"Just my luck, Larry," he grumbled. "Here are the Yanks and Giants practically locked in deadly combat, and my boss flags me for Boston."

The radio man grinned in sympathy, then reached for a tiny package on a display stand. It was no bigger than a prayer book. Mahon flicked a button on it, pressed it to the ear of his disgruntled friend.

"Say—it's a radio," he cried. "And I can hear the Series! Oh, boy! Score's three-two in the fifth." Doakes clutched the miniature radio to his ear. "Gosh, this is just the thing for my trip!"

"And you can have it, too—for ten dollars," the radio man replied.

Doakes didn't hesitate a moment. He pulled a ten-spot out of his pocket and tossed it to the dealer. "Just what I've always wanted," he shouted, dashing for his train.

## RADIO'S GREATEST YEAR

His excited customer gone, Radioman Mahon smiled to himself. Pocket radios certainly were going like the proverbial hot cakes, and it looked as though they'd furnish a nice share of 1941 profits. Besides, there were television receivers, still in the class field, but going better each year. Combina-



Pocket receiver employing bantam junior tubes, being used experimentally by Salem (Mass.) police.

tions and records were selling well and people had caught on to the idea of "radio in every room" and were buying small sets for just that purpose. And to round out things nicely, records were selling faster than they could be pressed.

"It's a great year," mused Mahon. "This business is getting better every day."

And he was right. Industry statisticians in October, 1941, predicted a 15-million-set year. Pocket radio had swept the country; television stations were being erected in all large cities, and a million video receivers had been sold. Of course they hadn't displaced radio receivers, which were better than ever—with a tuning attachment that had captured the public's fancy. From his armchair, the radio owner had merely to announce

the call letters of the station he wanted to hear, and the set automatically tuned to the corresponding wavelength!

On television stations throughout the country, news and stage programs were being broadcast each night. In sound broadcasting four giant networks were sending out elaborate radio programs. But the chain system hadn't hurt local stations. Advertisers found "spot" announcements to their advantage in districts where their product had special appeal. More than a dozen super-stations of 500 kilowatt strength, flung their signals to the air.

## FACSIMILE ARRIVES, TOO

Facsimile had become an active factor in American life. Newspapers of the air were broadcast on a subscription basis to homes in suburbs and country. City folk who couldn't wait for papers also subscribed to this service that printed the news right in their home, hot off the linotype. Reporters groaned—for "scoops" were less than minute wonders. Exclusive news was quickly grabbed up by the opposition, flashed in radio broadcasts and in facsimile.

Auto radio was at a new peak for reception and compactness, and was standard equipment on even the lowest priced cars. One manufacturer was rumoring that next year, 1942, he would put out an automobile television set.

Farm radios graced every rural home, many with facsimile attachments. Portable sets were now considered a necessity in every comfortable home.

## RADIOS EVERYWHERE

Office radios, too, had become a potent sales factor, a million of them being sold early in 1941 when the Soviet Russia-Germany crisis developed.

While peace trembled in the balance, radio again proved its vital necessity to American life—even as it

The RCA Building at "The World of Tomorrow"—New York World's Fair—is in form of a radio tube.



Crosley Building at N. Y. Fair, where facsimile and radio will be shown.

had in 1938 when Fuehrer Hitler met Chamberlain at Munich. This time, radio dealers were smart. They equipped innumerable business offices with sets, especially radios of the silent type resembling office telephones. These office radios localized reception and didn't disturb other workers. And so radio men cashed in on the crisis.

Leaders of the television-radio industry were equally enthusiastic about the future. Volume was booming, but overproduction was under control. Merchandising problems had been simplified. Radio dealers were now "Home entertainment merchants," handling small and large radios, combination sets, records, home-movie projectors, television and facsimile receivers, electronic pianos, and all the marvelous new musical devices which, at the flick of a switch, could reproduce the tones of any familiar string or wind instrument.

Radio was fulfilling the dreams of its most ardent builders and devotees.

#### LOOKING FURTHER AHEAD

Meanwhile, as we turn our backs on 1941 and look further ahead, we find progress in radio rushing along on a dozen far-flung fronts.

Of widest promise, perhaps, is the field of ultra ultra shortwaves—tiny radio oscillations measuring hundreds and thousands to the inch. Here lie a wealth of channels ready for use, as fast as apparatus is developed. For it must be remembered that each time the wavelength is halved, there are immediately opened up *twice* the total number of frequencies, or *as many more* radio frequencies as were previously available in all the former spectrum!

New broadcasting and communication possibilities crowd before us here. Not only can each individual have his own radio receiver; every inhabitant might conceivably have his own special wavelength, and his own radio transmitter, capable of "calling" the micro-wave channel of any person he might want to reach. In our most

intensely developed American metropolis live not more than nine million people. Yet nine million frequency channels could be easily available in this rich new frontier region of the electro-magnetic spectrum. So that each inhabitant could have his own individual phone connection through the ether.

#### PLENTY OF CHANNELS

Such availability of ample radio channels would lift the restrictive "ceiling" which has always hung everywhere over radio and choked its widest use. Plentiful channels at last would open radio applications to really widespread use in every activity of industry, business and home. Besides telephones and intercommunication systems, there are all the opportunities for machine remote control. Teletypewriters and accounting machines, instead of using carbon copies, might turn out "originals" at half a dozen points—head office, shipping room, accounting department, and branch offices concerned.

Shortwaves might offer new opportunities even for power distribution and transmission. Original minds have not ceased to look for ways to

supply actual driving power to machines, ships and airplanes through power beams from reflector transmitters. When one recalls that all the energy we have on earth, arrived here as "beam power" transmitted over very short waves of the electro-magnetic spectrum, and that our autos and planes today operate on the residue of this energy, captured through age-long processes of tree growth, animal life and petroleum production, it is not so unthinkable that our autos and airplanes may some day be operating directly by radio power!

#### EXTENDING FACULTIES

Radio so far has largely worked chiefly to extend the human faculties—to give new amplification to our senses of hearing and touch and latterly of seeing. In the last-named field, it may eventually give us super telescopes, with magnification possibilities, which will make the new 200-inch glass on Mt. Palomar, as inadequate as a 1920 crystal set! (which is its true optical prototype.)

Radio may extend our other senses and faculties. Smell and taste seem to be, at bottom, oscillation senses, as sound and sight are. Create the right olfactory and gustatory frequencies, and radio men may be able to let the television audience also sniff the rare perfumes of Arabia—taste the mangoes of the tropics for themselves!

Along with television—Tel-olfaction? Tele-gustation? Why not?

#### LIMITLESS POSSIBILITIES

Radio men still move in a field of limitless possibilities.

Radio's chief assets are yet unknown.

Radio manufacturers, distributors, dealers and service men still can look forward to an unending parade of new developments—new radio products on which to cash in!



"Spirit of Electricity and Radio," as depicted by Rockwell Kent for the General Electric exhibit at N. Y. Fair.



Sound is as important as lighting at the Court of the Seven Seas in Golden Gate Exposition.

# Bright Future in Selling Sound

*Public's demand for better hearing achieved with amplifiers. Unlimited sound possibilities exist in industrial, educational and entertainment fields.*

With the surface hardly scratched, Sound has an extremely optimistic outlook, according to leading sound merchandisers and manufacturers. New uses are being found every day that are forever increasing the number of potential prospects. Because all this amplifier equipment uses radio components, this sound business will remain in the hands of the radio industry as long as they go after it.

As in the lighting and illumination field, where light intensities have consistently increased; there is likewise in sound, a growing need for increased sound levels or intensities. Persons should not have to strain to hear what is being said or going on. The fact that ordinary noise levels around us are getting greater will unquestionably help to boom sound.

## **INDUSTRIAL POSSIBILITIES UNLIMITED**

Main use of sound will probably be in the entertainment and educational fields, and industrial applications. While the first two uses are quite well defined, the industrial possibilities are only now beginning to be discov-

ered—and how these possibilities can be increased and developed depends entirely upon the resourcefulness of radio and sound men.

Practically every time a group of several dozen or more persons get together, there is a need for sound. Numerous tests have been made that show when an audience is noisy, it is usually because they cannot hear well—and consequently they shift about noisily or disregard the main program and talk to their neighbors. In some circumstances there have been reductions in the background noise of more than 10 decibels after the sound system is turned on. (And for those that don't know, 10 DB is a sound level ratio of 10.) Every meeting place, therefore, is a prospect for sound.

Entertainment places, one of today's largest sound users, will in the future continue to demand sound. Patrons must be able to hear well for proper enjoyment of what's going on. Because many of these installations have been made using cheap or improper equipment, there will be many modernizations and replacement of this equipment in years to come.

## **MAINTENANCE AND MODERNIZATION**

Many of the components in even the better of the old systems, such as microphones and speakers, are quite crude when compared with today's new and improved types. Maintenance and modernization are, and will continue to be, good bets for the technically inclined sound men.

Exhibits of all types require sound if they are going to attract the full quota of observers. At the N. Y. World's Fair and the Golden Gate Exposition there are hundreds of sound systems helping to increase the capacity of the various free and paid exhibits.

## **ANIMATED DISPLAYS THAT TALK**

Animated displays should use sound to tell the story and attract attention. At the Chrysler Salon in New York, speakers are installed in the cars which tell about the features of the cars as the hood, doors, etc., open and close. In these displays, records are employed, but live talent has been used in other places with startling results.

Public speakers, politicians, ministers, etc., no longer have to confine their talks to a single auditorium. By using telephone wire connections or recordings with an amplifier at the remote points, it is possible to deliver talks when it is impossible to be present in person. When recordings are used, there is the further advantage, that the talk can be reproduced time and time again. In this day and age when time is so valuable, it is logical to expect a great increase in the use of "canned" and remote delivery of speeches.

#### CENTRALIZED SYSTEMS PROFITABLE

Schools and institutions of all types appear to be some of the best prospects for sound. Centralized systems are available for every requirement at a wide range of prices. Educational authorities agree that sound is a necessity if schooling is to keep pace with tempo of today and the future.

With only 7 per cent of the schools equipped with sound, the possibilities are there! The question is whether or not the sound industry is capable of merchandising the proper equipment.

In industry, employee relationship is more important than ever. Music and sound have proved extremely helpful in this relationship—so helpful that any industrialist is willing to give audience to your proposal. The foremost authorities on the subject believe that it is possible to develop this volume far above expectations.

#### PUBLIC APPRECIATES SOUND

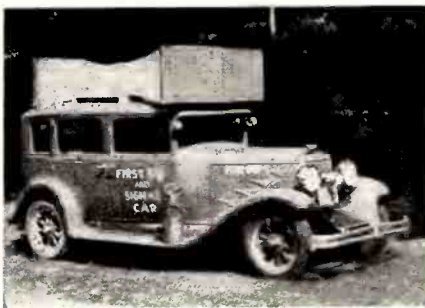
From Webster-Chicago's General Manager D. MacGregor comes this significant prediction, "During the next five years, the sound business should win general public favor by reason of constantly improved quality.

"Now, with manufacturers generally supplying apparatus of higher quality; and with a growing corps of fairly expert sound men in the field, the public will come to know what can really be accomplished by sound. The result should be reflected in the sales curve of every sound system manufacturer, with the greater portion of the business going to the industrial and institutional fields."

Optimistically, George Cole of RCA's Commercial Sound Sales comments, "New applications and uses of sound, naturally, lead to refinements of existing equipment and development of new apparatus. This in turn opens new and hitherto unsuspected uses.

"In addition to the current well-known applications of sound systems, we feel now that its use in industry presents sales opportunities of large proportions."

Sam Ruttenberg of Amperite believes, "Sound amplification will expand mainly in two directions. First



Every city and town is a sound prospect.

the increased use for entire stage and distant pickup, and secondly increased use of Kontak microphones for not only boosting the volume but the quality of string instruments such as violins, pianos, guitars, etc. Installations of simpler systems will be done more and more by radio servicemen and radio and musical dealers. The more complicated systems will only be handled by sound specialists."

#### ARCHITECTS RECOMMENDING SOUND

"We find that practically all new public buildings, projected by Government or private interests, particularly schools, hospitals, courthouses, assembly halls, etc., embodied sound systems in the original construction plans," states David Bogen, manufacturer of sound systems.

"Invariably the specifications call for elaborate systems and the sound equipment manufacturer who wants to share in this business will have to build better planned and better balanced systems. This should lead to a decided trend of quality in the trade and raise it to a higher plane."

In sound as in every other commodity, there is the merchandising problem. Who is to handle the business and how, is still a matter of question.

#### MERCHANDISING PROBLEMS

"Merchandising must be more carefully studied in the future than in the past years," is the advice of R. E. Potts of Bell, "There has been too great a tendency on the part of the jobber to deal in package goods which he can place in the hands of the dealers without any constructive effort on his part.

"The success in sound is dependent on intelligent study on the part of the jobber of the needs of the consumer. The day of 'behind-the-counter' sales is going. Jobbers are in a position to cash in only if they conscientiously aid their dealers with technical suggestions.

"Education and industry are a challenge to our ingenuity and sales

Perisphere at N. Y. World's Fair forms the horn of the largest speaker ever made. Built by RCA it employs 36 reproducers with a response from 20 to 10,000 cycles

ability." In conclusion Mr. Potts states, "No longer will our customers come to us—we must carry our plan of merchandising to their door."

"There is no doubt in anyone's mind but that the sound business is going to expand very greatly in the next few years. The applications and needs for sound equipment are increasing daily, even to a point where they are actually being retarded due to the lack of proper distribution facilities," comments Hubert Shortt, President of Transformer Corp. of America. "All of the principles adhered to in the merchandising of replacement parts, radio sets and similar items cannot be applied to sound selling.

"Until proper cognizance is taken of these facts, the haphazardous methods employed by sound distributors will continue to exist. The present 'radio' outlets for sound equipment are not properly set up to handle sound equipment merchandising and unless they amend their ways very shortly, the major portion of sound equipment selling will be handled by concerns other than those considered to be in the radio industry. Sound equipment selling is no longer an 'on the shelf' proposition, even when it is carried as a side line. A different sales approach is required for sound equipment selling."



# Looking Ahead in Parts

*Millions of extra sets to be sold for television, facsimile, frequency modulated broadcasts. Thousands of U-H-F transmitters to provide program service. Radio pianos and industrial controls need radio parts.*

Never before has the outlook for the radio parts industry been as bright as now. Uses for radio parts have gone far beyond the horizon marked by receivers, for such parts are now being used in television, facsimile, sound systems, electronic musical instruments, industrial control systems, and other radio-tube devices. Then too, there has been established a fair degree of mechanical and electrical standardization, resulting in a better opportunity for economical manufacture.

## TELEVISION BOOM

Television receivers with their some 25 to 30 tubes, are equivalent in the number of parts to a couple of 10-tube broadcast receivers and a cathode-ray oscilloscope. In television sets there are really two complete receivers—one for the video, another for the audio. Then to make the picture tube function there must be sweep circuits, filters for separating synchronizing signals, and a high-voltage power supply.

For volume-control manufacturers, television should precipitate a boom,

since up to 13 variable controls are used, as compared with a maximum of two in a sound receiver. Likewise tube manufacturers should rejoice, for 25 or more tubes are used. Similar examples can be listed for every other type of parts, but it suffices to say that in a television receiver, each tube requires as many if not more parts than a tube in an ordinary all-wave receiver. Fortunately, for the parts jobbers and servicemen practically all of the parts, except a few of those involved in the cathode-ray circuits and the tuned coils, are the same as those used in every-day radio work.

While facsimile at present is being peep-swished on the broadcast band, thus permitting the use of standard receivers with a facsimile attachment, in the future much facsimile will be sent out on the ultra-high frequencies. The use of these frequencies means that there will be a great demand for ultra-high-frequency receivers to operate the facsimile printers. Considerable numbers of radio parts are used in the facsimile printers, even though they are mainly mechanical in operation. It is likely, however, that many of the

radio parts manufacturers will supply the mechanical parts for the printers, thus keeping the entire manufacture in the radio trade.

## ULTRA-HIGH FREQUENCIES

Ultra-high-frequency receivers are going to be needed for the reception of frequency modulation transmissions as well as for facsimile. The number of U-H-F sets that will be sold in the next several years is probably in the tens of millions. And it should be remembered that these sales will be in addition to the regular number of sets sold for use on the standard broadcast band.

Pocket radios, predicted many months ago by RADIO TODAY have now reached the experimental stage, and it has been proven that they are practical. Extremely small tubes about three-quarters of an inch in diameter have been developed for dry cell operation. Merchandising experts believe that several million of these sets can be sold each year, so that Mr. and Mrs. Public can have radio reception everywhere they go. Since these sets are primarily portables and depend on batteries for operation, they will not be used appreciably at home. Instead the regular power-line operated receiver will be employed. Thus, it should be noted that the pocket radio will be an extra radio—it will not supplant any of the present sets.

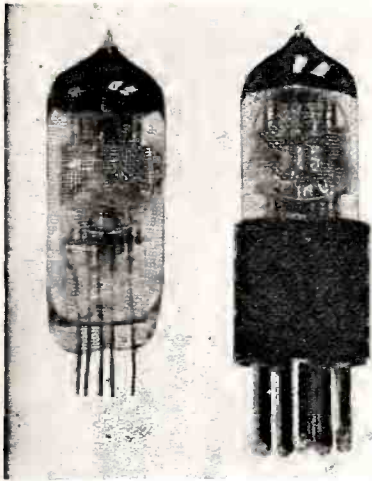
## HEAVY DEMAND ON BATTERIES

Since the battery pocket sets must be compact and light, very small batteries will be used. Naturally there will be a constant demand for new batteries as the old ones wear out. With millions of these pocket sets in daily use, battery manufacturers will have a market greatly in excess of that which existed when the home-type battery set was at its height. Dealers and jobbers will have an item that will bring every set owner to their stores at regular and often intervals.

To provide program service for facsimile, television, and frequency-modulated sound transmissions is going to require an immense expansion program in the broadcasting industry.



"Radio" piano developed by Miessner, using amplifiers and loudspeakers to provide great depth of tone and volume.



Actual size of bantam jr. tubes just developed by Hytron for ultra-compact receivers and devices.

Predictions have been made that there may be a thousand television stations in a few years compared to the present 765 broadcasting stations we now have. Then there must be U-H-F stations for facsimile and frequency modulation. A total of 10,000 more stations within five to ten years is entirely possible. That means an average annual sale of parts in excess of the total number of parts now in use in broadcasting.

#### TRANSMITTERS GALORE

Then to provide remote tele pickups, there must be available at each television station at least several mobile television transmitters. And should radio links be used to form television chains, a few more thousand relay transmitters will be needed.

In addition to radio's entertainment possibilities, there is the commercial aspect. Today all commercial airliners have 2-way radio communications. In a few more years when the public takes to the air and there are a few million private planes, it will be necessary for all private planes to have 2-way radios. With the air thick with planes in the vicinity of airports, radio will be essential in order to properly direct traffic and effect safe landings. Several million 2-way radios will give the parts people something to keep busy—naturally special light-weight designs will be needed, but such problems are easily solved.

Government figures show that there are now almost 250,000 numbered motorboats—boats that are used for pleasure on U. S. waterways. Here is an expanding market for radio that hasn't been scratched. Two-way radio installations will be used in a large percentage of these boats because of the safety angle. Others will have a radio only for its entertainment value. Every radio sold, means dozens of parts for the initial building, and later parts for replacement when the set needs repairing.

Straying away from straight radio applications, there are sound and

electronic musical instruments which require hi-gain amplifiers having more parts than our average present-day radio set. The day is approaching when it will be considered just as essential that an audience hear without ear-strain, as it is that we see without eye-strain. Sound will be considered as necessary in large rooms and auditoriums as proper lighting.

Amplified and electronic musical instruments, just now in infancy, are raising a man-sized sound for recognition in the musical world. Electronic organs have won acceptance in the past several years. Now there are pianos, stringed instruments, and combination instruments giving piano, organ string, and wind effects from one keyboard. All these instruments use amplifiers, and many of them have electrical filters for giving various overtone effects.

#### "RADIO" PIANOS

About 15 years ago, when pianos were expensive, some 400,000 units were sold, all of which are obsolete. In 1938 about 100,000 pianos were sold, and for 1939 expectations are for a 25 per cent increase. Electronic pianos should be able to corner this entire market and develop more sales, since it is anticipated that the "radio" pianos can be sold for a fraction of the cost of a standard one; yet the tone of an electronic piano compares with the finest grand piano. Close to a million electronic pianos a year, a few years from now is entirely possible. Then there are all the other versions of electronic musical instruments to be sold.

Industrially, there are numerous devices requiring radio parts that are being developed and tried out. The most spectacular ones being photo-cell control of operations. Many authorities are predicting a rapid rise



New circuits and features provide parts manufacturers with an ever-growing market. Pictured is the Admiral Aero-scope loop antenna.

in the use of electronic devices in industry as soon as the various engineers get acquainted with the devices and what they will do.

#### MEDICAL FIELD

In the medical field there are the cardiograph and diathermy that have won tremendous acclaim. While in numbers the cardiographs are few, each unit calls for an exceptional number of radio parts. Diathermies, on the other hand, are devices that many claim can be sold to the public. This being true, there is a tremendous market on tap. Companies offering diathermy machines for sale to the public, report sales far beyond their fondest hopes. Machines, incidentally, sell for upwards of \$150.

And if it were not for limited space, it would be possible to continue ad infinitum giving illustrations of how the demand for radio parts will expand in the future. Certainly, the future of the radio parts industry is excellent.



The Hammond Novachord employs a host of radio parts to provide amplification and reproduction of piano and other tones.

# Selling Up for Bigger Profits

*How a prospect with \$9.95 ideas can be sold a hundred-dollar radio, how a dealer may reach the consumer who can afford higher priced sets is told by sales experts.*

To help radio dealers make greater profits by increasing their dollar volume, leading radio merchandisers are explaining their methods for the benefit of RADIO TODAY's readers. These exceptionally successful dealers have found out that the problem of selling up is, after all, only a matter of actual selling. Manufacturers, ever on the alert, are helping solve the sales problems by supplying the right merchandise and suitable promotion aids.

To the man used to quibbling about a twelve-cent sales tax, sales of \$2,500 seem out of the question, but to Mr. Kolmetz of Liberty Music Shop, New York City, they're all in the day's work. Here are some of his ideas on how to chase the ever elusive big sale.

## GOOD REPUTATION IMPORTANT

Spend most of your advertising money to promote lines that put cash in your till and create a good reputation. When people spend big money, they go to a store which has their confidence.

Cater to your women buyers. They buy when they *want* a radio, price is secondary; but they must have excuses for spending large sums, both for themselves and friend hubbie. Provide them with plenty of reasons, such as: the savings *you* give them, the better reception on large consoles, how their friends will admire the more beautiful set.

Play a classical recording on the

best combination you have and point out the better tone, the richer obligatos. If they don't appreciate it, they won't admit it and are impressed. If they do like good music, you've made a sale. No one who really appreciates fine music will buy an inferior instrument.

Above all don't be afraid of the sound of hundreds of dollars, let the price come quietly as though it were chicken feed. Always remember you're selling quality and let them know that the more they pay the more they get. Too many salesmen make the mistake of regarding the \$300 set as a museum piece, too valuable to even mention to the casual buyer, reserved for a dream millionaire who'll drop in and say "I want that one."

## PERIOD MODELS FOR PARTICULAR BUYERS

R.C.A., Philco, Stromberg-Carlson, Capehart, Brunswick and Ansley are promoting period furniture radios in an attempt to climb out of the 1938 price cellar.

The idea, while new, is not untried and it should be sold to every person who takes pride in the furnishing of his home. A travel agency doesn't sell a prospect for a Bermuda cruise an excursion on the Albany night boat. Far-sighted radio dealers don't sell a man who can afford to buy other quality merchandise, a radio set to hide behind the bookcase.

"People with well furnished homes have been buying midget radios be-



Hepplewhite by Brunswick features a 6-tube chassis with push-button tuning.

cause they're easily hidden, but they'd buy a higher priced set if it harmonized with the rest of the furniture," says H. L. Weisburgh of Mersman Bros., makers of Brunswick radios. After talking with thousands of dealers and consumers—and being in the selling game himself—he's well qualified to sound off on how it's done. He cites Emporium, of San Francisco, Cal., as a typical example of what can be accomplished by "being on the button."

Featuring clever cartoons and snappy copy, Emporium advertises period furniture radios as the sets for the discriminating buyer. "If your radio fights your furniture, you'll appreciate the new Brunswick radios," they flash. Orders are coming in every week and call it "selling up" you must, because Emporium is continually tapping the high-mark-up market. Will you hear further?

"Radio sets with cabinets as occasional pieces in Duncan Phyfe, Chipendale or other period styles are certainly a means of getting bigger profit and greater sales. Our 1500 dealers state definitely that people can be

*(Continued on page 89)*



Rare woods and limited production make these Spartons truly unique.





People everywhere are excited about television; they want to know when, how and where they can buy television sets. Picture shows the crowds which daily pour into the television exhibit at the San Francisco World's Fair which opened in January.

## Let's Start Television Right!

In television we are launching a new industry.

Starting fresh, let us see that television avoids the mistakes and pitfalls that have cursed radio.

As radio men, we have had bitter experience in the past. We know where disaster lies. Let's insist that television's course be charted to avoid these troubles—from the beginning.

With the new art soon to be put before the buying public, let us plan its sales and business structure soundly. Let us banish forever any possibilities that this great service may be marred by the business evils that have beset the sale of radio.

Television is the newest, greatest, most complex service devised by man. Already we can see that it is more than a mere technical art, even though it combines the latest knowledge of electrical engineering, chemistry, physics and electronics.

For television will—we now realize—like its older brother, radio, involve undreamed social, political and international complica-



O. H. CALDWELL  
Editor Radio Today  
Former Federal Radio  
Commissioner

tions. As television grows, its impact will be felt in the whole gamut of human emotions and relations.

It is important then, that the business structure of the new art be set up right from the very start. Models, prices and discounts must all be planned carefully. A television Code of Ethics is in order. Certainly, this is a time to call together all those who will have a hand in this new art, to combine ideas, and to see that no careless "monkey-wrench" is tossed into the shimmering structure now being erected.

Perhaps patent control can effect the coordination so much needed. Perhaps Washington—sensing a new industry which can help roll back the recession—will help by authorizing sessions looking toward sound business planning.

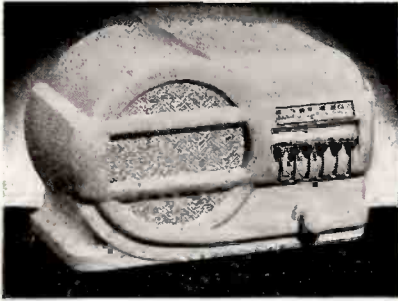
But the time for action is now. Television must be planned *right*, from the start. Or evils and dismay may beset it through all its future years.

O. H. CALDWELL,  
Editor, RADIO TODAY

On April 30th, with the opening of the N. Y. World's Fair, television broadcasting will start in the New York area, and the Television Era will begin.

In April, appropriately, RADIO TODAY will issue its Television Selling Number, featuring television sets, attachments, prices, discounts, and what radio men need to know about television installation and servicing.

**WATCH FOR RADIO TODAY'S "TELEVISION SELLING NUMBER", APRIL, 1939**



### AC-DC chokes

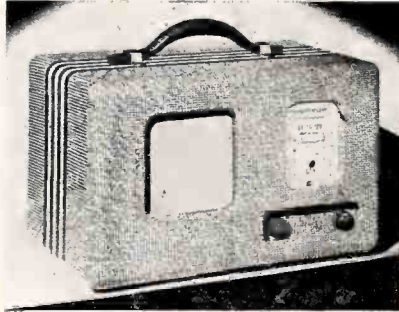
★ Replacement chokes for AC-DC receivers. Designed with resistances of 200, 250, 300, and 350 ohms. Produce minimum voltage drop. Catalog No. 400 available. Thor-darson Elec. Mfg. Co., 500 W. Huron St., Chicago, Ill.—RADIO TODAY.

### Push-button superhet.

★ AC-DC, 5-tube superhet, portable house radio tuning 540 to 1,650 kc. Has six-station automatic tuning, built-in antenna, 5 inch dynamic speaker. Bakelite cabinet in walnut or ivory finish. Model 519. Belmont Radio Corp., 1257 Fullerton Ave., Chicago—RADIO TODAY.

### Dry electrolytic kits

Handy kits containing six or twelve Sprague atom condensers, take little space in service kit. Will safely replace larger ones. Catalog available. Sprague Products Co., North Adams, Mass.—RADIO TODAY.



### Companion set

4-tube portable super-het tuning 550 to 1,500 k.c. Built-in antenna, fine selectivity and tone quality. Self-contained, long-life batteries. Stewart-Warner Corp., 1826 Diversey Pky., Chicago.—RADIO TODAY.

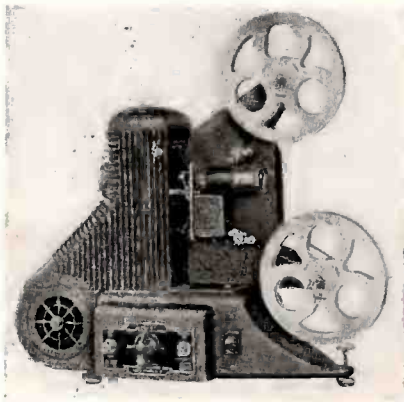


### Substitute speaker and vibrator tester

★ Universal - type substitute speaker with meter calibrated in watts output. PM-type speaker with output transformer for matching loads from 2000 to 30,000 ohms. Field resistance from 300 to 10,000 ohms. Vibrator tests under actual operating conditions. Complete A battery circuit for auto radio testing. Model TS-50. Hickok Electrical Instrument Corp., 10514 Dupont Ave., Cleveland, Ohio.—RADIO TODAY.

# More New Things

Latest news of radio products from manufacturers



### Univex projector

500-watt 8-mm. projector with efficient cooling system. Projects up to 5x7 ft. using high-speed lens of F:1.6. Threaded focusing adjustment. G-E pre-focused lamp socket, heavy duty AC-DC universal motor with variable speed control. \$42.50 list. Universal Camera Corp., 32-46 W. 23rd St., New York, N. Y.—RADIO TODAY.

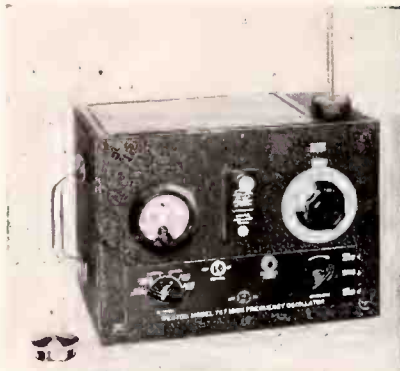
### Tubular capacitor

Paper tubular capacitor, supplementing old type DT "Dwarf Tiger." Impregnated in Dykanol "D," no additional price. Approximately fifty capacities available in 400, 600, 1,000, and 1,600-volt ratings. Catalog No. 165A on request. Cornell Dubi-

lier Elec. Corp., S. Plainfield, N. J.—RADIO TODAY.

### Television oscillator

★ Ultra-high-frequency test oscillator designed for servicing television receivers. Tunes 22 to 150 megacycles in one continuous band. Overall accuracy better than 2 per cent. Uses inductance type tuning. Dial turns 16 revolutions. Battery operated—weight 16 lbs. Rod-type antenna and conventional output through resistance attenuator. Pro-

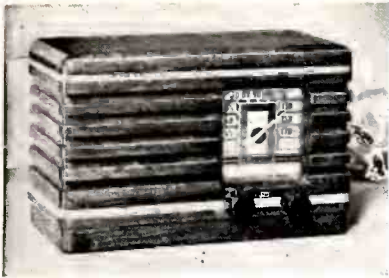


vision for crystal operation and external modulation. Provides signal when stations are not on the air. Model 787. Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark, N. J.—RADIO TODAY.



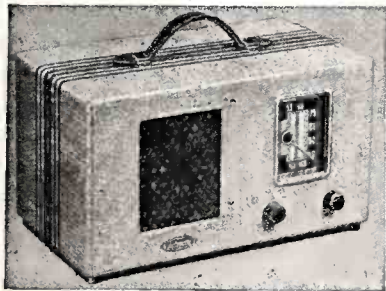
### Rider electronic volt-ohmmeter

★ Multi-range DC voltmeter having 16-megohm constant input resistance. Voltage ranges of 0/5/10/25/100/250/500/1000/2500/5000 at 2 per cent accuracy. Resistance ranges of 0/1M/10M/100M/1 meg/10 meg/100 meg/1000meg. Electronic circuit using push-pull arrangement statically and dynamically balanced. Zero adjustment does not require resetting when changing ranges. Permits voltage measurements in all circuits under dynamic operating conditions. Stabilized self-contained power supply. AC operated. Rider Volt-Ohmmeter \$57.50. Service Instruments, Inc., 404 Fourth Ave., New York, N. Y.—RADIO TODAY.



### Transitone compact\*

★ 5-tube AC-DC superhet covering broadcast band, state and municipal police calls. Dynamic speaker, AVC, built-in aerial. Approved by Underwriters' Laboratories. Solid walnut cabinet—model TP-12. Philco Radio & Television Corp., Tioga & C Sts., Philadelphia, Pa.—RADIO TODAY.



### All-purpose portable

★ Five tube portable receiver operates on batteries or AC-DC line. Weather-proofed, aero-luggage case with carrying handle. Built-in loop and connection for external antenna. Tuning range 550 to 1,700 kc., airplane type dial, 5 inch speaker. Lafayette Model CC-55. Wholesale Radio Service Co., 100 Sixth Ave., New York, N. Y.—RADIO TODAY.



### Lamp and radio combination

★ Combined lamp and five tube super-het designed in 8 types. Chassis concealed in base. Large dynamic speaker below reflector bowl. Self-contained antenna. AC-DC operation. Tunes 1750-540 kc. 10 kc. selectivity. Has AVC. Radio Lamp Co. of America, 1313 W. Randolph St., Chicago, Ill.—RADIO TODAY.

### Generating plants

Water-cooled AC generating plants operating on gasoline, natural or manufactured gas, 1,500-watt capacity, supplied in manual, self-starting or full automatic types.

Metal housing, easy accessibility to accessories, little sound or vibration while running. Model W15. D. W. Onan & Sons, Minneapolis, Minn.—RADIO TODAY.



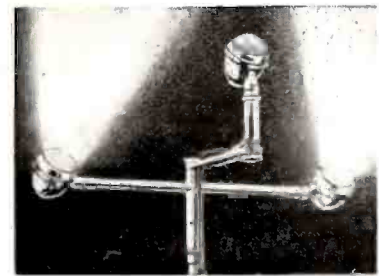
### Complete service kit

★ Service-Pak contains stock of essential parts for radio servicing, including resistors, volume controls & switches, audio, output & power transformers and 5 inch electrodynamic speaker. Accommodations for extra parts, over-all size 17 x 39 x 10 inches. Price to dealer \$29.95 complete. Utah Radio Prod. Co., 820 Orleans St., Chicago, Ill.—RADIO TODAY.



### Bantam Jr. sockets

★ Molded sockets for bantam junior tubes available in black or mica-filled bakelite, accommodate 5 & 6 prong tubes. Sockets are compact, mount in plain 5/8 inch round hole, held by retainer ring. Adapters and analyzer plugs available. American Phenolic, 1250 Van Buren St., Chicago, Ill.—RADIO TODAY.



### Lighted microphone stand

"Mike-Lite" has adjustable lights with rose-tinted, frosted lens on either side of microphone, no glare or shadows. Chromium plated, equipped with 25 ft. shielded cable and AC cord, transformer. Assembly folds flat, lists from \$62.50 to \$77.00 depending on type of microphone. Astatic Microphone Lab., Inc., Youngstown, Ohio—RADIO TODAY.



### Multi-range push-button tester

★ Automatic push-button AC-DC tester incorporating 29 ranges. All measurements, except 3,000 v. AC-DC, obtained from two polarized tip jacks. Simple to operate 3-inch D'Arsonval meter. Housed in compact wooden case. Series 870, \$16.95 net. Precision Apparatus Co., 821 E. New York Ave., Brooklyn, N. Y.—RADIO TODAY.

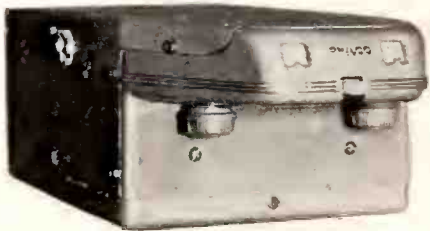


RCA shows its handsome radio-phonograph console Victrola with crystal pick-up, electric tuning, constant-speed motor, lovely lady—no telephone number.

# Auto Radio Interest Soars

Increased motoring to N. Y. and San Francisco fairs to hike demand for auto sets. 23 million car owners are prospects for 1939. More new sets announced.

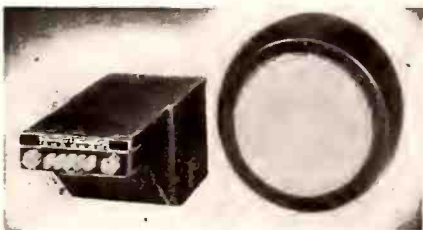
Some twenty million American motorists who are already sold on the value of radio, but do not yet have an auto radio, are even now looking forward to summer pleasures. To the radio dealers, these twenty million used-car owners represent a prolific



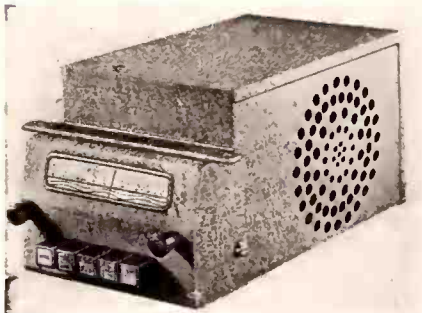
Philco's 933 features one push button for tuning five stations.



G-E's single-unit super-het has touch tuning, variable antenna adjustment.



United Motors stresses adaptability in this Delco push-button model.



Admiral model 55 by Continental has slide-rule dial and sub-dash mounting.

source of sales for the next few months. By stressing the features of the new auto-radio sets in terms of summer enjoyment and pointing out the exceptional values obtainable for a small cost, the dealer can do much to increase his spring and summer profits.

Dealers should contact the millions of persons who will be motoring to the World's Fair and the San Francisco Exposition. These motorists will be traveling long distances and a radio will serve to reduce the monotony. And for those driving at night, the radio will be an invaluable aid in keeping the driver awake.

## 23 MILLION AUTO-RADIO PROSPECTS IN 1939

To help sell the twenty million car owners who do not own an auto radio now, the radio manufacturers have announced sets suitable for every car and every pocketbook. And for the new-car trade, many of the radio companies are producing custom sets that match the instrument panel of the car. While the new cars will probably number only three million, these prospects generally have and are willing to buy the more expensive radio sets. Installation in new cars shouldn't be overlooked because of the comparatively limited market—the unit sale, less installation, will probably average twice that of the used-car market.

New auto lines announced this month are Delco, General Electric, and Philco, which are illustrated and described on this page. Previous announcements and specifications, including Admiral, Arvin, Howard, RCA-Victor, and Troy, appeared on

pages 10 and 11 of the February RADIO TODAY.

Philco is featuring several models for installation in any make car. Custom controls are available without extra charge for those sets suitable for instrument panel mounting. A 2-unit push-button receiver, for universal mounting is being pushed for the lower-priced installation—it lists for \$39.95. A single push-button selects five stations and has a position for manual tuning.

## UNIVERSAL MOUNTING SETS

General Electric is promoting a single-unit receiver for mounting under the instrument panel. Set has touch tuning with five buttons as shown in the illustration.

Automatic permeability tuning is but one outstanding Delco feature for 1939. These sets do not use a variable condenser for tuning, but continuously-variable inductances with movable iron cores. Both universal mounting and custom-type sets are available for all cars.

Other features of the 1939 sets are improved antennas, simplified installation, improved appearance, and lower prices, all of which make the new auto radios easier to sell. Radio dealers everywhere can easily find out who their prospects are from the lists of automobile registrations that are available.

Locating leads from registration lists, incidentally, is one of the best methods of nailing actual customers for auto radios. All effort and expense are then concentrated on people who are most interested and most able to purchase the product.

## 1939 Auto Radio Specifications—Cont'd

Model No.	List price	No. of tubes	Watts audio power	Amps. batt. drain	Speaker		Tone control	Type tuning controls	Push button tuning
					Size	Location			
General Electric Co., 1285 Boston Avenue., Bridgeport, Conn.—"G-E"									
GA-62	NS	6	NS	NS	6	In set	NS	Direct	Yes
Transitone Automobile Radio Co., Tioga and C Streets, Philadelphia, Pa.—"Philco"									
936	\$29.95	6-GL	NS	NS	NS	In set	NS	Remote	No
937	49.95	6-GL	NS	NS	NS	In set	Yes	Remote	Yes
938K	69.95	7-GL	NS	NS	NS	Cowl	Yes	Remote	Yes
933	39.95	6-L	NS	NS	NS	Choice	Yes	Direct	Yes
United Motors Service, 3044 W. Grand Boulevard, Detroit, Mich.—"Delco"									
R675	NS	5-MG	3½	6.3	5	In set	No	Direct	Yes
R676	NS	6-MG	4	6½	6	In set	Yes	Remote	No
R677	NS	6-MG	4½	7	NS	Choice	Yes	Direct	Yes
R678	NS	6-MG	5	7	8	Cowl	Yes	Direct	Yes

# OUTSTANDING

*In Appearance  
and Performance!*



For 110-Volt A.C.  
or 6-Volt Storage  
Battery Operation

## The Webster Electric Amplifier Assures a Complete High Quality Mobile Sound System

When you buy a Mobile Sound System you might just as well get outstanding appearance as well as outstanding performance. You very definitely get both in this fine Webster Electric unit.

Note the illustration. Have you ever seen a better looking unit? Follow the arrow and see how simple it is to change for either 110-volt operation or 6-volt battery operation. It is convenient, too. Four speaker receptacles are provided with change-over switch for matching impedance. The power output is 20 watts at 5% harmonic distortion. Gain: 130 D. B. for microphone; 91 for phono unit.

The complete system includes amplifier with turntable and crystal pick-up; hand type crystal microphone with shielded cord and plug; two P.M. dynamic speakers with cords and plugs; set of matched tubes and power packs for operation off of 110-volts A.C. and 6-volts D.C. and battery connecting cord.

Write for complete specifications on complete line of amplifiers and portable systems. It is a well-known fact that you cannot secure anything better than Webster Electric quality—at moderate prices.

WEBSTER ELECTRIC COMPANY  
Racine, Wisconsin . . . U. S. A. . . . Established 1909  
Export Dept., 100 Varick Street, New York City  
Cable Address "ARLAB" New York

*"Licensed by Electrical Research Products, Inc., under U. S. Patents of American Telephone and Telegraph Company and Western Electric Company, Incorporated."*

# Webster Electric

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

# Trade Flashes

## Parts Show at Chicago, June 14-17

Wednesday, June 14, and Thursday, June 15, will be Jobber Days at the 1939 National Radio Parts Trade Show at the Stevens Hotel, in Chicago. Friday, June 16, and Saturday, June 17, will be given over to the general trade, with the servicemen carrying on their principal activities on Friday, and the amateurs on Saturday.

This is the first time in the history of radio trade shows that specific days have been set aside for various sections of the radio parts industry. Jobbers will thus have an opportunity to discuss problems with their manufacturers, and on general trade days, servicemen and amateurs will find the booths manned by technicians who are familiar with the problems of the technical groups.

More than a hundred manufacturers had contracted for over 130 booths in the 1939 Show by the first of March.

Ken Hathaway of the Show Corporation reports that the number of exhibitors, as well as the amount of space contracted for, is running ahead of last year's record by nearly a month.

## When you visit N. Y. World's Fair

RADIO TODAY offers to its subscribers, readers, and friends in the industry the complete facilities of a service bureau that will handle everything necessary for comfort and enjoyment during your visit in New York to see the World's Fair as well as New York City, the great metropolis.



J. Earl Smith, Southern representative for Meissner, reviewing his '38 sales reports which show him winner of sales contest. W. F. March, Meissner sales manager, and Mrs. Smith standing at left. Albert Reid of Mr. Smith's office standing at right.

This bureau is located in the heart of New York, one block from Times Square, and offers tours with room assured in either hotel, residence club, or private home.

The hotels and residence clubs are located in Manhattan, and the rooms in private homes are located in Queens County near the site of the World's Fair. All rooms in private homes are located within fifteen minutes' ride of the Fair Grounds.

Also included are NBC broadcasting or television studio tours at Radio City, with grand sightseeing tour of

New York and admission to the Fair.

RADIO TODAY suggests that radio men avail themselves of the services of the Central Sightseeing Bureau, Inc., 55 West 42nd Street, New York, telephone LOnacre 5-3940. No charge is made by this bureau for services rendered.

## Facsimile network formed by MBS

That Facsimile transmission and reception is no longer "around the corner" has been conclusively demonstrated by the formation of a Facsimile network which began operations on March 11. The three Mutual stations WGN, WOR, and WLW making the chain have been transmitting facsimile locally for more than a year and will alternate 30 minute period presentations from 2 to 3:30 a.m. EST.

J. R. Poppele, chief engineer of WOR states that while many problems have yet to be solved, broadcasters and manufacturers of facsimile receivers are in a much more encouraging position than were the pioneers of radio. Of interest to servicemen and dealers is his comment that about \$15.00 per year will be spent by the owner of a facsimile receiver for paper, parts and service.

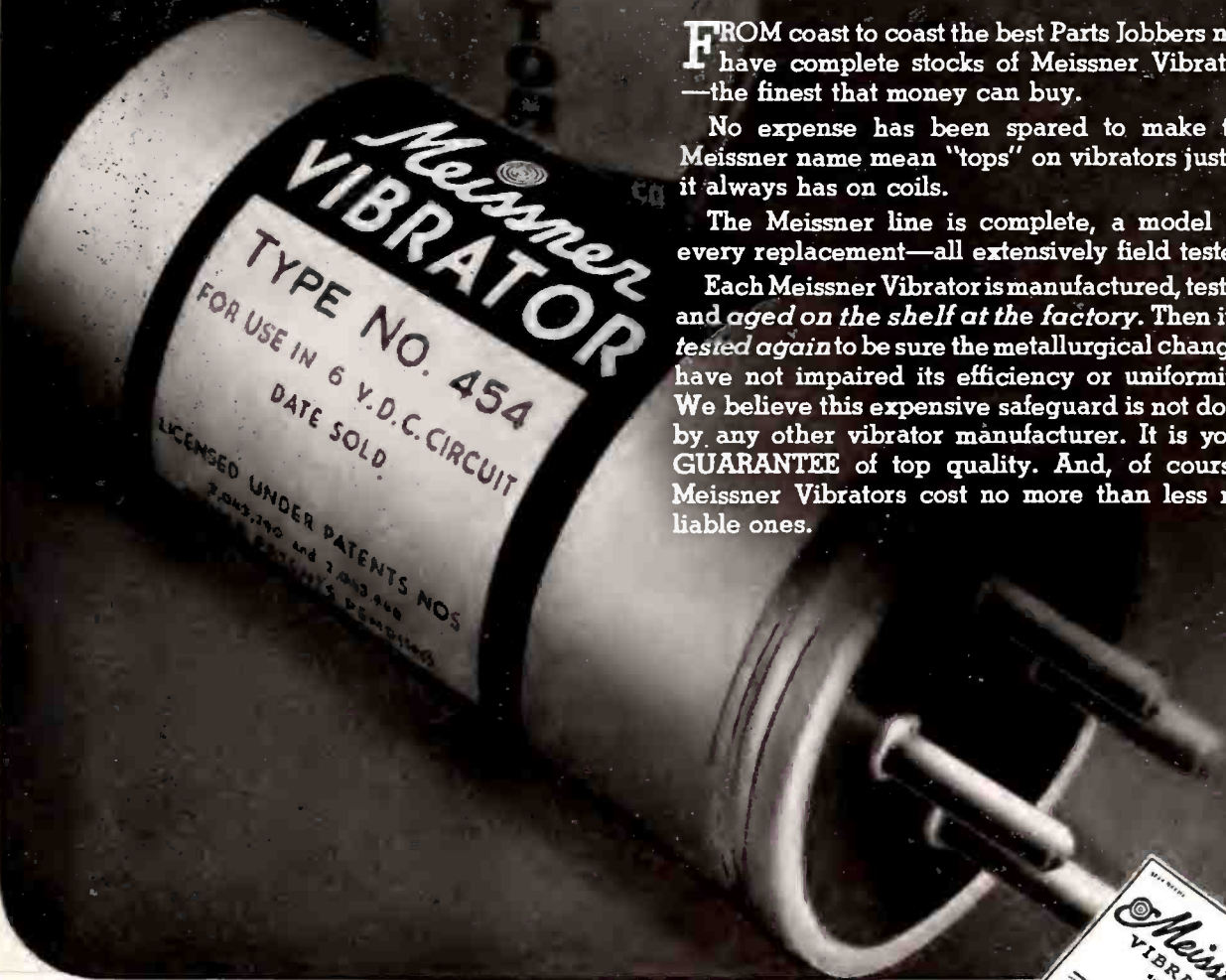
Further indication that facsimile is hot, is the news that Finch Telecommunications Labs. have engaged Harry Bressler, famous artist to handle special cartoons for facsimile programs.

Ralph H. Linder has been appointed Sales Promotion and Advertising Manager of the American Record Corp., New York City.



Dallas dinner party—left to right: E. Wilkinson, of Wilkinson Bros.; Mrs. Ray Carson; M. B. Patterson, Sylvania rep; P. S. Ellison, Sylvania Sales & Ad. Mgr.; Mrs. E. Wilkinson; Ray Carson, Sylvania rep; Mrs. M. B. Patterson; celebrating visit of Mr. Ellison on his country-circling trip. He returns this week to New York after traveling through twenty-seven states visiting Sylvania distributors.

# The Biggest *News* in VIBRATORS



**F**ROM coast to coast the best Parts Jobbers now have complete stocks of Meissner Vibrators—the finest that money can buy.

No expense has been spared to make the Meissner name mean "tops" on vibrators just as it always has on coils.

The Meissner line is complete, a model for every replacement—all extensively field tested.

Each Meissner Vibrator is manufactured, tested and aged on the shelf at the factory. Then it is tested again to be sure the metallurgical changes have not impaired its efficiency or uniformity. We believe this expensive safeguard is not done by any other vibrator manufacturer. It is your **GUARANTEE** of top quality. And, of course, Meissner Vibrators cost no more than less reliable ones.

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 • I. F. TRANSFORMERS  
SERVICE PARTS • DIALS • SWITCHES • TUNING UNITS

**"A FAMOUS NAME FOR TWO DECADES"**

MEISSNER MFG. CO.  
Mt. Carmel, Illinois, Dept. T-3

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

Name .....

Address .....

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





Call	Location	Freq. in kc.	Power	Call	Location	Freq. in kc.	Power	Call	Location	Freq. in kc.	Power	Call	Location	Freq. in kc.	Power
WJAG	Norfolk	1060	O	WLAW	Lawrence	680	O	WNAX	Yankton	570	O	WGAN	Scranton	880	M
WJAR	Providence	890	O	WLB	Minneapolis	760	S	WNBC	New Britain	1380	K	WQBC	Vicksburg	1360	O
WJAS	Pittsburgh	1290	O	WLBC	Muncie	1310	H	WNBF	Binghamton	1500	H	WQOM	St. Albans	1350	O
WJAX	Jacksonville	900	O	WLBL	Stevens Pt.	900	S	WNBH	New Bedford	1310	H	WQXR	New York	1300	O
WJCB	Bloomington	1200	H	WLBZ	Bangor	620	M	WNBZ	Springfield	1260	O	WRAC	Williamsport	1370	H
WJCK	Detroit	1300	H	WLEU	Erie	1420	H	WNEI	Saratoga Lake	1290	H	WRAP	Reading	1340	H
WJCL	Decatur	1120	H	WLLH	Lowell	1370	H	WNEW	New York	1250	O	WRBL	Columbus	1200	H
WJBO	Baton Rouge	1120	M	WLNH	Laconia	1310	H	WNLN	New London	1500	H	WRC	Washington	950	O
WJBW	New Orleans	1200	H	WLS	Chicago	870	W	WNOX	Knoxville	1010	O	WRDO	Augusta	1370	H
WJBY	Gadsden	1210	H	WLTH	Brooklyn	1400	M	WNYC	New York	810	O	WROW	Augusta	1500	H
WJDX	Jackson	1270	O	WLVA	Lynchburg	1200	H	WDAI	San Antonio	1190	W	WREC	Memphis	1220	O
WJEL	Hagerstown	1210	H	WLW	Cincinnati	700	W	WOO	Davenport	1370	H	WREN	Lawrence	1220	O
WJHL	Johnson City	1210	H	WMAJ	Washington	1420	H	WOO	Ames	1370	H	WRGA	Rome	1500	H
WJIM	Lansing	1210	H	WMAQ	Chicago	1170	W	WOK	Albany	1430	M	WRIN	Racine	1370	H
WJJD	Chicago	1130	U	WMAZ	Springfield	1420	H	WOL	Washington	1230	O	WRNL	Richmond	880	M
WJMS	Irenwood	1130	U	WMB	Chicago	1420	H	WOLS	Florence	1200	H	WROK	Rockford	1410	M
WJNO	WPalm Beach	1200	H	WMB	Chicago	1420	H	WOMI	Owensboro	1200	H	WROL	Knoxville	1310	H
WJRO	Detroit	750	W	WMB	Chicago	1420	H	WOMT	Manitowoc	1210	H	WRR	Dallas	1280	M
WJRW	Tuscaloosa	1200	K	WMB	Chicago	1420	H	WOO	Gd Rpd	1270	M	WRTO	Richmond	1500	H
WJST	Washington	1460	T	WMB	Chicago	1420	H	WOPI	Bristol	1500	H	WRUF	Gainesville	830	S
WJTN	Jamestown	1210	H	WMB	Chicago	1420	H	WOR	Newark	710	W	WRVA	Richmond	1110	S
WJW	Akron	1210	H	WMB	Chicago	1420	H	WORC	Worcester	1250	M	WSAJ	Cincinnati	1330	H
WJZ	San Juan	760	W	WMB	Chicago	1420	H	WORK	York	1320	O	WSAL	Salisbury	1200	K
WKAA	San Juan	1240	O	WMB	Chicago	1420	H	WORL	Boston	920	M	WSAN	Allentown	1440	M
WKAR	E. Lansing	850	O	WMB	Chicago	1420	H	WQSU	Columbia	570	N	WSAR	Fall River	1450	O
WKAT	Miami Beach	1500	H	WMB	Chicago	1420	H	WOW	New York	1130	O	WSAU	Vausau	1370	H
WKBB	E. Dubuque	1150	T	WMB	Chicago	1420	H	WOW	Omaha	590	O	WSAY	Rochester	1210	H
WKBB	LaCrosse	1380	O	WMB	Chicago	1420	H	WOWO	Fl. Wayne	1160	T	WSAZ	Huntington	1190	O
WKBN	Youngstown	570	M	WMB	Chicago	1420	H	WPAO	Paducah	1420	H	WSB	Atlanta	740	W
WKBO	Harrisburg	1200	H	WMB	Chicago	1420	H	WPAB	Parkersburg	1420	H	WSB	Chicago	1210	H
WKBV	Richmond	1200	H	WMB	Chicago	1420	H	WPAX	Thamesville	1210	M	WSBT	South Bend	1350	M
WKBW	Buffalo	1480	S	WMB	Chicago	1420	H	WPAY	Portsmouth	1370	H	WSFA	Montgomery	1410	M
WKCB	Muskogee	1500	H	WMB	Chicago	1420	H	WPEN	Philadelphia	920	O	WSGN	Birmingham	1310	H
WKCU	Griffin	1300	H	WMB	Chicago	1420	H	WPG	Atlantic City	1100	S	WSIX	Nashville	1210	H
WKOK	Sumner	1210	H	WMB	Chicago	1420	H	WPR	Providence	1370	H	WSJ	Winston-Salem	1310	H
WKRC	Cincinnati	550	O	WMB	Chicago	1420	H	WPRP	Ponca	1420	H	WSL	Jackson	1420	H
WKST	New Castle	1250	K	WMB	Chicago	1420	H	WPTF	Raleigh	680	S	WSM	Nashville	1210	H
WKY	Oklahoma City	900	O	WMB	Chicago	1420	H	WQAM	Miami	560	O	WSNB	New Orleans	1320	O
WKZO	Kalamazoo	590	O	WMB	Chicago	1420	H					WSMK	Dayton	1300	I
WLAC	Nashville	1470	S	WMB	Chicago	1420	H					WSNJ	Bridgeton	1210	H
WLAK	Lakeland	1310	H	WMB	Chicago	1420	H								
WLAP	Lexington	1420	H	WMB	Chicago	1420	H								

# FOUR Good Reasons Why A UniveX Department Means BIG PROFITS

**SMALL INVESTMENT!** UniveX cameras and accessories are the lowest-priced in all photographic history! It takes a small investment to stock and display the full line.

**LITTLE SPACE REQUIRED!** Because UniveX cameras and projectors are amazingly compact and streamlined—a dramatic, eye-compelling display can be presented on one counter—or in one small booth!

**NO SERVICING!** UniveX cameras and projectors are easy to understand; simple to operate! No technical knowledge is needed on the part of your clerks. And you have no servicing problems, for all servicing is handled by your customers direct with the factory!

**NATIONALLY ADVERTISED!** Consistent, dynamic advertising tells the dramatic UniveX story of value, performance and results in the magazines read by your customers! Your UniveX counter and window displays will bring in more traffic . . . more sales . . . more profits!

For complete details regarding UniveX products, prices and promotional plans write Universal Camera Corporation, New York, Chicago, Hollywood.

FAIR TRADE PROTECTED IN 43 STATES

Only 1/1000<sup>th</sup> Second  
Candid Under  
\$100

TRICOR f3.5 LENS  
Photoflash Synchronizer Built-In  
Automatic Film Transport

Here's the only completely All-American made camera that gives you the speed, the performance and the prize-winning results you'd expect only from the most expensive foreign makes! Think of halting a 200-mile-per-hour racing automobile! A shutter with 1-1000th-of-a-second speed gets it—true, sharp, clear! Think of taking perfect nighttime shots—indoors or out! The built-in photoflash synchronizer switch makes it easy! Think of cutting your negative costs in half! The most economical UniveX 35 mm. film makes it possible!

- Check these features!
- All-metal focal plane shutter!
  - Built-in optical view-finder!
  - Automatic film transport—double exposures impossible!
  - Interchangeable lens!

When you visit the New York World's Fair, don't miss the dramatic presentation of the entire UniveX line in the Communications Building!

America's Greatest  
Movie Camera  
Value!

NEW! FASTER  
f4.5 LENS!  
NEW! Built-In  
VIEW-FINDER

**\$15**

USES 69¢ FILM!

Here's the new 1939 movie camera that gives you the simplicity of operation . . . the dependable performance . . . the thrilling life-like results you'd expect only from high-priced cameras. So dependable is this new UniveX, with fast f4.5 lens and built-in optical view-finder, that we guarantee "satisfactory results, or a new roll of film free." Movies are easy to take with the new UniveX—just as easy as taking snapshots! And with the 69¢ UniveX film roll, your movies actually cost less than snapshots!

It's America's greatest movie value, because UniveX makes more movie cameras than any other manufacturer. Ask your dealer today to show you the sensational, new 1939 UniveX with its sensational high-priced features. Many dealers now offer the new UniveX on convenient easy payment terms.

UNIVEX MOVIE CAMERA PRICES START AT \$995

Sensational New Guarantee Insures Your Movies!

"Satisfactory movies if instructions are followed or a new roll of film free." Your guarantee of perfect results with this \$15 camera.

Reproductions of typical UniveX ads which are now appearing in National Magazines.

It's Smart To Own The NEW 1939 UniveX

# 8624

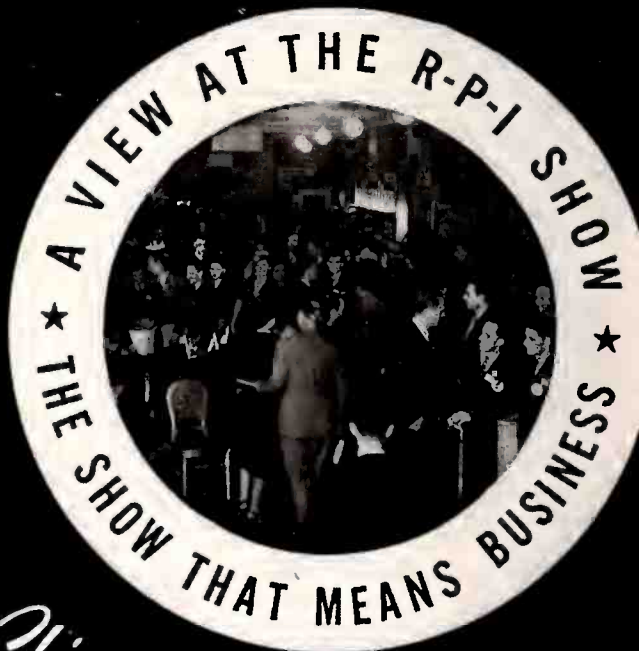


Yes...eight thousand six hundred and twenty-four attended the National Radio Parts Trade Show in Chicago last June—the biggest get-together the Radio Parts Industry has ever held! Look at the record—see how the National Radio Parts Trade Show has grown in interest and attendance with each successive year! Every branch of the Industry has been represented. Manufacturers, Jobbers, Manufacturers' Agents, Engineers, Factory Men, Sound Specialists, Servicemen and Amateurs—from all over the world—meet in this one and only big annual event for the Radio Parts Industry.

## IT PAYS TO ATTEND THE TRADE SHOW

Whatever you do, don't miss the next National Radio Parts Trade Show at the Stevens Hotel in Chicago, June 14, 15, 16, 17. Over 100 Manufacturers have already taken exhibit space. That's setting a new record—and means the biggest show ever! Make plans now to attend.

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.</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

# Radio Names—Past and Present

Including receiver designations that have come and gone,—as makers have dropped out of business, entered other lines, or adopted new tradenames

Radio-set trade names still being used—**Bold face**.  
Radio-set trade names no longer being used—**Light face**.  
Manufacturers no longer using tradename, but still operating—\***Light face with asterisk**.

<b>A</b>	Betta-Tone Big Six Biltmore *Birnhaeh Blair Blue Bird Blue Streak *Bosch Bosworth Brandes Branson Diamond T Diana Bremer-Tully Bretnig Brown Telephone Brown & Manhart Browning Browning-Drake *Bruno Brunswick Bryant Buckeye Buckingham Buckwalter Buick Bulora Bush & Lane B. W.	De Luxe Derby Deresnadyne De Soto Detroit <b>De Wald</b> DeWitt-LaFrance Dexter Dial Less Diamadyne Diamond T Diana Dimmock-Bogart Distantone Dodge Doerle Doleres *Domaine Dow Dray Drexel *Dubilier Dumont Dungan-Sternfeld Dunn <b>Dunn-Hall</b> Duodine Duotone Duotrola Du-Ra-Co. Dymac Dynamophone	<b>B</b>	Abhey ABC AC Dayton Ace Acme Acratone 3-d-a-unit *Adler-Royal Admiral Admiralty Adrola Advance Aer-A-Dyne Aero Aerodyne Aeronaute Aeronautical Aeroking Aeromaster Aetna Ainsworth Air Castle Airex Air King Air Line Airmaster Air-Ola Air Pilot Airtone Airtune Ajar Aladyne Algo All-Amaz All-American Mohawk Amaco Ambassador Ambrosola Ambu Amerex American American Beauty *American-Bosch American Television Amertone AmDola Amplex Amrad *Amso Andrea Angelua Anstey Aper Apollo-Dyne Appleby *Appel-Hendersan Aragan ArborPhone Arcadia Argus Ariel Arlonola Aristocrat Arlington Arkay Arrow Artax Astral Arvia Arvin Atchison Atec Atlas-Colonial A. T. R. Atwater-Kent Audola Audio-Tone Aurophone Aurora Austin Autocrat Automaster Automatic Autophone Autorex Aztec	<b>C</b>	Cadillac Caladyne Calvert Cameo Capehart Capital Cardinal Cardinola Cardial Carillon Carol-Dyne Cehophone Ecodyne Caruso Carter Case Cascade Cavalier Cavalcade Celeste Central Century Champion Champlain Chanticleer Chatham Chevrolet Chieftan Chrysler Cincodyne Circulet Clago Clardyne Claratone Clarton Clearbrook Clearfield Clear-o-dyne Cleartone Cleveland Climax Clinton Cole *Colonial Columbia Comldyne Compendyne Com Rad Concerdyne Concert Grande Concertola Concourse Consolette *Consomello Grand Continental Corcoran Corona Coronado Cosmopolitan Counterphase Country Gentlemen Courier Crescentyne Crimp-O-Dyne Crosley Crown Crusader Curkoid	<b>D</b>	Davis Davison-Haynes Day Fan *Dayrad Dayton Deem De-Exer Defiance De Forest Deltrickson *DeJur Delano Delco	<b>E</b>	Eagle Eaglet Earl EasterD Echo Echophone Ecodyne Edco Edison Edison Bell Eisemann Electradyne Electrola Electrotone Elektric Elling Elkay Elmco El-Rey Emerson Emersonette Emmons-Premier Empire Ensign Equidoron Equidyne Erla Eschner Escodyne Espey Essex Eveready	<b>F</b>	Fada Fadalette Fairbanks-Morse Fairview Faraday Faraway Farrand Fearless Stuplex Federal Fenway Ferguson Ferranti Ferrydyne Finch Fine-Arts Firstone Fischer-Smith Flex-O-Dyne Fleetwood Forbes Ford Fordson Franklin Freed Freed-Eisemann French Freshman Frontinac	<b>G</b>	Galvia Gamble-Skogmo Gardner Gard Gar-Shear-Dyne Garvold General General American General Auto General Electric General Five General Motors	<b>H</b>	Hails Hail *Hallardson Hallcrafters Halowat Halson Hammarlund Hammarlund-Roberts Harding Harley-Davidson Harmonic Harmonson Harold Bell Harmony Hartman *Harty & Young Hemco Henderson Herald Heraldine De Luxe Herzog Hetro H. F. L. Hilltop Six Hi-Lo Hi-Power Hollywood Holmes Hoodwin Howard Hudson Hudson Hudson-Ross Huhert Huntington-Williams Humobile Hy-Pex Hy-Tone	<b>I</b>	I-C *I C A Illinois Imperial Indian Inductrola Inland Insuletta International International Babydyne Interocean Ion Irving Isofarad	<b>J</b>	Jackson Jackson Bell Jefferson-Travis Jenkins Jewett Jolley Jones Just-Rite	<b>K</b>	Kaar *Kadette Kanawha Karadio Kardonstrip Kayo Keller-Fuller Kellogg Kenman Kennedy Kent Kerstone King King Cole King-Hinners Kingston Kirk Recreation Kismet Kisonet Kiltzen Knight Kolster	<b>L</b>	Lacault Lafayette Lamb Lance Lang LanSins Lark Larkin La Salle Lasco Lascodyne Layton Layton Learadio Le Bron Le Calle Leich Lenco Le Mor Lenford Lester Leutz Levy Lexington Liberty Lincoln Little Giant Lloyd C. Greco London Lofin-White Logodyne Longoria L'Atro Luxer Lyric	<b>M</b>	Macadyne Macy Madison-Moore Magnadyne Magnatone *Magnavox *Magnutrol Main Majestic Major Manning-Hall Manhart Marathon *Marsonphone Maroonphone Marine Martin Marlodyne Marwol Master Masterdyne Masterpiece Masterola May Mayfair Mayflower Marvian McLords-Silver McMillan Meco Meissner Melburn Melco-Supreme Mel-O-Dee Melody Melody King Melodyne Mel-O-Tone Mercury Mercedes Merrell Metcor Metrodyne Midwest Mikado Minerva Minuet Minute Man Miraco Mirrodyne Mistion Bell Mobllette Mohawk Monarch Monoddyne Monrona Montrodyne Montrosset Mo-Re-Co Morradyne Morton & Borks Mormaster Motorola Motoret Murdock Musique Mutual Mysto	<b>N</b>	Nash Nassau National Nazeley Neo-Dyne Nestor Neutrodyne Neuway	<b>O</b>	Obermiller Oard Octo Octophase Okay Oleismobile O'Neill *Operadio Orator Orion Orpheus Orthon Orthodyne Ortho-Sonic Oslo Ostermeier Overtone Ozarka	<b>P</b>	Pacific Packard Packard Bell Padre Page Parkin Parla Parmak Patterson Paulson & Hopple Pearl Peerless Pelrad Pelradyne Penn C Penrad Perasco Perfectone Petter Pan Petro Philmore Philarmonic Phusiflex Pierce Arrow *Pilgrim Pilot Pioneer Plaza Pliodyne Plio-6 Plymouth Polodyne Pontiac Pomco Popular Port-o-matic Porto-Dyne Port-O-Radio Portrola Power-Argue Powerola Powertone Premier Priess Prima Pritchard-Roeber	<b>Q</b>	Quad Qualiphone Queen Q-R Radak Radiant *Radiant Radiette Radiobar Radiodyne Radio-Tone-O-Graf Radiograph Radlokeg *Radiola Radiophone Radiotel Radiotone Radiotrope Radiorogue Radisto RaDy-Narde Radyno Ragan-Grant Rambler Six Ramway	<b>R</b>	Randle Ranger Rapco Ra-Vox Rawlings Raydeluxe *RCA RCA-Victor RCL RD-X Norco Norden-Hauch Northwest Novadyne Novoye Nunn-Landon Nu-Tone Nyaccodex	<b>S</b>	Salem Sampson Sara Sargent Savil Scott Scout Seery-Bartell Selectodyne Sentinel Serenaier Sethell-Carlson Shameck Sheldon Shenola Silver King Silver Marshall Silvertone Silver Simon Simple Simon Simplex Simpil-Dyne Sinerflex Sky-Chief Sky Hawk Sky-Rider Slagle Sleeper Sloley Solex Somerset Songbird Sonora Sorelign Sparton Sulldorf Square Deal Standard Standardyne Standish Stanley Stanrad Stanwood Star Star-Raider Stelrite Steinmetz Sterling Stewart Stewart-Warner Story & Clark Stromberg-Carlson Studebaker Sumter Sun Sunbeam Super Superadio Superdyne Superflex Superfone Superior Superiorodyne Superlatone Super-Reinartz Super-Symphonic Supertone Superiorflex Superola Super-Pre Supreme Sweeney Sylvan Symphonic Synchrophase Spher	<b>T</b>	Tanuerflex Taylor Te-lek-tor-et Teleradio Teletone Temple Terry T & H Thermiodyne Thomas & Silverman Thomb Thumb Thorohoro Thorola Iscodyne Tiffany Tiffany-Tone Tilman Timson Tiny Tim *Toho Todd Tone-A-Dyne Tordyne Tranadyne Trans-Atlantic Transcontinental Transitone Traul Traveler Trebler Trego T. R. F. Triantola Trinity Troubadour Troy Tru-Dial True Tone Tustin Troman 20th Century Air King Twitchell Tyman Tzigan	<b>U</b>	UCCO U-Flex Ultradyne Ultramar Ultra-Marvel United United Motors Uni-Tune Universal USL	<b>V</b>	Valley Valleytone Van-Asche Van Slekken Van Staagen Veriphone Vesco *Victor Victory Victrola Viking Vitaradio Vitatone Voelteste Voco Vogue Voltsometer Voltone Voltamp	<b>W</b>	Wallace Walham Ware Warner Hanson Warwick Watterson Wave-Minster Way-O-Dyne *Webster Wells Wells-Gardner Western Electric Westinghouse Weston Wheeler White Whiteand Whitestone Wilcox Wilcox-Gay Wings Wippel-Raine Wolverine Wonder Wunderstone World World Record Worrite *Wright De Coster Wurlitzer	<b>Z</b>	Zaney-Gill Zenette Zenith Zephyr
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\*Indicates this trade name is no longer being used to designate a radio set, but that manufacturer is still in business.

# An Adventure in Discovery...

Meet the Modern  
*Rip Van Winkle...*  
he slept from 1901 to 1939!

Rip fell asleep in Central Park, New York City. That was in 1901, just a few days after Marconi's Kite Antenna picked up the first transatlantic wireless signal. For 38 years Rip slept undisturbed while radio was growing like Jack's famous beanstalk.



**Imagine Rip's Surprise on Waking to Find Radio City**—First thing Rip saw when he woke up was the RCA Building. Amazed, he decided to investigate. So he wandered around, puzzling at the letters "RCA" everywhere about him. Opening a door, he found a pretty girl and asked:



The surprised receptionist replied that RCA is the symbol of the radio age—that it stands for the Radio Corporation of America, a family of organizations engaged in services in every field of radio... and explained how radio had developed from Marconi's idea. Then she told Rip about:

## RCA Tubes—the Heart of Broadcasting Stations—and of Your Home Set



The transmitters, giant power tubes, all the astonishing variety of broadcasting equipment, Rip heard, were made by the RCA Manufacturing Company. "Fine," said Rip... "but how do folks hear broadcasts?" So the girl explained about home receivers built by RCA Victor.

## Finer Reception with RCA Victor Radios and RCA Victrolas



The engineers who design broadcasting equipment create RCA Victor Radios and RCA Victrolas. There are RCA Victor instruments priced for every need and purse range—from "Little Nipper Radios" and other low cost table models to glorious high fidelity consoles.



Victor and Bluebird Records offer music lovers the greatest artists and bands. RCA Victrola Attachments connect to any modern radio and play records through the radio. RCA Victrolas combine radio and record entertainment at prices from \$19.95 to \$355.00, f.o.b. Camden, N. J.

## RCA's Role in Safety at Sea and in the Air



Radiomarine Corporation of America supplies radio safety devices such as the RCA "direction finder" that afford protection for ships at sea. RCA Manufacturing Company helps make flying safer with such developments as the "radio compass."

## RCA as Radio's Leading Educator



By training young people in technical radio work, RCA Institutes, Inc., performs a real public service in developing skilled workers for radio. RCA Institutes Press publishes the RCA Quarterly Review (\$1.50 per year) and other technical radio publications.

## RCA's Role in Television



RCA Laboratories are exploring the best ways of adding sight to radio service. And Rip, hearing of accomplishments already achieved in television, gained new appreciation of the importance of RCA and RCA research.



# RADIO CORPORATION of

RADIO CITY, NEW YORK

RCA Manufacturing Co., Inc. National Broadcasting Company R.C.A. Communications, Inc. RCA Institutes, Inc.

# The Story of the Services of RCA!

R.C.A. Communications, Inc....a message service with the speed of lightning



Rip learned that one member of the family, R.C.A. Communications, Inc., operates a world-wide radio communications system with direct circuits between the United States and 43 foreign countries, and with ships at sea. A service of immense importance to our modern life.



And she went on to explain how RCA Laboratories have helped develop broadcasting and other modern applications of radio through research which began with communications and has branched out into research in every field of radio.

Rip Learned of the Great Broadcasting Services of NBC



Rip marveled at the contribution of the National Broadcasting Company made to American culture through its nationwide networks and its outstanding programs... the world's best music, great plays, news and educational programs, political broadcasts and many other features.

RCA Victor Radio Entertainment Wherever You Go or Wherever You Are



RCA Victor Auto Radios give motorists radio entertainment as they drive. The new RCA Victor Pick-Me-Up Radio is a portable set that can be carried anywhere. Other RCA Victor battery sets serve unwired farms and homes.



Millions enjoy movies more because research in RCA Laboratories helps create finer motion picture sound. RCA Photophone equipment records sound on film at many leading Hollywood studios. Pictures talk at more than 5,000 theatres through RCA Photophone Reproducing Equipment.

RCA and Police Radio



Rip learned from his charming companion that many towns and cities from coast to coast are protected by RCA police radio which makes it possible for squad cars to be on the scene of any disturbance within only a few minutes.

Gosh...said Rip...does everyone know how much radio service is available from RCA?



RCA's answer is millions do—but we want everyone to understand it even better. That's why RCA has a comprehensive exhibit at the New York World's Fair. In it will be displays that will show just how much radio can mean to everyone and dealers, especially, will see how many opportunities RCA offers for making money.

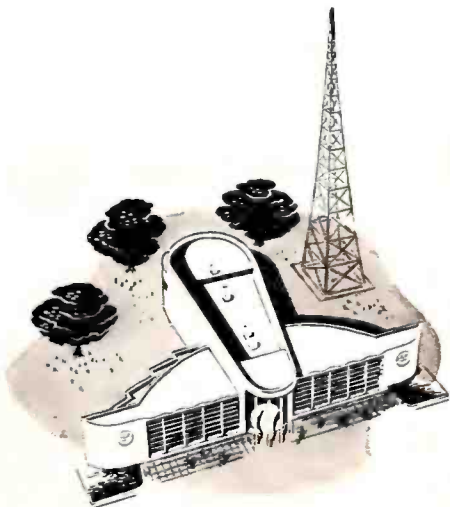
## It will pay you to visit the RCA Building at the World of Tomorrow

You'll learn more about the services you sell or can sell! Get a thrilling picture of how RCA puts the world's greatest radio experience to work to create values that mean greater sales for you. You'll understand better than ever why it pays to push the merchandise mentioned here and in the pages which follow.

You'll see television demonstrated at the Fair and discover how this new science will some day put profits in your bank account.

Yes, a visit to the RCA Building will pay in dollars and cents—because it will give you a renewed enthusiasm that will be reflected in sales. For greater profits—in radio and television—it's RCA All the Way.

Listen to the "Magic Key of RCA" every Sunday, 2 to 3 P. M., E. S. T., on the NBC Blue Network.



# AMERICA

# NEW RCA Victor RADIOS

## To Make More Money for



AMAZING  
ELECTRIC  
TUNING  
VALUE! ONLY..

**\$89<sup>95</sup>\***

*Push a Button—There's Your Station!*

RCA Victor Console Model 98K2. A superb 8-tube radio with Electric Tuning for 6 stations, Victrola Button, 3-band Super-Sight Dial, Plug-in for Victrola Attachment, Magic Eye, RCA Metal Tubes. Instrument panel and top, rolls over, has Oriental wood veneer cut on 45 degrees in the center with heart walnut on either side and band of butt walnut at bottom. Many other great features.

*Listen to the Magic Key every Sunday, 2 to 3 p. m., E. S. T., on the NBC Blue Network*

**For finer radio performance—  
RCA Victor Radio Tubes**

**SENSATIONAL NEW MODELS DESIGNED,  
STYLED AND PRICED FOR FAST SELLING!**

Once again RCA Victor steps out in front with new sets that *sell*. Priced right for you and for your customers! Packed with features that make them want to buy! Designed and styled so those who come to look will remain to buy! Values such as these are sending RCA Victor dealers off to a flying start towards another great RCA Victor year. Make sure you cash in on them, too.

LOOK AT THIS  
END TABLE **\$69<sup>95</sup>\***  
MODEL! ONLY..

*Push a Button—There's Your Station!*

RCA Victor End Table Model 96E2. Has improved Electric Tuning for 6 stations, 3-band Super-Sight Dial, Victrola Button, Plug-in for Victrola Attachment, RCA Metal Tubes. Cabinet has top of "V" matched Oriental wood face veneer. Front and sides are of butt walnut face veneer, top and bottom. Many other sales-making features.

*\*All prices f. o. b. Camden, New Jersey, subject to change without notice.*



# RCA Victor

RCA MANUFACTURING CO., INC., CAMDEN, N. J. • A Service of the Radio Corporation of America

# NEW Victor Record PLANS

## you this Spring!

**DECIDE NOW TO BECOME  
AN RCA VICTOR MUSIC MERCHANT—  
HANDLE VICTOR AND BLUEBIRD RECORDS**

The re-birth of the record business is one of the most remarkable phenomena of recent American business history. If you are not handling Victor (both Red Seal and Black Label) and Bluebird Records you are missing a rare opportunity to make more money not only this spring—but for years to come. Think what the record business offers:

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

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—radio, magazines, and newspaper; and show you the many sales-making plans that are yours as an RCA Victor Music Merchant.



**GET IN THE RECORD BUSINESS THIS SPRING—  
SEE YOUR RCA VICTOR DISTRIBUTOR NOW!**



# VICTOR RECORDS

RCA MANUFACTURING CO., INC., CAMDEN, N. J. • A Service of Radio Corporation of America



### A TREMENDOUS SALES MAKER —THE VICTOR RECORD SOCIETY

You are familiar with the famous Victor Record Society offer. In one short year more than 100,000 members have joined. And—this is important to you—not only have most of these members continued to buy Victor and Bluebird Records, but thousands have graduated to higher priced RCA Victrolas.

This is just one of the many sales-making plans which go to work for you when you become an RCA Victor Music Merchant.



*For finer radio performance—  
RCA Victor Radio Tubes*

Still More  
Ways to

**MAKE MORE**

# DISPLAY... RCA Victor RADIO TUBES

**T**HE striking RCA Victor Radio Tube display illustrated is the Spring Tonic your radio tube business needs now. Use it to start a big push on RCA Victor Radio Tubes that will mean real profits for you.

This display is only a part of the fine 1939 RCA Victor Window Display Service which consists of:

1. Four separate 8-color window displays, each made up of a number of individual pieces—any or all of which may be used effectively by itself as a display for different parts of your store.
2. Two attractive window streamers will be furnished with each of the four window displays.

3. A quantity of World Series score sheets.

4. A supply of complete 1939 collegiate football schedules.

This sales-getting material will help you make more money—not only this Spring—but all year long. Ask your RCA Victor Distributor how you can obtain this service.

Listen to the "Magic Key of RCA" every Sunday, 2 to 3 P.M., E.S.T.  
on NBC Blue Network

For finer radio performance—RCA Victor Radio Tubes



# RCA Victor RADIO TUBES

RCA MANUFACTURING CO., INC., CAMDEN, N. J. · A Service of the Radio Corp. of America



# MONEY

# This Spring!



Illustrated is RCA Victor Console Recorder MI-12700. This instrument records and reproduces records at a speed of 78 or 33 1/3 revolutions per minute using 10", 12" or 16" discs. Employs inside-out or outside-in recording methods. Visual indicator. New cutting and recorder head with cutter-head float stabilizer. High fidelity amplifier and speaker. Volume and tone control. Completely self-contained, providing all necessary elements for recording and reproducing discs and records with RCA Velocity Microphone . . .

**\$475<sup>00</sup>\***



### YOU PROFIT IN ALL THESE WAYS!

1. On the recordings made in your store.
2. On the sale of RCA Victor Recorders to your customers.
3. On the sale of RCA recording discs.
4. On recordings made outside your store.
5. By the great increase in your store traffic—making extra sales to those drawn by this new attraction.
6. By making sales of RCA Victrolas, RCA Victor Radios, Victor and Bluebird Records, and many other musical instruments for which this attraction will create new interest.

## A Profitable Brand New Business Offered to You on a Platter!

# RCA Victor RECORDERS

Custom recording is sweeping the country . . . and RCA Victor offers you now a plan to establish you as a leader in this growing business. Your prospects are legion for the new RCA Victor Recorders and for the recording service you can offer in your store. Music Students, Public Speakers, Business Offices, Clergymen, Lawyers, are but a few.

Now, for the first time, you can offer highly efficient record mak-

ing equipment by RCA Victor, the leader in record making and record playing instruments.

Backed by outstanding promotional material, displays, and advertising, RCA Victor Recorders mean new business. And new profits! In addition, this business means new stimulation to all your musical instrument business. Details from your RCA Victor distributor—or write us in Camden.

Portable RCA Victor Recorder, MI-12701 comes in attractive, gray carrying case with handle. Turntable speed, 78 revolutions per minute. Will handle discs up to 12". Volume indicator meter. Tone control. Completely self-contained. All necessary elements for recording and reproducing, including RCA Aerodynamic Microphone. Employs outside-in recording method.

**\$179<sup>00</sup>\***

*\*Prices f.o.b. Camden, N. J., subject to change without notice.*

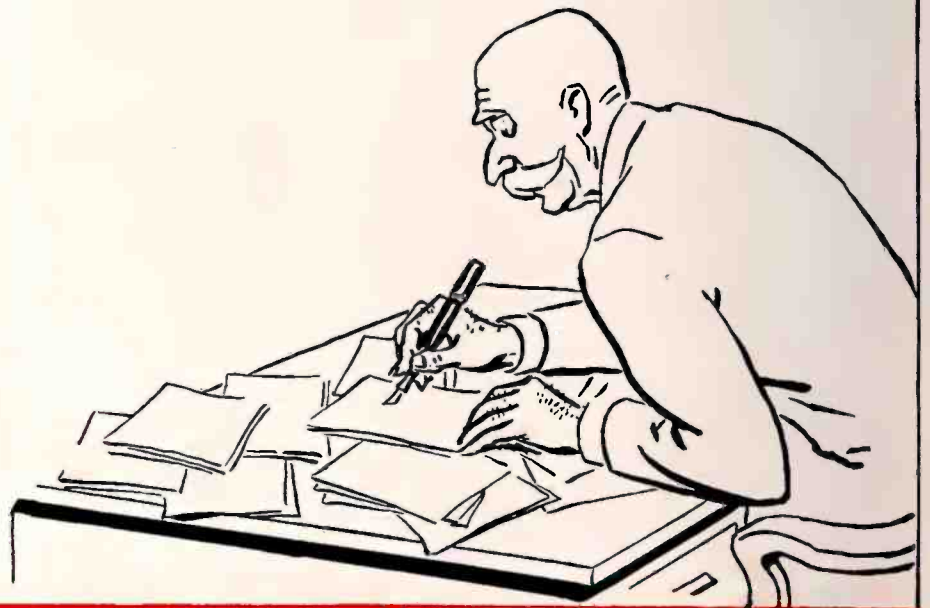
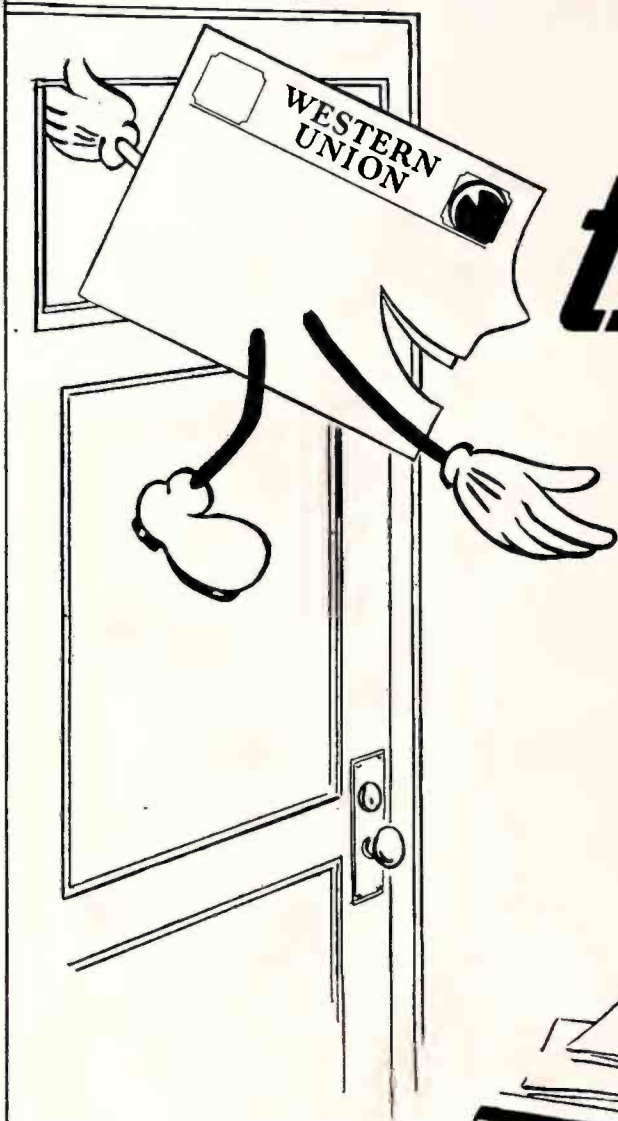


# RCA Victor RECORDERS

RCA MANUFACTURING CO., INC., CAMDEN, N. J. · A Service of the Radio Corp. of America

# *Telegrams get through!*

**GET THE EYE . . .  
GET ACTION!**



*Use* WESTERN UNION  
**NIGHT LETTERS**  
COST IS SMALL

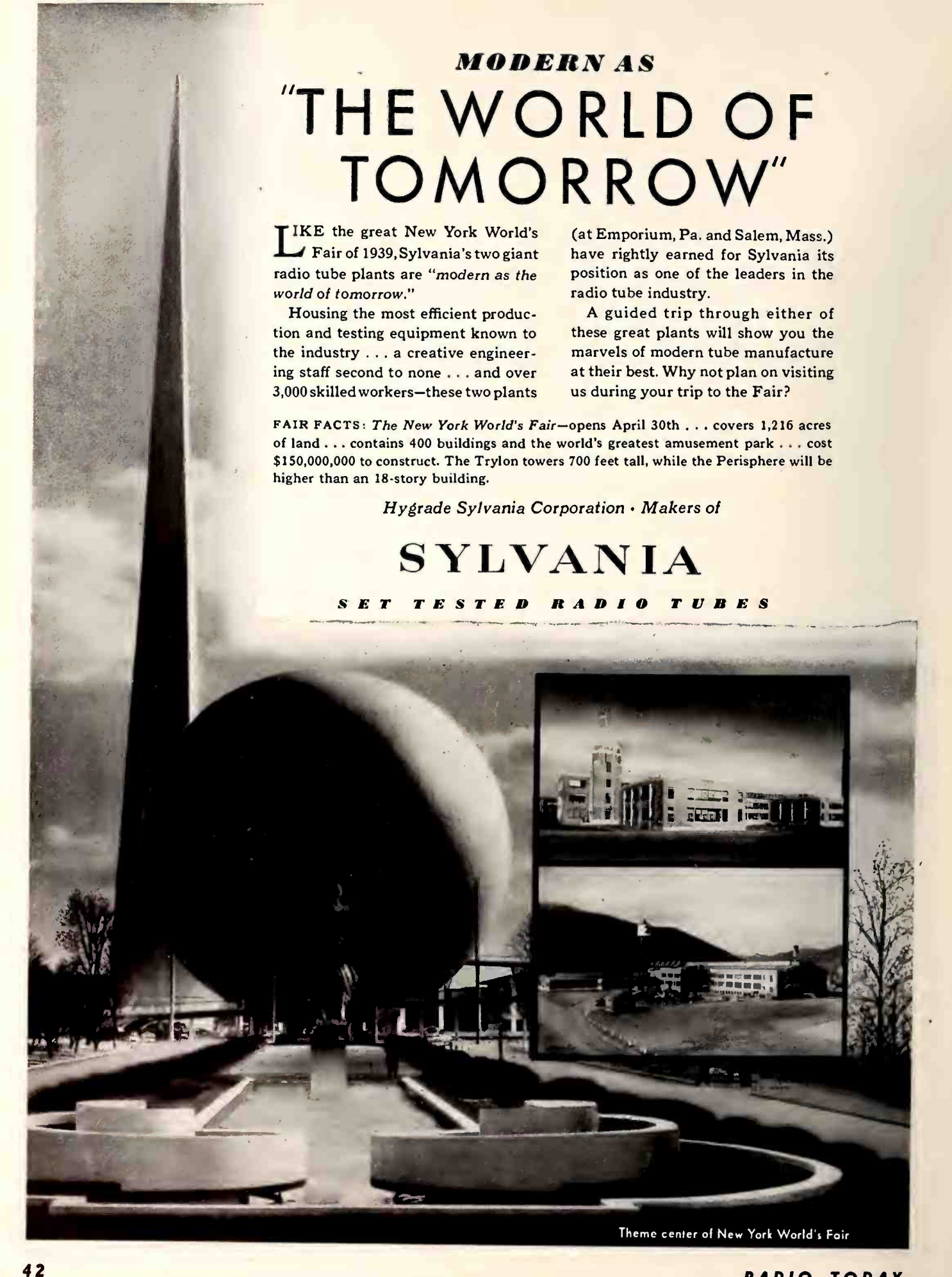
1939-1940

**RADIO  
YEAR  
BOOK**

**Including  
RADIO TRADE DIRECTORY**

**RADIO  
TODAY**

CAIDWELL-CLEMENTS, INC.  
480 Lexington Avenue, New York



**MODERN AS**  
**"THE WORLD OF TOMORROW"**

**L**IKE the great New York World's Fair of 1939, Sylvania's two giant radio tube plants are "modern as the world of tomorrow."

Housing the most efficient production and testing equipment known to the industry . . . a creative engineering staff second to none . . . and over 3,000 skilled workers—these two plants

(at Emporium, Pa. and Salem, Mass.) have rightly earned for Sylvania its position as one of the leaders in the radio tube industry.

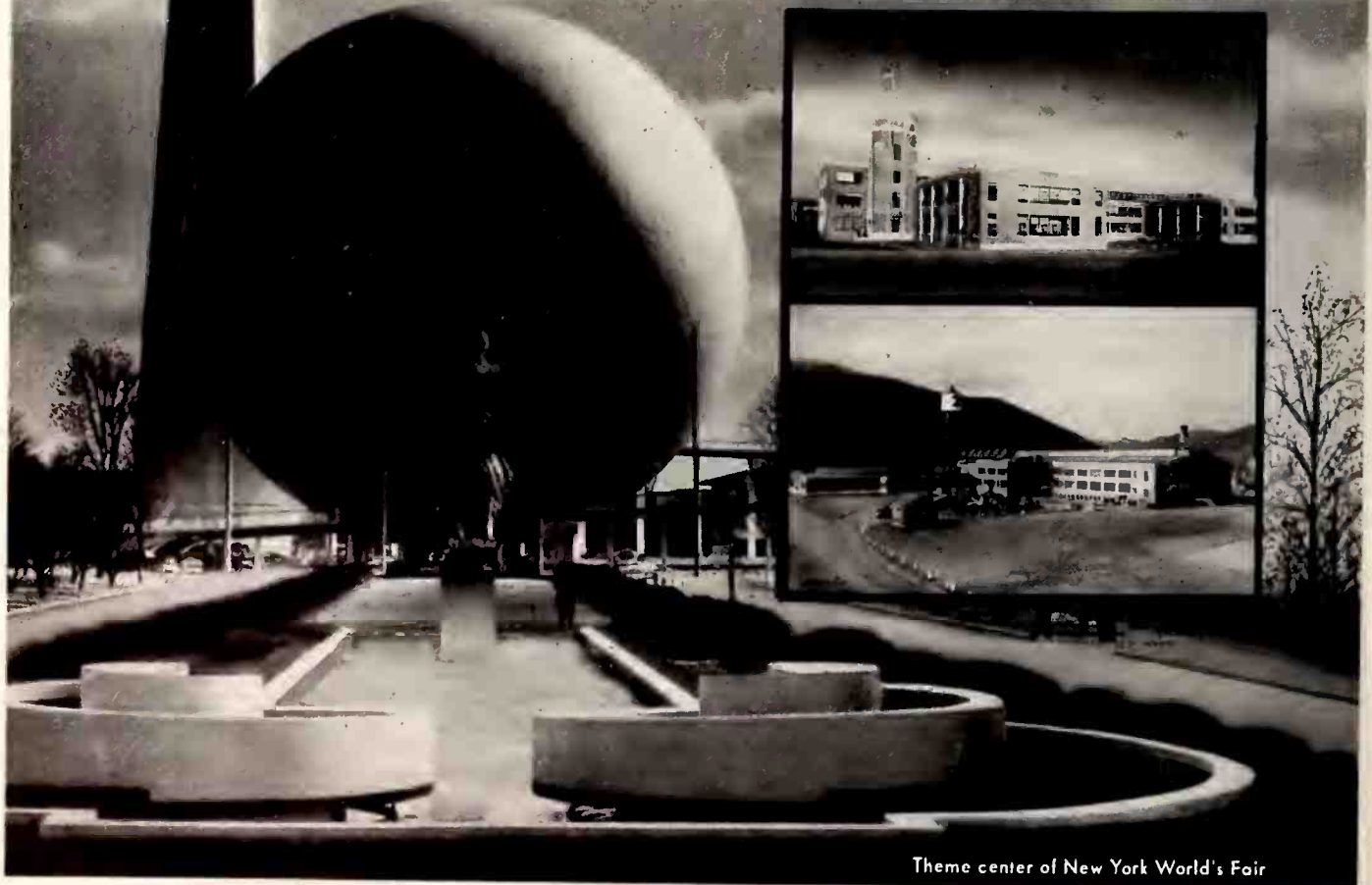
A guided trip through either of these great plants will show you the marvels of modern tube manufacture at their best. Why not plan on visiting us during your trip to the Fair?

**FAIR FACTS:** *The New York World's Fair*—opens April 30th . . . covers 1,216 acres of land . . . contains 400 buildings and the world's greatest amusement park . . . cost \$150,000,000 to construct. The Trylon towers 700 feet tall, while the Perisphere will be higher than an 18-story building.

*Hygrade Sylvania Corporation • Makers of*

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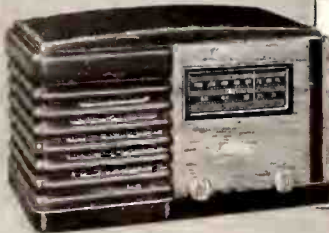
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DEALER MARK-UPS!



**Model 651—6 Tubes**  
6 tube (includes ballast)  
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volume control. Tunes  
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net in Ivory or Walnut.

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tuning hands. 6 pushbutton  
permeability tuning. Genu-  
ine walnut cabinet. Model  
2D59EB, 7 tubes (incl. bal-  
last) AC-DC.



**Model 1A59—5 Tubes**  
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slide-rule dial. Genuine  
walnut cabinet. Model  
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last) AC-DC.

**Model 1A59—Phono  
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with new low-drain  
tubes. Built-in an-  
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  - Weighs only 12½ lbs.
  - Weight balanced; is not end-heavy.
  - Latest type batteries in new unit-pack.
  - Highest quality PM speaker.
- The name ESPEY is more than a guarantee of quality. It means individuality in design and finish, making every Espey receiver a truly prized personal possession. Espey sets are sold to dealers at discounts insuring a good resale profit.

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RADIO SET

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DESIGNED  
IN 8 TYPES  
FOR EVERY  
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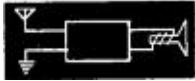
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1313 W. Randolph Street, CHICAGO, ILL.

# ANNUAL RADIO TRADE DIRECTORY

Up-to-date, verified listings of manufacturers, products and trade names—a complete buying guide. Index of products and advertisements on page 43.

## RECEIVING SETS



Amateur . . . . . AM  
 Auto . . . . . A  
 Aviation . . . . . AV  
 Battery, portable . . . . . BP  
 Commercial . . . . . COM  
 Farm . . . . . F  
 Facsimile . . . . . FAC  
 Frequency mod. . . . . FM  
 Home . . . . . H  
 Kits . . . . . K  
 Marine . . . . . M  
 Phonograph-radio . . . . . PR  
 Police . . . . . P  
 Police auto . . . . . PA  
 Ultra high freq. . . . . UHF  
 Television . . . . . T  
 Television kits . . . . . TK

ABC RADIO LABORATORIES, 3334 N. New Jersey St., Indianapolis, Ind., "ABC"—short wave auto converters  
 ADMIRAL—Continental Radio & Television Corp.  
 AERONAUTICAL RADIO CO., Roosevelt Field, Mineola, N. Y.—AM, AV, M  
 AIR KING PRODUCTS CO., INC., 19 Hooper St., Brooklyn, N. Y., "Air King"—BP, F, H, PR  
 AIR LINE—Montgomery Ward & Co.  
 AIRMASTER—Automatic Radio Mfg. Co.  
 ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago, Ill., "Knight"—A, BP, F, K, PR, TK  
 AMERICAN TELEVISION CORP., 130 W. 56th St., New York, N. Y.—T  
 AMPLEX RADIO CORP., 240 W. 23rd St., New York, N. Y.—H, PR  
 ANDREA RADIO CORP., 48-02 48th Ave., Woodside, L. I., N. Y., "Andrea"—A, H, T, TK  
 ANSLEY RADIO CORP., 240 W. 23rd St., New York, N. Y., "Ansley Dynaphone Combination"—H, PR  
 ARCADIA—Wells-Gardner & Co.  
 ARVIN—Noblitt-Sparks Industries, Inc.  
 AUTOMASTER—Automatic Radio Mfg. Co.  
 AUTOPHONE—Calvert Motors Associates  
 AUTOMATIC RADIO MFG. CO., 122 Brookline Ave., Boston, Mass., "Automatic," "Tom Thumb," "Auto-Rola," "Airmaster," "Automaster"—AM, A, BP, COM, H, P, PA  
 AUTO-ROLA—Automatic Radio Mfg. Co.  
 BELL RADIO & TELEVISION, 125 E. 46th St., New York, N. Y., "Bell"—A, F, H, T, PR  
 BELMONT RADIO CORP., 1257 Fullerton Ave., Chicago, Ill., "Belmont," "Freshman Masterpiece"—A, BP, F, H, PR, T  
 BENDIX RADIO CORP., 60 E. 25th St., Chicago, Ill.—AV, M, P, PA  
 BENDIX RADIO MFG. CO., Wood Lake, Minn.—F, H  
 BRETING RADIO MFG. CO., 2117 Venice Blvd., Los Angeles, Calif., "Bretling"—AM  
 BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass., "Browning 83"—K  
 CALVERT MOTORS ASSOCIATES, LTD., 1028 Linden Ave., Baltimore, Md., "Cavalier," "Autophone," "Mobilette"—A, H  
 CAVALIER—Calvert Motors Associates, Inc.  
 CAPEHART CORP., E. Pontiac St., Ft. Wayne, Ind., "Capehart"—PR  
 CAVALCADE RADIO MFG. CO., 271 7th St., San Francisco, Calif., "Cavalcade"—A, H

CHAMPION RADIO LABORATORIES, 14553 Madison Ave., Lakewood, Ohio, "Champion," "Victory," "Monarch," "LaSalle"—A, F, H  
 CINEMA ENGINEERING CO., 7605 Santa Monica Blvd., Hollywood, Calif., "Cinema"—COM, M  
 CLIMAX RADIO & TELEVISION COMPANY, 513 S. Sangamon St., Chicago, Ill., "Climax"—A, F, H  
 COLONIAL RADIO CORP., 254 Rano St., Buffalo, N. Y., "Colonial"—A, BP, H, PR  
 CONTINENTAL RADIO & TELEVISION CORP., 3800 W. Cortland St., Chicago, Ill., "Admiral"—A, BP, F, H, PR  
 CROSLEY RADIO CORP., 1329 Arlington St., Cincinnati, Ohio, "Crosley"—A, BP, F, FAC, H  
 CRUSADER—Pacific Radio Corp.  
 DELCO RADIO DIV., General Motors Corp., Kokomo, Ind.—A  
 DELCO—United Motors Service  
 DETROLA CORPORATION, 1501 W. 14th Ave., Detroit, Mich., "Detrola"—A, F, H, P, UHF  
 DE WILD—Pierce Airo, Inc.  
 ALLEN B. DUMONT, 2 Main Ave., Passaic, N. J., "Dumont"—T  
 DUNN-HALL CO., 1477 W. Adams St., Los Angeles, Calif., "Dunn-Hall," "Tiny Tim"—H, PR  
 DYNAPHONE—Ansley Radio Corp.  
 ELECTRICAL RESEARCH LABS., INC., 2222 Diversey Parkway, Chicago, Ill., "Eria"—A, BP, F, H, PR, T  
 ELECTROTONE—Harris Mfg. Co.  
 EMERSON RADIO & PHONOGRAPH CORP., 111 Eighth Ave., New York, N. Y., "Emerson"—BP, F, H, PR  
 ENSIGN—Espey Mfg. Co., Inc.  
 ERLA—Electrical Research Labs., Inc.  
 ESPEY MFG. CO., INC., 67 Irving Place, New York, N. Y., "Ensign," "Espey"—BP, F, H, PR  
 FADA RADIO & ELECTRIC CO., 30-20 Thomson Ave., Long Island City, N. Y., "Fada"—A, BP, F, H, PR  
 FARNWORTH RADIO & TELEVISION CORP., Marion, Ind.—H, T  
 F.E.C.—Foraco Corp.  
 FINCH TELECOMMUNICATIONS LABS., 37 W. 57th St., New York, N. Y.—FAC  
 FISCHER-SMITH, 162 State St., W. Englewood, N.J., "Fischer-Smith"—A  
 FORACO CORP., 2111 Woodward Ave., Detroit, Mich., "F.E.C."—A, F, H, PR, BP  
 FRANKLIN—Mission Bell Radio Co., Inc.  
 FRESHMAN MASTERPIECE—Belmont Radio Corp.  
 GALVIN MFG. CORP., 4545 Augusta Blvd., Chicago, Ill., "Motorola"—A, BP, F, H, P, A, PR, T  
 GAROD RADIO CORP., 115 Fourth Ave., New York, N. Y., "Garod"—F, H, PR, TK  
 GENERAL—General Television & Radio Corp.  
 GENERAL ELECTRIC CO., 1285 Boston Ave., Bridgeport, Conn., "General Electric"—BP, COM, F, FM, H, PR, T  
 GENERAL ENGINEERS, 2241 Garrett Rd., Upper Darby, Pa., "General Engineers"—AM, BP, M, P, PA  
 GENERAL TELEVISION & RADIO CORP., 257 W. 17th St., New York, N. Y., "General"—AM, COM, H  
 GILFILLAN BROS., INC., 1815 Venice Blvd., Los Angeles, Calif., "Gilfillan"—F, H, PR  
 GREBE MFG. CO., INC., 119 Fourth Ave., New York, N. Y., "Grebe"—BP, F, H, PR  
 HAIGIS LABORATORIES, INC., Maple Shade, N. J.—P, PA, UHF  
 HALLICRAFTERS, INC., 2611 S. Indiana St., Chicago, Ill., "Skyrider"—AM  
 HALSON RADIO & TELEVISION, INC., Meriden, Conn., "Halsen"—BP, H, PR

HAMMARLUND MFG. CO., 421 W. 33rd St., New York, N. Y., "Super-Pro," "Pro"—AM, COM  
 HARRIS MFG. CO., 2422 W. 7th St., Los Angeles, Calif., "Electrotone"—PR  
 HEINTZ & KAUFMAN, South San Francisco, Calif.—COM  
 HETRO ELECTRICAL INDUSTRIES, INC., 4611 Ravenswood Ave., Chicago, Ill., "Hetro"—A, F, H, PR  
 HERBERT H. HORN, 1201 S. Olive St., Los Angeles, Calif., "Tiffany Tone"—A, H, PR  
 HOWARD RADIO CO., 1731-35 Belmont Ave., Chicago, Ill., "Howard"—A, AM, BP, F, H, PR  
 INTERNATIONAL INDUSTRIES, INC., Ann Arbor, Mich.—H  
 JEFFERSON-TRAVIS RADIO MFG. CORP., 198 Milburn Ave., Baldwin, N. Y., "Jefferson-Travis"—M, P, PA  
 KAAR ENGINEERING CO., 619 Emerson St., Palo Alto, Calif., "Kaar"—AM, M  
 KINGSTON RADIO CO., INC., Kokomo, Ind., "Kingston"—H  
 KNIGHT—Allied Radio Corp.  
 LAFAYETTE—Wholesale Radio Service Co., Inc.  
 LASALLE—Champion Radio Laboratories  
 LAUREHK RADIO MFG. CO., E. Michigan St., Adrian, Mich., "Laurehk," "Musique"—BP, F, H  
 LEAR DEVELOPMENT CO., 121 W. 17th St., New York, N. Y.—AV, COM  
 LINCOLN RADIO & TELEVISION CORP., 841 Jackson Blvd., Chicago, Ill., "Lincoln"—A, BP, F, H, PR  
 LUXOR RADIO MFG. CO., 521 W. 23rd St., New York, N. Y., "Luxor"—H  
 MAJESTIC RADIO & TELEVISION CO., 2600 W. 50th St., Chicago, Ill., "Majestic"—BP, F, H, PR, T  
 MARCONIPHONE, INC., 679 Madison Ave., New York, N. Y., "Marconiphone"—H, PR  
 MARINE RADIO CORP., 91 Third Ave., New York, N. Y., "Marine"—AM, AV, COM, M  
 MEISSNER MFG. CO., 7th & Belmont, Mt. Carmel, Ill.—AM, K  
 MIDWEST RADIO CORP., 909 Broadway, Cincinnati, Ohio, "Midwest"—F, H, PR, BP  
 MISSION BELL RADIO CO., INC., 833 Venice Blvd., Los Angeles, Calif., "Tru-Dial," "Franklin"—A, BP, H, PR, P, PA  
 MOBILETTE—Calvert Motors Associates, Ltd.  
 MONARCH—Champion Radio Laboratories  
 MOTOROLA—Galvin Mfg. Corp.  
 MUSIQUE—Laurehk Radio Mfg. Co.  
 NATIONAL COMPANY, 61 Sherman St., Malden, Mass., "National"—AM, COM, UHF  
 NOBLITT-SPARKS INDUSTRIES, INC., Columbus, Ind., "Arvin"—A, F, H, PR  
 PACIFIC RADIO CORP., 5016 S. Main St., Los Angeles, Calif., "Pacific Crusader"—H, PR  
 PACKARD BELL RADIO CO., 1320 S. Grand Blvd., Los Angeles, Calif., "Packard Bell"—A, H  
 PATHE RADIO & TELEVISION CORP., 2241 S. Indiana Ave., Chicago, Ill.—H  
 PATTERSON RADIO CO., 1320 S. Los Angeles St., Los Angeles, Calif.  
 PEERLESS RADIO MFG. CO., Division St. & Broadway, Albany, N. Y., "Peerless"—AM, A, BP, F, H  
 PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—A, BP, F, H, P, PA, T  
 PHILHARMONIC RADIO CO., 54 W. 21st St., New York, N. Y.—H, PR  
 PHILMORE MFG. CO., 113 University Place, New York, N. Y., "Philmore"—BP, H, K  
 PIERCE AIRO, INC., 440 Lafayette St., New York, N. Y., "De Wald"—A, BP, H, PR  
 PIERSON-DELANCE, INC., 2345 W. Washington Blvd., Los Angeles, Calif.—AM, COM, H, M, P  
 PILGRIM ELECTRIC CORP., 138 5th Ave., New York, N. Y., "Pilgrim"—A, BP, F, H

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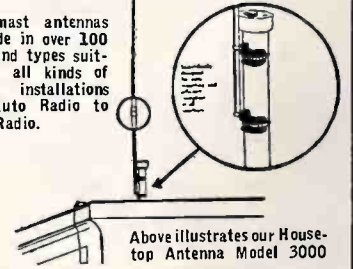
## RECEIVING SETS—Cont'd

PILOT RADIO CORP., 37-06 36th St., Long Island City, N. Y., "Pilot"—BP, F, H, PR, AM, COM  
PORTOMATIC CORP., 1013 Madison Ave., New York, N. Y., "Portomatic"—PR  
PRESTO RECORDING CORP., 139 W. 19th St., New York, N. Y., "Presto"—COM  
PRO—Hammarlund Mfg. Co.  
RADIOBAR CO. OF AMERICA, Trenton, N. J.—PR  
RADIO ENGINEERING & MFG. CO., 26 Journal Sq., Jersey City, N. J.—UHF  
RADIO LABORATORIES, INC., 2701 California Ave., Seattle, Wash.—M  
RADIO LAMP CO., 1313 W. Randolph St., Chicago, Ill.—H, lamp style  
RADIO MFG. ENGINEERS, INC., 306 1st Ave., Peoria, Ill., "RMIE"—AM  
RADIOMARINE CORP. OF AMERICA, 75 Varick St., New York, N. Y.—COM, M  
RADIO NAVIGATIONAL INST. CORP., 500 Fifth Ave., New York, N. Y.—AV  
RADIO PRODUCTS CORP., 3800 W. Cortland, Chicago, Ill.—A, BP, H, PR  
RADIO TRANCEIVER LABS., 86-27 115th St., Richmond Hill, N. Y., "Radio Tranceiver Labs."—AM, BP, UHF  
RADOLEK CO., 601 W. Randolph St., Chicago, Ill., "Radolek"—A, AM, BP, F, H, PR  
RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA-Victor"—A, AM, BP, FAC, H, M, P, PR, T  
REGAL AMPLIFIER MFG. CO., 14 W. 17th St., New York, N. Y.—F, H, BP, PR  
REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif., "Remler"—F, H  
J. & L. SARA CO., 123 Liberty St., New York, N. Y., "Sara"—H  
E. M. SARGENT CO., 212 9th St., Oakland, Calif., "Sargent"—AM, COM  
SCHIRESON BROS., 226 N. Main St., Los Angeles, Calif.—A, H, PR  
E. H. SCOTT LABORATORIES, INC., 4450 Ravenswood Ave., Chicago, Ill., "Scott"—H, PR, F  
SEARS, ROEBUCK & CO., 925 So. Homan St., Chicago, Ill., "Silvertone"—AM, A, BP, F, H, PR  
SENTINEL RADIO CORP., 2222 Diversey Pkwy., Chicago, Ill., "Sentinel"—A, BP, F, H, PR, T  
SETCHELL-CARLSON, INC., 2233 University Ave., St. Paul, Minn., "Setchell-Carlson"—BP, F, H, M, PA  
SILVERTONE—Sears, Roebuck & Co.  
SIMPLEX RADIO CO., Sandusky, Ohio, "Simplex"—F, H  
SKY CHIEF RADIO CORP., 345 E. 37th St., New York, N. Y., "Sky Chief"—H, PR  
SKYRIDER—Hallcrafters, Inc.  
SONORA ELECTRIC PHONOGRAPH CO., INC., 132 West 22nd St., New York, N. Y., "Sonora"—PR  
SONORA RADIO & TELEVISION CORP., 2626 W. Washington Blvd., Chicago, Ill., "Sonora"—A, BP, F, H, PR, T  
SPARKS-WITHINGTON CO., E. Ganson Ave., Jackson, Mich., "Sparton"—A, F, H, PR  
SPARTON—Sparks-Withington Co.  
STEWART-WARNER CORP., 1826 Diversey Pkwy., Chicago, Ill., "Stewart-Warner"—A, BP, F, H, PR, T  
STROMBERG-CARLSON TELEPHONE MFG. CO., 100 Carlson Rd., Rochester, N. Y., "Stromberg-Carlson"—F, H, PR  
SUPER-PRO—Hammarlund Mfg. Co.  
L'TATRO MFG. CO., 417 W. Water St., Decorah, Ia.—BP, F  
TINY TIM—Dunn-Hall Co.  
TOM THUMB—Automatic Radio Mfg. Co.  
TRAV-LER RADIO & TELEVISION CORP., 1036 W. Van Buren St., Chicago, Ill., "Trav-Ler"—A, BP, F, H, PR  
TREBOR RADIO CO., Pasadena, Calif., "Trebor"—A, H  
TROUBADOUR—Ultramar Mfg. Corp.  
TROY RADIO MFG. CO., 1144 S. Olive St., Los Angeles, Calif., "Troy"—A, BP, F, H, PR  
TRU-DIAL—Mission Bell Radio Co., Inc.  
TRUETONE—Western Auto Supply Co.  
ULTRAMAR MFG. CORP., 303 W. Monroe St., Chicago, Ill., "Ultramar," "Troubadour"—A, BP, F, H, KT, PR  
UNITED AMERICAN BOSCH CORP., 3664 Main St., Springfield, Mass.—A, F, H, P  
UNITED MOTORS SERVICE, 3044 W. Grand Blvd., Detroit, Mich., "Delco"—A, F, H  
UNIVERSAL BATTERY CO., 3410 So. LaSalle St., Chicago, Ill., "Universal"—A, F, H  
VICTROLA—RCA Mfg. Co.

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 MONTGOMERY WARD & CO., W. Chicago & N. Larr  
 Sts., Ill., "Air Line"—AM, A, AV, BP, COM, F,  
 H, M, PR  
 WARWICK MFG. CO., 1700 W. Washington Blvd.,  
 Chicago, Ill., "Warwick"—A, BP, F, H  
 WELLS-GARONER & CO., 2701 N. Kildare Ave., Chi-  
 cago, Ill., "Arcadia"—A, BP, F, H  
 WESTERN AUTO SUPPLY CO., 2107 Grand St., Kan-  
 sas City, Mo., "Truetone"—A, H, F  
 WESTERN ELECTRIC CO., 195 Broadway, New York,  
 N. Y., "Western Electric"—AV, M, P, PA  
 WESTINGHOUSE ELEC. & MFG. CO., Baltimore,  
 Md.—P, PA  
 WESTINGHOUSE ELECTRIC SUPPLY CO., 150 Var-  
 ick St., N. Y., "Westinghouse"—BP, F, H  
 WHOLESALE RADIO SERVICE CO., INC., 100 Sixth  
 Ave., New York, N. Y., "Lafayette"—A, AM, BP,  
 F, H, PR  
 WILCOX-GAY CORP., Charlotte, Mich., "Wilcox-  
 Gay"—F, H  
 ZENITH RADIO CORP., 6001 Dickens Ave., Chicago,  
 Ill., "Zenith"—BP, F, H  
 ZEPHYR RADIO CO., 13139 Hamilton Ave., Detroit,  
 Mich., "Zephyr"—A, F, H, PR

## ANTENNAS & ACCESSORIES



All-wave (home) .....	AW
Auto .....	A
Ground clamps .....	G
Insulators .....	I
Kits .....	K
Lightning arresters .....	L
Loop antennas .....	LA
Master systems .....	MS
Noise-reducing broadcast .....	N
Outlets .....	O
Towers & supports (home) .....	T

ABC RADIO LABORATORIES, 3334 N. New Jersey  
 St., Indianapolis, Ind., "ABC"—A  
 AIR LINE—Montgomery Ward & Co.  
 AIR QUEEN—Knox Porcelain Corp.  
 ALOEN PRODUCTS CO., 715 Center St., Brockton,  
 Mass., "Fade-out"—AW  
 ALLIEO RADIO CORP., 833 W. Jackson Blvd., Chi-  
 cago, Ill., "Knight"—AW, A, K, LA, MS  
 ALPHA WIRE CORP., 50 Howard St., New York,  
 N. Y.—AW, G, I, K, L  
 AMERICAN COMMUNICATIONS CORP., 1650 Broad-  
 way, New York, N. Y., "American"—MS, O  
 AMERICAN INJECTOR CO., Detroit, Mich., "HI-FI"  
 —A  
 AMERICAN PHENOLIC CORP., 1250 W. Van Buren  
 St., Chicago, Ill., "Amphenol"—O  
 AMERICAN RADIO HARDWARE CO., 476 Broadway,  
 New York, N. Y., "Arhoc"—A  
 AMPHENOL—American Phenolic Corp.  
 AMY, ACEVES & KING, INC., 11 W. 42nd St., New  
 York, N. Y., "Multicoupler"—MS  
 ARHCO—American Radio Hardware Co., Inc.  
 ARVIN—Noblitt-Sparks Industries  
 CHARLES AVNET CO., 156 Chambers St., New York,  
 N. Y.—A  
 BELOEN MFG. CO., 4647 W. Van Buren St., Chicago,  
 Ill., "Belden"—AW, G, I, K, L  
 BIRCO—Birnback Radio Co.  
 BIRNBACH RADIO CO., 145 Hudson St., New York,  
 N. Y., "Birco"—A, AW, K, MS, I  
 L. S. BRACH MFG. CORP., 55 Dickerson St., New-  
 ark, N. J., "Puratone"—AW, A, G, I, K, L, MS,  
 N, O, T  
 BUO RADIO, INC., 5205 Cedar Ave., Cleveland, Ohio,  
 "Bud"—G, I, K, L, O  
 CLAMPIPE—Mueller Electric Co.  
 CONSOLIDATED WIRE & ASSOC. CORP., Peoria &  
 Harrison Sts., Chicago, Ill.—A, AW, G, I, K, L, MS  
 CONTINENTAL WIRE CO., 110 Lafayette St., New  
 York, N. Y., "Continental"—AW, A, G, I, K, L,  
 MS, N, O  
 COPPERWALD STEEL CO., 9th St. & Allegheny Ave.,  
 Glassport, Pa.—G  
 CORNING GLASS WORKS, Walnut St., Corning,  
 N. Y., "Pyrex"—I

CORNISH WIRE CO., INC., 30 Church St., New York,  
 N. Y., "Corwico"—AW, K  
 CORWICO—Cornish Wire Co., Inc.  
 OELCO RADIO DIV., General Motors Corp., Kokomo,  
 Ind.—A  
 OELCO—United Motors Service  
 TOBE DEUTSCHMANN CORP., Canton, Mass., "Fil-  
 terizer"—AW, K  
 EFFARSEE—Fishwick Radio Co.  
 ELECTRONIC PRODUCTS SPECIALTIES CO., 1623  
 S. Hill St., Los Angeles, Calif.—A  
 FAOE-OUT—Alden Products Co.  
 FEDERAL SALES CO., 26 S. Jefferson St., Chicago,  
 Ill.—G  
 FILTERIZER—Tobe Deutschmann Corp.  
 FISHWICK RADIO CO., 139 W. 4th St., Cincinnati,  
 Ohio, "Efarsee"—A, AW  
 M. M. FLERON & SONS, 113 N. Broad St., Trenton,  
 N. J., "Fleron"—A, AW, K, I  
 FOWLER MFG. CO., 9 Rutger St., St. Louis, Mo.—K  
 FULTON RADIO CORP., 100 6th Ave., New York,  
 N. Y.—A  
 GALVIN MFG. CORP., 4545 Augusta Blvd., Chicago,  
 Ill., "Motorola Booster"—AW, A  
 GENERAL ELECTRIC CO., 1285 Boston Ave., Bridge-  
 port, Conn., "GE," "V-Doublet"—AW, K, N  
 G.E.—General Electric Co.  
 GENERAL WINDING CO., 254 W. 31st St., New  
 York, N. Y., "Gen-Wir"—AW, K, MS, N  
 GEN-WIN—General Winding Co.  
 D. H. HARRELL, 7731 Essex Ave., Chicago, Ill.—N  
 HI-FI—American Injector Co.  
 HUNTER PRESSEO STEEL CO., Lansdale, Pa.—A  
 ICA—Insuline Corp. of America  
 INSULINE CORP. OF AMERICA, 25 Park Place, New  
 York, N. Y., "ICA"—AW, A, I, K, L, MS, O  
 ISOLANTITE, INC., 233 Broadway, New York, N. Y.,  
 "Isolantite"—I  
 J. F. O. MFG. CO., 4111 Ft. Hamilton Pkwy., Brook-  
 lyn, N. Y., "J. F. D."—AW, A, K  
 KNIGHT—Allied Radio Corp.  
 KNOX PORCELAIN CORP., Knoxville, Tenn., "Air  
 Queen"—AW, I  
 LAFAYETTE—Wholesale Radio Service Co., Inc.  
 LITTLEFUSE LABORATORIES, 4238 Lincoln Ave.,  
 Chicago, Ill.—ACC  
 P. R. MALLORY & CO., 3029 E. Washington St.,  
 Indianapolis, Ind., "Yaxley"—O  
 MARS MFG. CO., 1512-14 56th St., Chicago, Ill.,  
 "Mars"—AW, A  
 MORRIS REGISTER CO., Council Bluffs, Iowa—A, G  
 MOTOROLA BOOSTER—Galvin Mfg. Corp.  
 MUELLER ELECTRIC CO., 1573 E. 31st St., Cleve-  
 land, Ohio, "Clampipe"—ACC, G  
 MULTICOUPLER—Amy, Aceves & King  
 NOBLITT-SPARKS INDUSTRIES, INC., Columbus,  
 Ind., "Arvin"—AW, A, K  
 NORWEST RADIO LABS., Blaine Ave. & Hill St.,  
 Shelby, Mont., "Streamline," "Vertenna"—A, AW  
 PHILCO RADIO & TELEVISION CORP., Tioga & C  
 Sts., Philadelphia, Pa., "Philco"—AW, A, K, N,  
 ACC  
 PHILSON MFG. CO., 156 Chambers St., New York,  
 N. Y.—A  
 PIONEER SPECIALTY CO., 521 St. Jean St., De-  
 troit, Mich.—A  
 PREMAX PRODUCTS DIV., Chisholm-Ryder Co., Ni-  
 agara Falls, N. Y., "Premax"—AW, K, T, A,  
 Ground Rods  
 PURATONE—L. S. Brach Mfg. Corp.  
 PYREX—Corning Glass Works  
 QUAM-NICHOLS CO., 33rd PL & Cottage Grove Ave.,  
 Chicago, Ill., "Quam"—A, AW, K, L  
 RADIART CORP., Shaw Ave. at 133rd St., Cleveland,  
 Ohio—A  
 RADOLEK CO., 601 W. Randolph St., Chicago, Ill.,  
 "Radolek"—A, AW, K  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J.,  
 "RCA"—A, AW, K, MS  
 RENSON PRODUCTS CO., Conshohocken, Pa.—A  
 SACKHEIM BROS. CORP., 215-219 W. Illinois St.,  
 Chicago, Ill.—G  
 SNYDER, INC., Noble & Darien Sts., Philadelphia,  
 Pa., "Snyder"—A, G, I, K  
 SPARTON—Sparks-Withington Co.  
 STANDARO TRANSFORMER CORP., 1500 N. Hal-  
 stead St., Chicago, Ill.—LA  
 STREAMLINE—Norwest Radio Labs  
 STROMBERG-CARLSON TELEPHONE MFG. CO., 100  
 Carlson Rd., Rochester, N. Y., "Stromberg-Carlson"  
 —AW  
 SUPERIOR TUBE CO., Norristown, Pa.—A  
 TACO—Technical Appliance Corp.

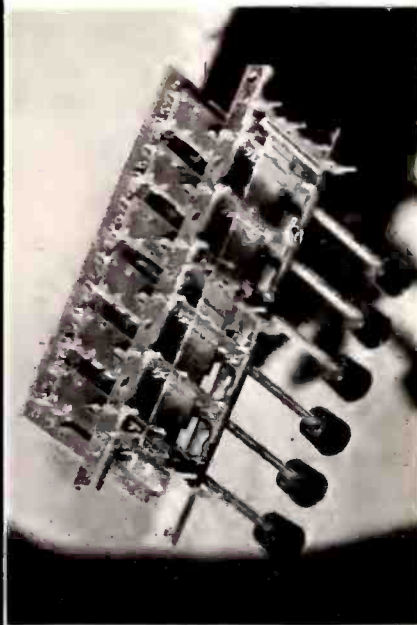
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 TOPSTREAM, INC., 1811 S. Lyndale Ave., Minneapolis, Minn., "Topstream"—A  
 UNITED MOTORS SERVICE, 3044 W. Grand Blvd., Detroit, Mich., "Delco"—A, AW, K  
 V-DOUBLET—General Electric Co.  
 VERTENNA—Norwest Radio Labs.



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VICTORY MFG. CO., INC., 2021 S. Michigan Ave., Chicago, Ill., "Victory"—A  
 MONTGOMERY WARD & CO., W. Chicago & N. Larr Sts., Chicago, Ill., "Airline"—AW, A, G. I, K, L, N, O, T  
 THE WARD PRODUCTS CORP., 1523 E. 45th St., Cleveland, Ohio, "Ward"—AW, A, K  
 WHOLESALE RADIO SERVICE CO., INC., 100 Sixth Ave., New York, N. Y., "Lafayette"—A, ACC, AW, K, MS  
 WINCHARGER CORP., Sioux City, Iowa—T  
 YAXLEY—P. R. Mallory & Co.

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 Push-button trimmer units comp....PT  
 Remote controls .....R  
 Station name cards .....SC  
 Switches .....S  
 Temperature compens. cond.....TC  
 Trimmer condenser units .....CU  
 Tuning motors .....M

ALADDIN RADIO INDUSTRIES, INC., 468 W. Superior St., Chicago, Ill.—IT  
 ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass.—K  
 ALLIANCE MFG. CO., Alliance, Ohio, "Alliance"—M  
 AMERICAN EMBLEM CO., INC., P. O. Box 116-J Utica, N. Y.—MS, SC  
 AUBURN BUTTON WORKS, Auburn, N. Y.—K  
 AUTOMATIC DEVICES MANUFACTURERS, 4243 West Ogden Ave. Chicago, Ill.—PT, S, CU  
 AUTOMATIC WINDING CO., INC., 900 Passaic Ave., East Newark, N. J.—IT, PT, TC, CU  
 CENTRALAB, 900 E. Keefe Ave., Milwaukee, Wis., "Centralab"—S  
 CROWE NAME PLATE & MANUFACTURING CO., 3701 Ravenswood Ave., Chicago, Ill., "Crowe"—MS, PM, R, SC  
 HARRY DAVIES CO., 1428 No. Wells St., Chicago, Ill.—K  
 DE-JUR-AMSCO CORP., Shelton, Conn.—MS  
 DELCO RADIO DIV., General Motors Corp., Kokomo, Ind.—PM, R

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa., "Erie"—K, TC, CU  
 A. W. FRANKLIN MFG. CORP., 175 Varick St., New York, N. Y., "Franklin"—MS, S, K  
 GEMLOID CORP., 425 4th Ave., New York, N. Y., "Gemloid"—SC  
 GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth, N. J.—MS  
 GENERAL MFG. CO., 8066 S. Chicago Ave., Chicago, Ill.—IT  
 DELCO APPLIANCE DIV., General Motors Sales Corp., 391 Lyell Ave., Rochester, N. Y.—M  
 GENERAL WINDING CO., 254 W. 31st St., New York, N. Y., "Gen-Win"—IT, PM, PT, CU, M  
 GEN-WIN—General Winding Co.  
 CARL GORR PRINTING CO., INC., 2615 N. Ashland Ave., Chicago, Ill.—SC  
 GUARDIAN ELECTRIC CO., 1625 Walnut St., Chicago, Ill.—R  
 E. I. GUTHMAN & CO., INC., 400 S. Peoria St., Chicago, Ill., "Guthman"—IT, PT, CU  
 HUSHTONE—Radio Reel Co.  
 HUNTER PRESSED STEEL CO., Lansdale, Pa.—MS, PM  
 ICA—Insuline Corp. of America  
 INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y., "ICA"—R, S, CU  
 KURZ-KASCH CO., Dayton, Ohio—K  
 P. R. MALLORY & CO., 3029 E. Washington St., Indianapolis, Ind., "Yaxley," "Mallory"—CU, K, S  
 MEISSNER MFG. CO., 7th & Belmont, Mt. Carmel, Ill., "Meissner"—CU, IT, PT, R, S  
 MUTER CO., 1255 S. Michigan Ave., Chicago, Ill., "Muter"—MS, S, TC  
 NORDENDALE MFG. CO., 2100 Fulton St., Chicago, Ill.—S  
 OAK MFG. CO., 711 W. Lake St., Chicago, Ill., "Oak"—MS, S  
 PACIFIC RADIO CORP., 5016 S. Main St., Los Angeles, Calif.—S  
 PATHE RADIO & TELEVISION CORP., 2241 S. Indiana Ave., Chicago, Ill.—R  
 RADIO REEL CO., Tacoma, Wash., "Hushtone"—R  
 SETCHELL-CARLSON MFG. CO., INC., 2233 University St., St. Paul, Minn., "Tunit"—R  
 F. W. STEWART MFG. CORP., 340 W. Huron St., Chicago, Ill., "Stewart"—MS, K, PM, R, SC, S  
 TELERADIO ENGINEERING CORP., 484 Broome St., New York, N. Y., "Teleradio"—IT, PT, TC, CU  
 TREBOR RADIO CO., Pasadena, Calif., "Trebtor"—PM  
 TUNIT—Setchell-Carlson Mfg. Co., Inc.  
 UNIVERSAL MOLDING CO., 16th & Vermont Sts., San Francisco, Calif.—K  
 UTAH RADIO PRODUCTS CO., 820 Orleans St., Chicago, Ill., "Utah"—M, S  
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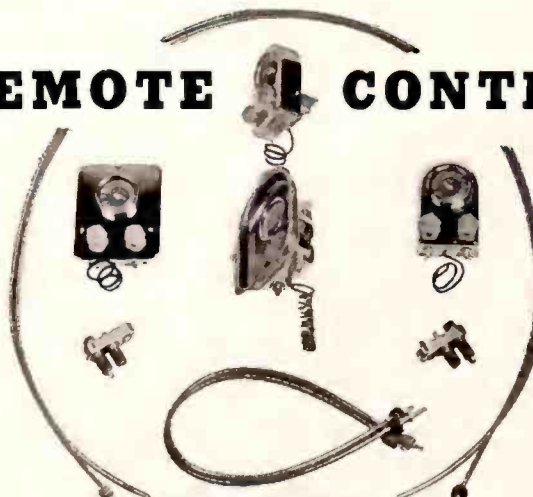
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- Cable replacement tools...T
- Control units (complete)...CU
- Control heads.....CH
- Fittings.....F
- Flexible shafts.....FS

ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass., "Alden"—F

ARVIN—Noblitt-Sparks Industries

CLOVER PARTS CO., 551 5th Ave., New York, N. Y., "Clover"—T, F, FS

CONSOLIDATED WIRE & ASSOC. CORP.S., Peoria & Harrison Sts., Chicago, Ill.—CH, CU

CROWE NAME PLATE & MFG. CO., 3701 Ravenswood Ave., Chicago, Ill., "Crowe"—CU, CH, F, FS, T

HARRY DAVIES CO., 1428 No. Wells St., Chicago, Ill.—CH

DELCO RADIO DIV., General Motors Corp., Kokomo, Ind., "Delco"—CU, CH, F, FS

DELCO—United Motors Service

DUAL REMOTE CONTROL CO., 7228 Warwick St., Detroit, Mich., "Dual"—CU, CH, F

GEMLOID CORP., 425 4th Ave., New York, N. Y. "Gemloid"—F

ICA—Insuline Corp. of America

INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y., "ICA"—FS

J. F. D. MFG. CO., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y., "JFD"—T, FS

NOBLITT-SPARKS INDUSTRIES, INC., Columbus, Ind., "Arvin"—CU, FS

PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—CU, CH, FS

STAR MACHINE MANUFACTURERS, INC., Hunts Point & E. Bay Aves., Bronx, N. Y., "Star"—CU, CH, F, FS

F. W. STEWART MFG. CORP., 340 W. Huron St., Chicago, Ill., "Stewart"—T, CU, CH, F, FS

UNITED MOTORS SERVICE, 3044 W. Grand Blvd., Detroit, Mich., "Delco"—CU

UNIVERSAL CONTROLS, INC., Division of A. W. Franklin Mfg. Co., 2107 40th Ave., Long Island City, L. I., N. Y.—CU, CH, F, FS

S. WHITE DENTAL MFG. CO., Industrial Bld., 10 E. 40th St., New York, N. Y., "S.S. White"—FS

## BATTERY CHARGERS



- Gas engine.....G
- Power line (home).....PH
- Power line (service station)....PS
- Wind driven.....W

AMERICAN TELEVISION & RADIO CORP., 300 E. 4th St., St. Paul, Minn., "ATR"—PH

ATR—American Television & Radio Corp.

AUTOMATIC ELECTRICAL DEVICES CO., 324 E. 3rd St., Cincinnati, Ohio—PH

B-L ELECTRIC MFG. CO., 19th & Washington Aves., St. Louis, Mo.—PH

BREEZ-ELECTRIC, 440 N. Oakley Blvd., Chicago, Ill.—W

BRIGGS & STRATTON CORP., 2711 No. 13th St., Milwaukee, Wis., "Briggs & Stratton"—G

CONTINENTAL MOTORS CORP., 12801 E. Jefferson, Detroit, Mich., "Tiny Tim"—G

DELCO—United Motors Service

EICOR, INC., 515 S. Laflin St., Chicago, Ill., "Utilite"—G, W

ELECTRICAL PRODUCTS CO., 6537 Russell St., Detroit, Mich.—PS

ELECTRIC STORAGE BATTERY CO., Allegheny Ave. & 19th St., Philadelphia, Pa., "Exide"—PS

EXIDE—Electric Storage Battery Co.

F.E.C.—Foraco Corp.

FORACO CORP., 2111 Woodward Ave., Detroit, Mich., "F.E.C."—G, W

GEN-E-ROTOR, 614 Grand Ave., Des Moines, Iowa, "Gen-E-Rotor," "Queen Bee," "Old Faithful"—W

HETRO ELECTRICAL INDUSTRIES, INC., 4611 Ravenswood Ave., Chicago, Ill.—G, PH, W

HY-TOWER—Parris-Dunn Corp.

IRON HORSE GENERATOR—Johnson Motors

JOHNSON MOTORS, Waukegan, Ill., "Iron Horse Generator"—G

KATO ENGINEERING CO., 530 No. Front St., Mankato, Minn., "Kato"—G, W

P. R. MALLORY & CO., 3029 E. Washington St., Indianapolis, Ind., "Mallory"—PH

MIDWEST MFG. & DISTRIBUTING CO., S. 13th & Kentucky Ave., Sheboygan, Wis.—G

MONTGOMERY WARD & CO., W. Chicago & N. Larr St., Chicago, Ill.—G, PH, PS, W

OLD FAITHFUL—Gen-E-Rotor

D. W. ONAN & SONS, 591 Royalston Ave., Minneapolis, Minn., "Onan"—G

PARRIS-DUNN CORP., 115 So. 15th St., Clarinda, Iowa, "Hy-Tower"—W

PINCOR—Pioneer Gen-e-motor Corp.

PIONEER GEN-E-MOTOR CORP., 466 W. Superior St., Chicago, Ill., "Pincor"—G, W

QUEEN BEE—Gen-E-Rotor

RAYTHEON MFG. CO., 190 Willow St., Waltham, Mass., "Rectibarger"—PS

RECTIChARGER—Raytheon Mfg. Co.

RURALITE ENGINEERING CO., Sioux City, Iowa—W

SENTINEL RADIO CORP., 2222 Diversey Pkwy., Chicago, Ill.—G, W

SKAGGS TRANSFORMER CO., 5894 Broadway, Los Angeles, Calif.—PH, PS

STANDARD TRANSFORMER CORP., 1500 N. Halstead St., Chicago, Ill.—PS

STROMBERG-CARLSON TELEPHONE MFG. CO., 100 Carlson Rd., Rochester, N. Y.—PH

TECHNICAL PRODUCTS INTERNATIONAL, 135 Liberty St., New York, N. Y., "Technipower"—G, W

TECHNIPOWER—Technical Products International

TINY TIM—Continental Motors Corp.

UNITED MOTORS SERVICE, 3044 W. Grand Blvd., Detroit, Mich., "Delco"—PH, W

UTILITE—Eicor, Inc.

WEDGE MFG. CO., 2338 S. Michigan Ave., Chicago, Ill., "Wedge-Power"—G

WINCHARGER CORPORATION, 2700 Hawkeye Drive, Sioux City, Iowa, "Wincharger"—W

WIND-IMPPELLER ELECTRIC WORKS, Ellsworth, Iowa—W

## CABINETS



- Console (wood).....C
- Metal.....M
- Plastic (see plastic molders)
- Table (wood).....T

ADLER MFG. CO., 29th & Chestnut Sts., Louisville Ky.—C, T

ALDEN CORP., 1 Exchange Place, Jersey City, N. J., "Alden"—C, T

ARCADIA—Wells-Gardner & Co.

BUD RADIO, INC., 5205 Cedar Ave., Cleveland, Ohio, "Bud"—M

CASTLEWOOD MFG. CO., INC., 12th & Burnett, Louisville, Ky.—C, T

CASWELL-RUNYAN CO., Huntington, Ind.—C, T

CHICAGO NOVELTY FURNITURE CO., 1750-60 N Campbell Ave., Chicago, Ill.—C

CHURCHILL CABINET CO., 2119 W. Churchill St., Chicago, Ill.—C, T

ERIE CAN CO., 816 Erie St., Chicago, Ill.—M

GRECO CABINET CO., 135 Plymouth St., Brooklyn, N. Y.—C, T

ILLINOIS WOOD PRODUCTS CORP., 2512 So. Damen Ave., Chicago, Ill.—C, T

INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y.—M

JOHNSON & TITUS, 423 E. State St., Rockford, Ill. Designers

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 So. Cicero Ave., Chicago, Ill., "Kellogg"—C, T

LEFEBURE CORP., 3117 1st Ave., Cedar Rapids, Iowa—M

PAR METAL PRODUCTS CORP., 35-25 41st St., Long Island City, N. Y., "Par-Met"—M

SHEET METAL SPECIALTY CG., 1417 W. Pico Blvd. Los Angeles, Calif.—M

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 UNITED CABINET MFG. CO., 629 W. Cermak Rd., Chicago, Ill.  
 WARREN FURNITURE CO., Warren, Pa.—C, M, T  
 WATTERSON RADIO MFG. CO., Dallas, Texas—C, T  
 WELLS-GARDNER & CO., 2701 N. Kildare Ave., Chicago, Ill., "Arcadia"—C, T  
 WESTERN ELECTRONICS CO., 1810 S. W. Yamhill, Portland, Ore.—C, M

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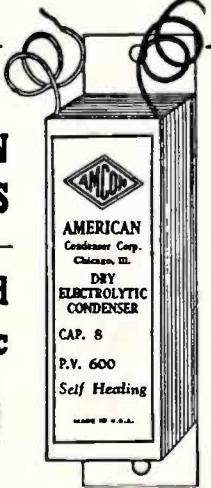
Coil forms . . . . . F  
 Coil winding equipment . . . W  
 I.F. coils . . . . . IF  
 R.F. chokes (receiving) . . CH  
 R.F. coils (receiving) . . . RF  
 Transmitting . . . . . T  
 Permeability R.F. assemblies . P

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 "B" . . . . . B  
 "C" . . . . . C  
 Dry cells . . . . . DC  
 Flashlight cells . . . . FL  
 Storage . . . . . S  
 Battery eliminator . . . . EL

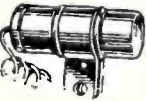




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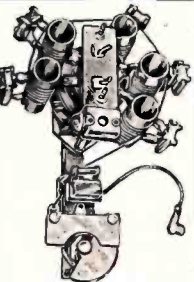


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 ALADDIN RADIO INDUSTRIES, INC., 468 W. Superior St., Chicago, Ill., "Aladdin"—IF, CH, R, RF, T  
 AMERICAN PHENOLIC CORP., 1250 W. Van Buren St., Chicago, Ill., "Amphenol"—F  
 AMPHENOL—American Phenolic Corp.  
 ANACONDA WIRE & CABLE CO., 25 Broadway, New York, N. Y.—F, IF, CH, RF, T  
 AUTOMATIC WINDING CO., INC., 900 Passaic Ave., East Newark, N. J.—IF, CH, RF  
 BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass.—IF, CH, RF, T  
 BUD RADIO, INC., 5205 Cedar Ave., Cleveland, Ohio, "Bud"—F, CH, RF, T  
 CARRON MFG. CO., 415 S. Aberdeen St., Chicago, Ill., "Carron"—IF, CH, RF, T  
 COLLINS RADIO CO., 2920 First Ave., Cedar Rapids, Iowa, "Collins"—T  
 CONSOLIDATED WIRE & ASSOC. CORPS., Peoria Ill., Chicago, Ill.—CH, IF, RF, T  
 COTO-COIL CO., INC., 229 Chapman St., Providence, R. I., "Coto"—CH, IF, RF, T  
 D-X RADIO PRODUCTS, 1575 Milwaukee Ave., Chicago, Ill., "DX"—CH, IF, RF, T  
 J. E. FAST & CO., 3101 W. Pulaski St., Chicago, Ill.—CH, RF  
 GENERAL MFG. CO., 1255 S. Michigan Ave., Chicago, Ill., "Gen-Ral"—IF, CH, RF  
 GEN-RAL—General Mfg. Co.  
 GENERAL WINDING CO., 254 W. 31st St., New York, N. Y., "Gen-Win"—F, W, IF, CH, RF, T  
 GEN-WIN—General Winding Co.  
 E. I. GUTHMAN & CO., INC., 400 S. Peoria St., Chicago, Ill., "Guthman"—F, W, IF, CH, RF  
 HAMMARLUND MFG. CO., 424 W. 33rd St., New York, N. Y., "Hammarlund"—F, IF, CH, RF, T  
 ICA—Insuline Corp. of America  
 INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y., "ICA"—F, W, IF, CH, RF, T  
 ISOLANTITE, INC., 233 Broadway, New York, N. Y., "Isolantite"—F  
 E. F. JOHNSON, Waseca, Minn., "Johnson"—T  
 P. R. MALLORY & CO., 3029 E. Washington St., Indianapolis, Ind., "Mallory"—CH  
 MEISSNER MFG. CO., 7th & Belmont, Mt. Carmel, Ill., "Meissner"—F, W, IF, CH, RF, T  
 J. W. MILLER CO., 5917 S. Main St., Los Angeles, Calif., "Miller"—CH, IF, RF  
 NA-ALD—Alden Products Co.  
 NATIONAL COMPANY, 61 Sherman St., Malden, Mass., "National," "N-C"—CH, IF, RF, T  
 N-C—National Co.  
 PACIFIC RADIO CORP., 5016 S. Main St., Los Angeles, Calif.—IF, CH, RF  
 PEERLESS RADIO MFG. CO., Division St. & Broadway, Albany, N. Y., "Peerless"—T  
 PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—IF, CH, RF  
 PRECISION INDUCTANCE CORP., 591 Broadway, New York, N. Y.—F, IF, CH, RF, T  
 PREMIER CRYSTAL LABS, INC., 55 Park Row, New York, N. Y., "Premier"—T  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—IF, RF, T  
 F. W. SICKLES CO., 300 Main Street, Springfield, Mass., "Sickles"—CH, IF, RF  
 SYNTHANE CORP., Highland Ave., Oaks, Pa.—F  
 TELERADIO ENGINEERING CORP., 484 Broome St., New York, N. Y., "Teleradio"—IF, CH, RF, T  
 TRIUMPH MFG. CO., 4017 W. Lake St., Chicago, Ill.—IF, CH, RF, T  
 ULTRAMAR MFG. CORP., 303 W. Monroe St., Chicago, Ill.—CH, IF, RF  
 UNIVERSAL WINDING CO., Providence, R. I., "Universal"—W

AIR CELL—National Carbon Co.  
 BOND ELECTRIC CORP., 146 Munson St., New Haven, Conn., "Bond"—A, B, C, DC, FL  
 BRIGHT STAR BATTERY CO., 200 Crooks Ave., Clifton, N. J., "Bright Star," "Unedit"—A, B, C, DC, FL  
 BURGESS BATTERY CO., Freeport, Ill., "Burgess"—A, B, C, DC, FL  
 DELCO—United Motors Service  
 ELECTRIC STORAGE BATTERY CO., Allegheny Ave. & 19th St., Philadelphia, Pa., "Exide"—S  
 EVEREADY—National Carbon Co.  
 EXIDE—Electric Storage Battery Co.  
 GENERAL DRY BATTERY CO., Cleveland, Ohio  
 GEN-E-ROTOR, 614 Grand Ave., Des Moines, Iowa, "Gen-E-Rotor"—S  
 GLOBE-UNION, INC., 900 E. Keefe Ave., Milwaukee, Wis., "Globe-Union"—S  
 JUMBO BATTERY MFRS., Ellsworth, Iowa, "Jumbo"—S  
 KATHANODE CORP., 369 Lexington Ave., New York, N. Y.—S  
 LAYERBILT—National Carbon Co.  
 MONARK BATTERY CO., INC., 4556 W. Grand Ave., Chicago, Ill., "Monark"—S  
 NATIONAL CARBON CO., INC., 30 West 42nd St., New York, N. Y., "Air Cells," "Eveready," "Layerbilt"—A, B, C, DC, FL  
 PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—A, B, C, DC, FL, S  
 RAY-O-VAC CO., 2317 Winnebago St., Madison, Wis., "Ray-O-Vac"—A, B, C, DC, FL  
 STROMBERG-CARLSON TELEPHONE MFG. CO., 100 Carlson Rd., Rochester, N. Y.—S, DC  
 UNITED MOTORS SERVICE, 3044 W. Grand Blvd., Detroit, Mich., "Delco"—S  
 UNIVERSAL BATTERY CO., 3410 S. LaSalle St., Chicago, Ill., "Universal"—S  
 U S L BATTERY CORP., Niagara Falls, N. Y., "U-S-L"—S  
 MONTGOMERY WARD & CO., W. Chicago & N. Larr Sts., Chicago, Ill., "Airline"—A, B, C, DC, FL, S  
 WILLARD STORAGE BATTERY CO., E. 131st St. & St. Clair Ave., Cleveland, Ohio, "Willard"—S



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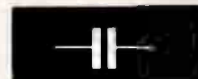
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 Mica receiving . . . . . M  
 Padding mica . . . . . PM  
 Paper (receiving) . . . . . P  
 Silvered mica . . . . . SM  
 Transmitting . . . . . T

AEROVOX CORP., 70 Washington St., Brooklyn, N. Y., "Aerovox," "Hi-Parad"—ED, EW, I, M, PM, P, SM, T  
 AIREX—Electronic Products Co.  
 AMERICAN CONDENSER CO., 2508 S. Michigan Ave., Chicago, Ill.—ED, I, P, T  
 AMNIL—Girard Continental Condenser Corp.  
 VICTOR J. ANDREW, 7221 S. Francisco Ave., Chicago, Ill.—T

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ATLAS CONDENSER PRODUCTS CO., 548 Westchester Ave., New York, N. Y., "Atlas Mites"—ED, P  
 ATOMS—Sprague Products Co.  
 AUTOMATIC WINDING CO., INC., 900 Passaic Ave., East Newark, N. J.—PM  
 BEAVER—Cornell-Dubilier Corp.  
 BLUE RIBBON—Curtis Condenser Corp.  
 CENTRALAB, 900 E. Keefe Ave., Milwaukee, Wis.—C  
 C-D—Cornell-Dubilier Corp.  
 CERAMICONS—Erie Resistor Corp.  
 CONDENSER CORP. OF AMERICA, 2000 Hamilton Blvd., South Plainfield, N. J.—ED, EW, P  
 CONDENSER PRODUCTS, 1369 N. Branch St., Chicago, Ill.—ED, P  
 CONSOLIDATED WIRE & ASSOC. CORP., Peoria & Harrison Sts., Chicago, Ill.—ED, P, T  
 CONTINENTAL CARBON, INC., 13900 Lorain Ave., Cleveland, Ohio, "Continental"—P, T  
 CORNELL-DUBILIER CORP., Hamilton Blvd., So. Plainfield, N. J., "Cornell-Dubilier," "Beaver," "C-D"—ED, EW, I, B, PM, P, SM, T  
 COSMIC RADIO CORP., 899 E. 135th St., New York, N. Y., "Cosmic," "Megrite"—ED, P  
 CROLITE—Henry L. Crowley & Co., Inc.  
 HENRY L. CROWLEY & CO., 1 Central Ave., West Orange, N. J., "Crolite"—ED  
 CURTIS CONDENSER CORP., 3088 W. 106th St., Cleveland, Ohio, "Standard," "Super," "Blue Ribbon"—ED  
 DE-JUR-AMSCO CORP., Shelton, Conn.—M, RT  
 TOBE DEUTSCHMANN CORP., Canton, Mass., "Filter-Mite," "Pluggin," "Tobe," "Micranol"—ED, I, P, T  
 DDMINO—Solar Mfg. Corp.  
 DUMONT ELECTRIC CO., INC., 514 Broadway, New York, N. Y., "Dumont"—ED, EW, I, M, P, T  
 ECCO HIGH FREQUENCY CORP., 120 W. 20th St., New York, N. Y., "Ecco H.F."—T  
 ELECTRO MOTIVE MFG. CO., INC., 797 E. 140th St., New York, N. Y.—M, PM  
 ELECTRONIC PRODUCTS CO., 5356 E. 9th St., Los Angeles, Calif., "Airex"—T  
 ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa., "Ceramicons," "Erie"—I, M, PM, T, C  
 EX-STAT—Tilton Electric Corp.  
 J. E. FAST & CO., 3121 N. Pulaski St., Chicago Ill.—I, P, T  
 FILTERMATIC MFG. CO., 6319 Ditman St., Philadelphia, Pa.—M  
 FILTER-MITE—Tobe Deutchmann Corp.  
 A. W. FRANKLIN MFG. CORP., 175 Varick St., New York, N. Y., "Franklin"—M  
 GENERAL RADIO CO., 30 State St., Cambridge, Mass., "G-R"—Precision M, Special  
 G-H—Girard-Hopkins  
 GIRARD-HOPKINS, 1437 23rd Ave., Oakland, Calif., "G-H"—ED, P, T, EW  
 G-R—General Radio Co.  
 HI-FARAD—Aerovox Corp.  
 ILLINDIS CONDENSER CO., 1160 N. Howe St., Chicago, Ill., "Illinois"—ED, I  
 INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y., "ICA"—PM, T  
 E. F. JOHNSON, Waseca, Minn., "Johnson"—T  
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 So Cicero Ave., Chicago, Ill., "Kellogg"—P  
 LEEDS & NORTHRUP CO., 4970 Stenton Ave., Philadelphia, Pa.—Precision M  
 LITTLE GIANT—Solar Mfg. Corp.  
 MAGNAVOX CO., 2131 Bueter Rd., Ft. Wayne, Ind., "Magnavox"—ED, EW, P  
 P. R. MALLDRY & CO., 3029 E. Washington St., Indianapolis, Ind., "Mallory"—ED, EW, I, M, PM, P, T  
 MEGRITE—Cosmic Radio Corp.  
 MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn, N. Y., "Micamold"—ED, EW, M, PM, P, T  
 MICRANOL—Tobe Deutchmann Corp.  
 MINICAP—Solar Mfg. Corp.  
 MITES—Atlas Condenser Products Co.  
 MDRRILL & MDRRILL, 30 Church St., New York, N. Y., "Morrill"—P, T  
 MUTER CO., 1255 S. Michigan Ave., Chicago, Ill., "Muter"—C, SM  
 PHILCO RADIO & TELEVISION CORP., Tioga & C St., Philadelphia, Pa., "Philco"—ED, EW, M, PM, P



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● For years, AEROVOX has pioneered the exact-duplicate idea, despite vigorous opposition. We built up the most extensive line covering all standard set needs, while others offered general-utility units for make-shift replacements. No production runs have been too small for us, even on the more special types. Listings, constantly expanded, have always been kept up to date. Truly a colossal, difficult, costly job. ● But now, in 1939, we enjoy our reward: Our judgment is fully vindicated; servicemen prefer exact duplicates; and the condenser industry at large accords us that sincerest flattery of following in our footsteps.

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**POTTER CONDENSER CO.**, 565 W. Washington Blvd., North Chicago, Ill., "Potter"—ED, I, P, T  
**PRECISION INDUCTANCE CORP.**, 591 Broadway, New York, N. Y.—M, PM  
**RCA MFG. CO.**, Front & Cooper Sts., Camden, N. J., "RCA Faradon," "RCA"—ED, EW, M, P, T  
**SANGAMO ELECTRIC CO.**, Springfield, Ill., "Sangamo"—M, T  
**SEALDITE**—Solar Mfg. Corp.  
**SEVISION ENGINEERING CO.**, 379 Phillips Ave., Toledo, Ohio—P  
**SOLAR MFG. CORP.**, 599 Broadway, New York, N. Y., "Solar," "Domino," "Sealdite," "Tom Thumb," "Transoil," "Transmica," "Minicap," "Little Giant"—ED, EW, I, M, PM, P, SM, T  
**SPRAGUE PRODUCTS CO.**, North Adams, Mass., "Sprague 600 Line," "Atoms"—ED, EW, M, P, SM, T  
**STANDARD**—Curtis Condenser Corp.  
**STROMBERG-CARLSON TELEPHONE MFG. CO.**, 100 Carlson Rd., Rochester, N. Y.—P  
**SUPER**—Curtis Condenser Corp.  
**SUPER SEAL**—Girard Continental Condenser Corp.  
**TILTON ELECTRIC CORP.**, 15 E. 26th St., New York, N. Y., "Ex-Stat"—ED, EW, P  
**TOBE**—Tobe Deutschmann Corp.  
**TOM THUMB**—Solar Mfg. Corp.  
**TRANSMICA, TRANSOIL**—Solar Mfg. Corp.

## CONDENSERS, VARIABLE



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Mica trimmer . . . . . M  
Receiver tuning . . . . . RT  
Transmitter tuning . . . . . TT

**ALDEN PRODUCTS CO.**, 715 Center St., Brockton, Mass., "Na-Ald"—M, RT  
**AMERICAN STEEL PACKAGE CO.**, Squire Ave., Defiance, Ohio, "Defiance"—RT  
**ATKINS & BROWN**, 215 Fourteenth St., Oakland, Calif., "A & B"—TT  
**AUTOMATIC WINDING CO., INC.**, 900 Passaic Ave., East Newark, N. J.—A, M  
**BROWNING LABORATORIES, INC.**, 750 Main St., Winchester, Mass.—RT, TT  
**BUD RADIO, INC.**, 5205 Cedar Ave., Cleveland, Ohio, "Bud"—A, M, RT, TT  
**ALLEN D. CARDWELL MFG. CORP.**, 81 Prospect St., Brooklyn, N. Y., "Cardwell"—A, RT, TT  
**D-X PRODUCTS CO.**, 1575 Milwaukee Ave., Chicago, Ill., "DX"—M  
**DEFIANCE**—American Steel Package Co.  
**DE-JUR-AMSCO CORP.**, Shelton, Conn., "De-Jur Amsco"—M, RT  
**ELECTRO MOTIVE MFG. CO., INC.**, 797 E. 140th St., New York, N. Y., "Elmenco"—M  
**GENERAL INSTRUMENT CORP.**, 829 Newark Ave., Elizabeth, N. J., "G. I."—RT  
G. I.—General Instrument Corp.  
**GENERAL MFG. CO.**, 8066 S. Chicago Ave., Chicago, Ill.—M  
**GENERAL RADIO CO.**, 30 State St., Cambridge, Mass., "G-R"—Special purpose  
G-R—General Radio Co.  
**GENERAL WINDING CO.**, 254 W. 31st St., New York, N. Y., "Gen-Win"—A, M  
**GEN-WIN**—General Winding Co.  
**E. I. GUTHMAN & CO., INC.**, 400 S. Peoria St., Chicago, Ill., "Guthman"—A, M  
**HAMMARLUND MFG. CO.**, 424 W. 33rd St., New York, N. Y., "Hammarlund"—A, M, RT, TT  
**HYGRADE-SYLVANIA CORP.**, Clifton, N. J.—TT  
**INSULINE CORP. OF AMERICA**, 25 Park Place, New York, N. Y., "ICA"—A, M, RT, TT  
**E. F. JOHNSON**, Waseca, Minn., "Johnson"—TT  
**P. R. MALLORY & CO.**, 3029 E. Washington St., Indianapolis, Ind., "Mallory"—M  
**MEISSNER MFG. CO.**, 7th & Belmont, Mt. Carmel, Ill., "Meissner"—A, M, RT  
**J. W. MILLER CO.**, 5917 S. Main St., Los Angeles, Calif., "Miller"—A, M  
**NATIONAL CO.**, 61 Sherman St., Malden, Mass., "National"—A, M, RT, TT  
**PHILCO RADIO & TELEVISION CORP.**, Tioga & C Sts., Philadelphia, Pa., "Philco"—M, RT  
**RADIO CONDENSER CO.**, Davis St. & Copewood Ave., Camden, N. J., "R.C.C."—RT

**RCA MFG. CO.**, Front & Cooper Sts., Camden, N. J., "RCA Faradon"—A, M, RT  
**R.C.C.**—Radio Condenser Co.  
**RELIANCE DIE & STAMPING CO.**, 1260 Clybourn Ave., Chicago, Ill.—RT  
**F. W. SICKLES CO.**, 300 Main St., Springfield, Mass., "Sickles"—A, M  
**SOLAR MFG. CORP.**, 599 Broadway, New York, N. Y., "Solar"—M  
**SPRAGUE PRODUCTS CO.**, North Adams, Mass., "Sprague"—M  
**TELERADIO ENGINEERING CORP.**, 484 Broome St., New York, N. Y., "Teleradio"—A, M  
**UNITED SCIENTIFIC LABORATORIES, INC.**, 400 Lafayette St., New York, N. Y., "United Scientific Lah."—RT

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Knobs—molded . . . . . KM  
Knobs—wooden . . . . . KW  
Name plates . . . . . N  
Pilot light assemblies . . . . . PL

**ALDEN PRODUCTS CO.**, 715 Center St., Brockton, Mass.—D, L, E, KM  
**AMERICAN EMBLEM CO., INC.**, P. O. Box 116, Utica, N. Y.—D, C, P, E, F  
**ANGELL EMBOSING CO.**, 1265 Broadway, New York, N. Y.—N  
**AUBURN BUTTON WORKS**, Auburn, N. Y.—KM  
**O. AUSTIN CO.**, 640 Broadway, New York, N. Y.—F, DE  
**BASTIAN BROS. CO.**, 1600 No. Clinton Ave., Rochester, N. Y.—D  
**BUD RADIO, INC.**, 5205 Cedar Ave., Cleveland, Ohio, "Bud"—D, E, KM, KW  
**CONSOLIDATED WIRE & ASSOC. CORP.**, Peoria & Harrison Sts., Chicago, Ill.—KM  
**CONTINENTAL DIAMOND FIBRE CO.**, Newark, Del., "Dilophone"—D  
**COTO-COIL CO., INC.**, 229 Chapman St., Providence, R. I., "Coto-Wheel"—D, KM  
**CROWE NAME PLATE & MFG. CO.**, 3701 Ravenswood Ave., Chicago, Ill., "Crowe"—D, C, P, E, F, KM, N, PL  
**CUTLER-HAMMER, INC.**, N. 12th St. & W. St. Paul Ave., Milwaukee, Wis., "Cutler-Hammer"—KM  
**DAVEN CO.**, 158 Summit St., Newark, N. J., "Daren"—E, KM  
**HARRY DAVIES CO.**, 1428 No. Wells St., Chicago, Ill.—KM  
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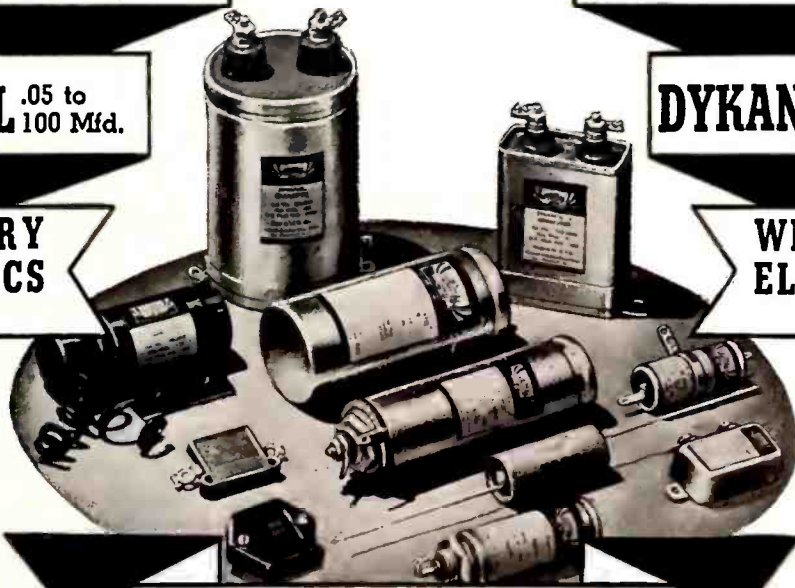
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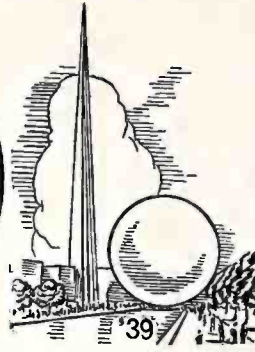
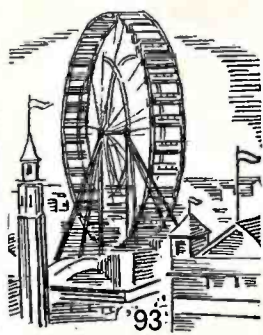
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STANDARD AND SPECIAL TYPES OF SHIELDS for Home sets . . . Auto radio . . . Portables . . . Amateur . . . Police . . . Aircraft . . . Marine . . . Sound Systems . . . Intercommunicators, etc.

GOAT 1100 SERIES—FEATURING . . . Beaded top . . . Easy assembly . . . Complete shielding . . . Sturdy construction . . . Improved grounding . . . Better appearance . . . Greater stability . . . Space saving . . . Economy. Write for catalog and samples.

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- DUAL REMOTE CONTROL CO., 7228 Warwick St., Detroit, Mich., "Dual"—E
- HUGH H. EBY, INC., 2066 Hunting Park Ave., Philadelphia, Pa., "Eby"—KM
- E. M. LAB., INC., 27 Jackson Ave., Long Island City, N. Y., "Dial Drives"
- ENAMELOID-CLOISONNE—Gemold Corp.
- ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. "Erie"—C, E, F, KM
- A. W. FRANKLIN MFG. CORP., 175 Varick St., New York, N. Y., "Franklin"—D, E, KM
- GEMLOID CORP., 425 4th Ave., New York, N. Y., "Enameloid-Cloisonne"—D, E
- GENERAL CEMENT MFG. CO., 611 Lincoln Ave., Rockford, Ill., "G-C"—Cable & belts
- G-C—General Cement Mfg. Co.
- GENERAL RADIO CO., 30 State St., Cambridge, Mass.—D, KM
- GORDON SPECIALTIES CO., 1104 South Wabash Ave., Chicago, Ill.—D, F, KM
- HUNTER PRESSED STEEL CO., Lansdale, Pa.—D, P, E
- HYGRADE SYLVANIA CORP., Clifton, N. J.—D
- ICA—Insulline Corp. of America
- INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y., "ICA"—D, C, L, P, E, F, KM, KW
- INSUROK—The Richardson Co.
- E. F. JOHNSON, Waseca, Minn., "Johnson"—P
- KAAR ENGINEERING CO., 619 Emerson St., Palo Alto, Calif., "Kaar"—F
- H. R. KIRKLAND CO., 75 West St., New York, N. Y.—Indicating lamps—PL
- KURZ-KASCH CO., Dayton, Ohio—D, KM
- LIBERTY ENGRAVING & MFG. CO., 1601 W. Jefferson Blvd., Los Angeles, Calif.—C, P, E
- MAGNAVOX CO., 2131 Bueter Road, Fort Wayne, Ind., "Transradiant"—F
- P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind., "Yaxley"—D, L, E, F, KM
- MANUFACTURERS SCREW & SUPPLY HOUSE, 215 W. Illinois St., Chicago, Ill.—KM
- MEISSNER MFG. CO., 7th & Belmont Sts., Mt. Carmel, Ill., "Meissner"—D
- NATIONAL COMPANY, 61 Sherman St., Malden, Mass., "National"—D, KM
- PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago, Ill.—C, F
- PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—L, KM
- PHILMORE MFG. CO., 133 University Place, New York, N. Y., "Philmore"—C
- PREMIER CRYSTAL LABS., INC., 55 Park Row, New York, N. Y.—D, F
- RADIO KNOB CO., 43 E. Ohio St., Chicago, Ill.—KM
- RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—D, E, KM
- RECTO MOLDED PRODUCTS, INC., Brownway & B. & O R.R., Oakley, Cincinnati, Ohio—KM
- THE RICHARDSON CO., 2738 Lake St., Melrose Park, Chicago, Ill., "Insurok"—KM
- SHEET METAL SPECIALTY CO., 1417 W. Pico Blvd., Los Angeles, Calif.—D
- STAR MACHINE MANUFACTURERS, INC., Hunts Point & E. Bay Aves., Bronx, New York, "Star"—E, KM
- F. W. STEWART MFG. CORP., 340 W. Huron St., Chicago, Ill., "Stewart"—D, C, P, E, KM, PL
- SYRACUSE ORNAMENTAL CO., Syracuse, N. Y., "Syrocwood," "Woodite," "Syroco"—E, KW
- SYROCO—Syracuse Ornamental Co.
- SYROCOWOOD—Syracuse Ornamental Co.
- TRANSRADIANT—Magnavox Co.
- TUNG-SOL LAMP WORKS, INC., Radio Tube Div., 95 8th Ave., Newark, N. J., "Tung-Sol"—L
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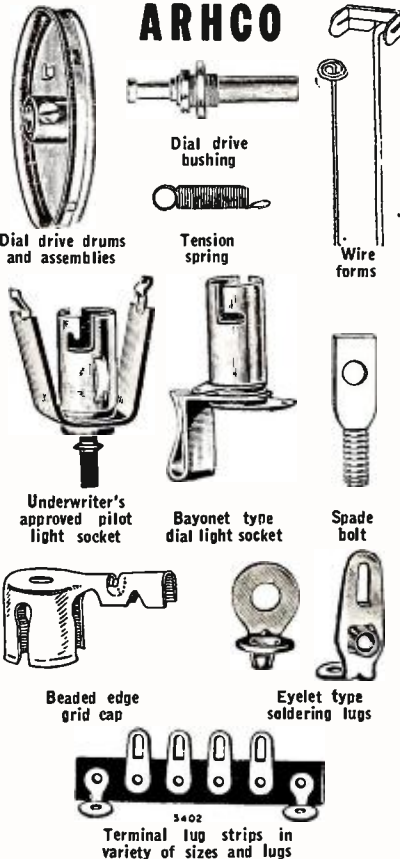
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 COMMUNICATIONS PRODUCTS, 245 Custer Ave., Jersey City, N. J.—SKT  
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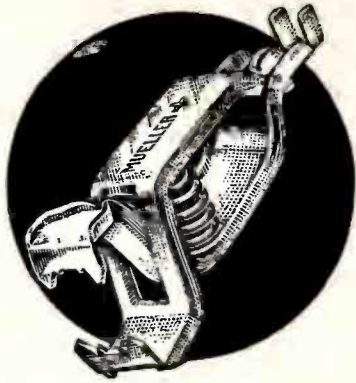
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PHILMORE MFG. CO., 133 University Place, New York, N. Y., "Philmore"—BP, C, P

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SYNTHANE CORP., Highland Ave., Oaks, Pa.—SKT, T

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 TURBO—William Brand & Co.  
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 Story & Clark Piano Co., 64 E. Jackson Blvd., Chicago  
 Winter & Co., 849 E. 141st St., New York City

Foreign  
 August Forster Piano Fabrik, Germany  
 Mason & Risch, Ltd., 642 King St., West, Toronto 2, Canada  
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 Sebastian Gundling & Sons, Lancaster, Pa.

Fretted Instrument Manufacturers  
 Epiphone, Inc., 142 W. 14th St., New York

### MIESSNER PATENTS ON ELECTRONIC MUSICAL INSTRUMENTS

Patent No.	Inventor	Date Issued
1,680,112	Bone, E. T.	April 13, 1928
1,886,687	Jacobs, C. T.	November 8, 1932
1,906,607	Jacobs	May 2, 1933
1,912,293	Miessner, B. F.	May 30, 1933
1,915,858	Miessner	June 27, 1933
1,915,859	Miessner & Jacobs	June 27, 1933
1,915,860	Miessner & Jacobs	June 27, 1933
1,915,861	Jacobs	June 27, 1933
1,929,027	Miessner	October 3, 1933
1,929,028	Miessner	October 3, 1933
1,929,029	Miessner	October 3, 1933
1,929,030	Miessner	October 3, 1933
1,929,031	Miessner	October 3, 1933
1,929,032	Miessner & Jacobs	October 3, 1933
1,933,294	Jacobs	October 31, 1933
1,933,295	Miessner	October 31, 1933
1,933,296	Jacobs	October 31, 1933
1,933,297	Miessner	October 31, 1933
1,933,298	Miessner	October 31, 1933
1,933,299	Vierling, O.	October 31, 1933
1,934,159	Miessner	July 2, 1935
1,963,668	Miessner & Jacobs	June 19, 1934
1,977,892	Miessner	October 23, 1934
1,979,633	Miessner	November 6, 1934
1,992,438	Miessner	February 26, 1935
2,001,391	Miessner	May 14, 1935
2,001,392	Miessner	May 14, 1935
2,007,302	Jacobs	January 7, 1936
2,027,073	Vierling	January 7, 1936
2,027,074	Miessner	January 7, 1936
2,027,075	Jacobs	January 7, 1936
2,033,440	Miessner	March 10, 1936
2,045,917	Miessner	June 30, 1936
2,071,649	Miessner	February 23, 1937
2,099,205	Jacobs	July 27, 1937
2,138,500	Miessner	November 29, 1938
2,140,025	Miessner	December 13, 1938

and numerous pending patents.

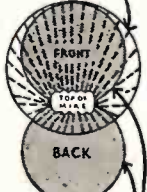
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- CINEMA ENGINEERING CO., 7606 Santa Monica Blvd., Hollywood, Calif., "Cinema"—CON, STD
- COLORSTONE ACOUSTIC DEVICES, South Bend, Ind.—ACC
- DICTOGRAPH PRODUCTS CO., INC., 580 Fifth Ave., New York, N. Y., "Dictograph"—CAR
- EASTERN MIKE-STAND CO., 56 Christopher St. Brooklyn, N. Y., "Eastern"—STD
- ELECTRO-VOICE MFG. CO., 324 E. Colfax Ave., South Bend, Ind., "Electro-Voice"—CAR, VEL, ACC, CTR, STD, DYN, SPR
- ELLIS ELECTRICAL LABORATORY, INC., 3502 Wesley Ave., Berwyn, Ill., "Ellis Microphones"—CAR, ACC, CTR, DYN, STD
- ICA—Insuline Corp. of America
- INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y., "ICA"—CAR
- KAAR ENGINEERING CO., 619 Emerson St., Palo Alto, Calif., "Kaar"—CAR
- KELLOGG SWITCHBOARD & SUPPLY CO., 8650 S. Cicero Ave., Chicago, Ill., "Kellogg"—CAR
- PHILMORE MFG. CO., 113 University Place., New York, N. Y., "Philmore"—HB
- PILGRIM ELECTRIC CORP., 138 5th Ave., New York, N. Y., "Major Edward Boves"—HB
- RACON ELECTRIC CO., INC., 52 E. 19th St., New York, N. Y., "Racon"—DYN
- RADIO RECEPTOR CO., INC., 251 W. 19th St., New York, N. Y., "Radio Receptor"—DYN
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- REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif., "Remler"—CRY, ACC, CTR, STD
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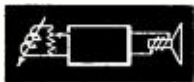
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INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y.—C, L  
J.F.D. MFG. CO., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y.—C  
MAAS & WALDSTEIN CO., 438 Riverside Ave., Newark, N. J.—C, E, I, L, P, V  
MICA INSULATOR CO., 200 Varick St., New York, N. Y., "Mico"—V  
ROXALIN FLEXIBLE LACQUER CO., Elizabeth, N. J.—E, L, P  
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Automatic record changers . . . ARC  
Discs (blank) . . . D  
Electric phonographs . . . EL  
Motors (record playing) . . . M  
Needles . . . N  
Needles (cutting) . . . CN  
Pick ups (crystal) . . . PC  
Pick ups (magnetic) . . . PM  
Records (phonograph) . . . R  
Record albums . . . RA  
Record cabinets . . . RC  
Recording machines . . . RM  
Record player attachments . . . RP  
Transcription record players . . . TR  
Turntables (record playing) . . . TT  
Wireless record players . . . W

H. W. ACTON CO., INC., 370 7th Ave., New York, N. Y., "Actone"—CN, N  
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago, Ill., "Knight"—EL, RP, TR, W  
ALLIED RECORDING PRODUCTS CO., 126 W. 46th St., New York, N. Y.—D, CN, RM  
AMERICAN RECORD CORP., 1776 Broadway, New York, N. Y.—E, N  
AMPLEX RADIO CORP., 240 W. 23rd St., New York, N. Y.—EL, RP  
ANSLEY RADIO CORP., 240 W. 23rd St., New York, N. Y., "Ansley Dynaphone"—EL, RP, TR  
ASTATIC MICROPHONE LABORATORY, 830 Market St., Youngstown, Ohio, "Astatic"—PC  
AUDAK CO., 500 Fifth Ave., New York, N. Y., "Audax"—PM  
AUDAX—Audack Co.  
BELFONE—Bell Sound Systems, Inc.  
BELL RADIO & TELEVISION, 115 E. 46th St., New York, N. Y., "Bell"—RP, W  
BELL SOUND SYSTEMS, INC., 61 E. Goodale St., Columbus, Ohio, "Belfone"—ARO, EL, RP, TR, TT  
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BRUNSWICK RECORD CORP., 1776 Broadway, New York, N. Y., "Brunswick," "Perfect," "Vocalion"—N, R  
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CAPEHART CORP., E. Pontiac St., Ft. Wayne, Ind., "Capehart"—ARC, EL  
CHAMPION—Decca Records, Inc.  
CHICAGO NOVELTY FURNITURE CO., 1750-60 N. Campbell Ave., Chicago, Ill.—BC  
CHICAGO SOUND SYSTEMS CO., 200 E. Illinois St., Chicago, Ill.—EL, BC, RP, TR, W  
CHICAGO SOUND SYSTEMS CO., 200 E. Illinois St., Chicago, Ill.—Record carrying cases  
CLARION—Transformer Corp. of America  
COLUMBIA PHONOGRAPH CO., 1776 Broadway, New York, N. Y., "Columbia"—N, R  
CONTINENTAL RADIO & TELEVISION CORP., 3800 W. Cortlandt St., Chicago, Ill.—W  
DECCA RECORDS, INC., 50 W. 57th St., New York, N. Y., "Decca," "Champion"—E, EL, N

DIHLE MFG. CO., Elizabethport, N. J., "Diehl"—M  
DYNAPHONE—Ansley Radio Corp.  
ELECTRO ACOUSTIC CO., 2131 Bueter Rd., Ft. Wayne, Ind.—EL, RC, RP, TR, TT  
ELECTROPHONE—Harris Mfg. Co.  
ESPEY MFG. CO., INC., 67 Irving Pl., New York, N. Y.—EL  
FAIRCHILD AERIAL CAMERA CORP., 88-06 Van Wyck Blvd., Jamaica, L. I., N. Y., "Fairchild" D, CN, PC, RM  
GALVIN MFG. CORP., 4545 Augusta Blvd., Chicago, Ill., "Motorola"—W  
GARRARD SALES CORP., 17 Warren St., New York, N. Y., "Garrard"—ARC, EL, M  
GENERAL COMMUNICATION PRODUCTS, INC., Lexington Ave. at Vine, Hollywood, Calif.—TR  
GENERAL ENGINEERS, 2241 Garrett Rd., Upper Darby, Pa., "General Engineers"—EL, TR  
GENERAL INDUSTRIES CO., 3537 Taylor St., Elyria, Ohio—ARC, M, TT  
GENERAL PRODUCTS CO., 1801 Fannin St., Houston, Texas—BA, RC, RP, TR, TT  
HARDRAY, INC., 524 W. Broadway, New York, N. Y., "Hardray"—ARC  
HARRIS MFG. CO., 2422 W. 7th St., Los Angeles, Calif., "Harris Electrotones"—N, RC, RP, TR  
HETRO ELECTRICAL INDUSTRIES, INC., 4611 Ravenswood Ave., Chicago, Ill., "Hetro"—EL, PC, PM, TT  
JACKSON PRODUCTS CO., 504 Griffin St., Dallas, Texas—RP  
KNIGHT—Allied Radio Corp.  
LOWELL NEEDLE CO., INC., Putnam, Conn.—N  
MAGNA—Unit Reproducers Mfg. Co.  
MAJESTIC RADIO & TELEVISION CO., 2600 W. 30th St., Chicago, Ill.—W  
MANUFACTURERS SCREW & SUPPLY HOUSE, 215 W. Illinois St., Chicago, Ill.—M  
MARCONIPHONE, INC., 679 Madison Ave., New York, N. Y.—EL  
MILES REPRODUCER CO., INC., 812 Broadway, New York, N. Y., "Sound-on-Film"—ARC, CN, D, EL, M, N, PC, PM, R, RA, RC, RM, RP, TR, TT  
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OPERADIO MFG. CO., 13th & Indiana Sts., St. Charles, Ill., "Operadio"—TT  
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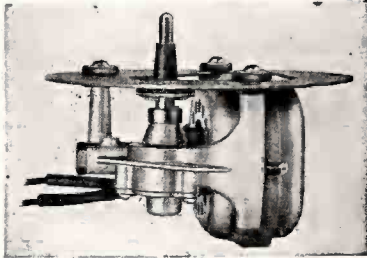
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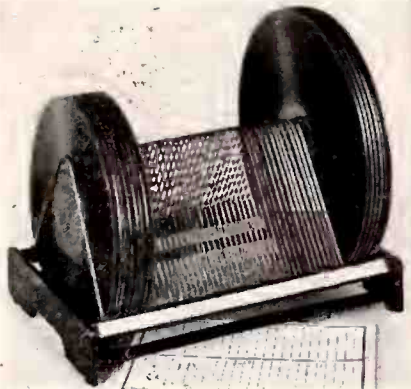


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PEERLESS ALBUM CO., INC., 38 W. 21st St., New York, N. Y.—RA  
PERFECT—Brunswick Record Corp.  
PERMO POINT—Permo Products Corp.  
PERMO PRODUCTS CORP., 6415 Ravenswood Ave., Chicago, Ill., "Permo Point"—N  
PHILCO RADIO & TELEVISION CORP., Tlaga & C Sts., Philadelphia, Pa., "Philco"—W  
PHONOGRAPH NEEDLE MFG. CO., INC., 42-46 Dudley St., Providence, R. I.—N  
POINSETTIA, INC., Pitman, N. J.—CN, D, N, R, RA, RM  
PRESTO RECORDING CORP., 139 W. 19th St., New York, N. Y., "Presto"—CN, D, EL, N, PM, RM, RP, TR, TT  
B. A. PROCTOR CO., INC., 17 W. 60th St., New York, N. Y.—RM, PC, TR, TT  
RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA," "Victor," "Bluebird"—ARC, CN, D, EL, M, N, PC, PM, R, RA, RC, RM, RP, TR, TT, W  
RADIO ENGINEERING & MFG. CO., 26 Journal Sq., Jersey City, N. J., "Remco"—TR  
RADIOTONE, INC., 6103 Melrose Ave., Hollywood, Calif.—CN, D, PC, RM  
RADOLEK CO., 601 W. Randolph St., Chicago, Ill., "Radolek"—EL, RP, TR, W  
RALSTON RECORD CO., 112 Cedar Ave., Pitman, N. J., "Ralston radio code course"—R  
RANGERTONE, INC., 201 Verona Ave., Newark, N. J., "Rangertone, Inc."—CN, D, N, RM  
REK-O-KUT CORP., 254 Canal St., New York, N. Y.—PM  
RECOTON CORP., 178 Prince St., New York, N. Y., "Recoton"—CN, D, N, RP  
REGAL AMPLIFIER MFG. CO., 14 W. 17th St., New York, N. Y.—EL, RP  
REMCO—Radio Engineering & Mfg. Co.  
REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif., "Remler"—RM, TR  
SACKHEIM BROS. CORP., 215-219 W. Illinois St., Chicago, Ill.—TT  
SCHIRESON BROS., 226 N. Main St., Los Angeles, Calif.—EL, N, PM, R  
SCHLOSS BROS., 801 E. 135th St., New York, N. Y.—RC  
SHURE BROS., 225 W. Huron St., Chicago, Ill., "Zephyr"—PC  
SONORA ELECTRIC PHONOGRAPH CO., INC., 132 W. 22nd St., New York, N. Y., "Sonora"—EL, RP  
SOUND PRODUCTS, 704 N. Curson Ave., Hollywood, Calif., "The Hollywood"—EL  
SPARKS-WITHINGTON CO., E. Ganson Ave., Jackson, Mich., "Sparton"—W  
SPARTON—Sparks-Withington Co.  
SPEAK-O-PHONE RECORDING & EQUIPMENT CO., 23 W. 60th St., New York, N. Y., "Speakophone"—CN, D, RM  
STROMBERG-CARLSON TELEPHONE MFG. CO., 100 Carlson Rd., Rochester, N. Y., "Stromberg-Carlson"—ARC, RP  
SUNDT ENGINEERING CO., 4238 Lincoln Ave., Chicago, Ill.—EL, PC, TT  
TALKING DEVICES CO., 4451 Irving Park Blvd., Chicago, Ill.—ARC, TT  
TELETRAN PRODUCTS CO., 2233 University Ave., St. Paul, Minn.—ARC, RP  
TRANSFORMER CORP. OF AMERICA, 69 Wooster St., New York, N. Y., "Clarion"—ARC, EL, RC, RP, TR, TT  
UNIT REPRODUCERS MFG. CO., 999 E. Main St., Rochester, N. Y., "Magna"—PM  
UNITED CINEPHONE CORP., Sound Equip. Div., 43-37, 33rd St., Long Island City, N. Y., "United Cinephone"—TR, TT  
UNIVERSAL MICROPHONE CO., 424 Warren Lane, Inglewood, Calif., "Universal"—CN, D, RM  
VICTOR—RCA Mfg. Co.  
VOCOGRAPH SOUND SYSTEMS, 164 N. May St., Chicago, Ill.—ARC, EL, RP

VOCALION—Brunswick Record Corp.  
WEBSTER-CHICAGO—Webster Co.  
WEBSTER CO., 5622 Bloomingdale Ave., Chicago, Ill., "Webster-Chicago"—PM  
WEBSTER ELECTRIC CO., Racine, Wis., "Webster Electric"—PC, PM, RP  
WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y., "Western Electric"—M, PM, TT  
WILCOX-GAY CORP., Charlotte, Mich., "Wilcox-Gay"—W  
RUDOLPH WURLITZER CO., North Tonawanda, N. Y.—EL  
ZEPHYR—Shure Bros.

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**Power rheostats . . . PR**  
**Precision . . . PRE**  
**Suppressors . . . SU**  
**Variable . . . V**  
**Volume controls . . . VC**

AEROVOX CORP., New Bedford, Mass., "Pyrohm"—FC, FW  
ALLEN-BRADLEY CO., 1326 South 2nd St., Milwaukee, Wis.—FC, FW, VC, V  
AMPERITE CO., 561 Broadway, New York, N. Y., "Amperite"—PT  
ARCO TUBE CO., 227 Central Ave., Newark, N. J.—PT  
ARCTURUS RADIO TUBE CO., 729 Frelinghuysen Ave., Newark, N. J., "Arcturns"—PT  
ATLAS RESISTOR CO., 423 Broome St., New York, N. Y., "Atlas"—FW, V  
BROWN DEVIL—Ohmite Mfg. Co.  
CANDOHMS—Muter Co.  
CARBORUNDUM CO., Global Division, Niagara Falls, N. Y., "Global"—FC  
CENTRALAB, 900 E. Keefe Ave., Milwaukee, Wis., "Centralab"—A, FC, PR, SU, V, VC  
CHAMPION RADIO WORKS, Danvers, Mass.—PT  
CHICAGO TELEPHONE SUPPLY CO., 1142 W. Beardsley Ave., Elkhart, Ind.—V, VC  
CINEMA ENGINEERING CO., 7606 Santa Monica Blvd., Hollywood, Calif., "Cinema"—A, I, PR, PRE, V  
CLAROSTAT MFG. CO., 285 N. 6th St., Brooklyn, N. Y., "Clarostat"—A, FC, FW, I, PT, PR, PRE, SU, V, VC  
COLE RADIO WORKS, 86 Westville Ave., Caldwell, N. J., "Meggit"—FW, V  
CONSOLIDATED WIRE & ASSOC. CORPS., Peoria St., Chicago, Ill.—FC, FW, V, VC, SU  
CONTINENTAL CARBON, INC., 13990 Lorain Ave., Cleveland, Ohio, "Continental"—FC, SU, FW, PRE  
DAVEN CO., 158 Summit St., Newark, N. J., "Daven"—A, FW, PRE, V, VC  
DE-JUR-AMSCO CORP., Shelton, Conn.—PR  
DEPENDABLE—Radio City Products Co., Inc.  
ELECTRO MOTIVE MFG. CO., INC., 797 E. 140th St., New York, N. Y., "Elmenco"—FC, FW, SU  
ELMENCO—Electro Motive Mfg. Co., Inc.  
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa., "Erie"—FC, I, SU  
EX-STAT—Tilton Electric Corp.  
GENERAL RADIO CO., 30 State St., Cambridge, Mass., "G-R"—PRE & special purpose  
G-H—Girard-Hopkins  
GIRARD-HOPKINS, 1437 23rd Ave., Oakland, Calif., "G-H"—FC  
GLOBAL—Carborundum Co.  
G-R—General Radio Co.  
GUARDIAN ELECTRIC CO., 1625 Walnut St., Chicago, Ill.—Remote volume controls  
HARDWICK & HINDLE, INC., 40 Herman St., Newark, N. J.—FW, I, PR  
HYGRADE SYLVANIA CORP., 500 Fifth Ave., New York, N. Y., "Sylvania"—PT  
HYTRON CORP., 78 Lafayette St., Salem, Mass., "Hytron"—PT  
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INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y., "ICA"—PRE, SU, V, VC

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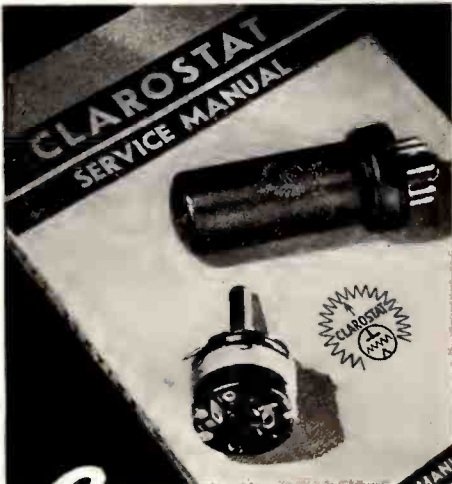
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 LECTROHM, INC., 5133 W. 25th Place, Cicero, Ill.—FW, I  
 LEEDS & NORTHRUP, 4970 Stenton Ave., Philadelphia, Pa.—A, PRE  
 P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind., "Yaxley"—A, FC, FW, I, PRE, V, VC  
 MEGGIT—Cole Radio Works  
 MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn, N. Y., "Micamold"—FW, PT  
 MICROHM—Precision Resistor Co.  
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 RAYTHEON PRODUCTION CORP., 420 Lexington Ave., New York, N. Y.—PT  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—A, I, PR, FC, FW, PRE, PT, V, VC, SU  
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 TUNG-SOL LAMP WORKS, INC., Radio Tube Div., 95 8th Ave., Newark, N. J., "Tung-Sol"—PT  
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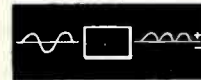


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 Converters . . . . . CON  
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 CARTER MOTOR CO., 1608 N. Milwaukee Ave., Chicago, Ill.—DYN, DC  
 EICOR, INC., 515 S. Laffin St., Chicago, Ill.—AC, CON, DC, DYN, ENG  
 ELECTRIC SPECIALTY CO., Stamford, Conn., "Esco"—CON, DYN, DC  
 ESCO—Electric Specialty Co.  
 F.E.C.—Foraco Corp.  
 FORACO CORP., 2111 Woodward Ave., Detroit, Mich., "F.E.C."—AC, ENG  
 HETRO ELECTRICAL INDUSTRIES, INC., 4811 Bavenwood Ave., Chicago, Ill.—AC, CON, DC, ENG  
 JANETTE MFG. CO., 556-558 W. Monroe St., Chicago, Ill.—AC, CON, DC  
 KATO ENGINEERING CO., 530 No. Front St., Mankato, Minn., "Kato"—AC, CON, DC, DYN  
 LAUSON CO., New Holstein, Wis.—ENG  
 LEARADIO—Lear Development Co.  
 LEAR DEVELOPMENT CO., 121 W. 17th St., New York, N. Y., "Learadio"—AC, ENG

D. W. ONAN & SONS, 591 Royalston Ave., Minneapolis, Minn., "Onan"—AC, DC  
 PHOTOPHONE—RCA Mfg. Co.  
 PIONEER GEN-E-MOTOR CORP., 466 W. Superior St., Chicago, Ill., "Pioneer"—AC, CON, DYN  
 POTTER CONDENSER CO., 1950 Sheridan Rd., North Chicago, Ill.—AC  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA Photophone"—CON  
 TELETRAN PRODUCTS CO., 2233 University Ave., St. Paul, Minn.—DYN  
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Battery charging tubes . . . . . B  
 Gas filled tubes . . . . . G  
 Metallic rectifiers . . . . . M  
 Mercury arc . . . . . MA  
 Power units complete . . . . . PU  
 Vacuum tubes (receiving excluded) . V

AMERICAN COMMUNICATIONS CORP., 1650 Broadway, New York, N. Y., "American"—G, V  
 VICTOR J. ANDREW, 6429 S. Laverne Ave., Chicago, Ill.—PU  
 ARCO TUBE CO., 227 Central Ave., Newark, N. J.—B, V  
 ARLAVOX MFG. CO., 430 S. Green St., Chicago, Ill.—G  
 B-L ELECTRIC MFG. CO., 19th & Washington Aves., St. Louis, Mo., "B-L"—M, PU  
 CETRON—Continental Electric Co.  
 CINEMA ENGINEERING CO., 7606 Santa Monica Blvd., Hollywood, Calif., "Cinema"—PU  
 COLLINS RADIO CO., 2920 First Ave., Cedar Rapids, IA.—PU, V  
 CONTINENTAL ELECTRIC CO., Geneva, Ill., "Cetron"—B, MA

## B-L METALLIC RECTIFIERS

for  
RADIO, TELEVISION, AND  
ELECTRONIC APPLICATIONS

B-L RECTIFIERS are dry, compact, rugged, all-metal units for:

- Relays and Solenoids
- Telephones
- Tube filaments
- Battery charging
- Speaker fields
- Exciter lamps
- Burglar alarms

and many other purposes.

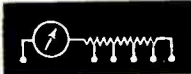


Write for literature on your company letterhead. Descriptive booklet containing useful data free to manufacturers and distributors.

THE BENWOOD-LINZE CO.  
ST. LOUIS, MO.

DELCO—United Motors Service  
 ECCO HIGH FREQUENCY CORP., 120 W. 20th St., New York, N. Y.—PU  
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York, N. Y., "Ferranti"—PU  
 INTERNATIONAL TRANSFORMER CO., 39 W. 20th St., New York, N. Y.—PU  
 KAAR ENGINEERING CO., 619 Emerson St., Palo Alto, Calif., "Kaar"—PU  
 P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind., "Mallory Dry Disc"—M. PU  
 RECTIFIER—Raytheon Mfg. Co.  
 RADIART CORP., Shaw Ave. at 133rd St., Cleveland, Ohio—PU  
 RADIO RECEPTOR CO., INC., 251 W. 19th St., New York, N. Y., "Radio Receptor"—PU  
 RAYTHEON MFG. CO., 190 Willow St., Waltham, Mass., "Rectifier"—PU  
 STANCOR—Standard Transformer Corp.  
 STANDARD TRANSFORMER CORP., 1500 N. Halsted St., Chicago, Ill., "Stancor"—M, PU  
 UNITED CINEPHONE CORP., United Electronic Ind. Div., 43-37 33rd St., Long Island City, N. Y.—PU, V  
 UNITED MOTORS SERVICE, W. 3044 Grand Blvd., Detroit, Mich., "Delco"—PU  
 UNITED TRANSFORMER CORP., 150 Varick St., New York, N. Y.—PU  
 WESTINGHOUSE ELEC. & MFG. CO., Chicopee Falls, Mass.—MA

## SERVICING EQUIPMENT



Adapters	AD
Audio oscillators	AO
Cathode ray oscillographs	CRO
Condenser testers	CT
Crystal calibrators	CC
Decade boxes (resistance)	DB
Frequency meters	FM
Impedance bridges	IB
Instrument fuses	F
Meters	M
Multi-meters	MM
Neon indicators	NI
Osc. frequency modulators	MOD
Ohmmeters	OHM
Output indicators	OI
Resistance bridges	RB
Set analyzers	SA
Signal generators	SG
Speaker testers	SPK
Tube testers	TT
Tuning wands	TW
Vacuum tube voltmeters	VTV

ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass.—AD  
 AEROVOX CORPORATION, New Bedford, Mass.—Interference analyzer  
 AMERICAN PHENOLIC CORP., 1250 W. Van Buren St., Chicago, Ill., "Amphenol"—AD  
 AMERICAN RADIO HARDWARE CO., 476 Broadway, New York, N. Y.—TW  
 APPROVED TECHNICAL APPARATUS CO., 57 1/2 Day St., New York, N. Y.—CT, MM, OHM, OI, SA, SG, TT, VTV  
 ASSOCIATED RESEARCH, INC., 16 N. May St., Chicago, Ill.—CT, DB, FM, IB, M, MM, NI, OHM, RB, SA, TT, VTV, VT  
 H. J. BERNARD, 319 Third Ave., Brooklyn, N. Y.—AO, CRO, CT, FM, IB, MM, OHM, OI, RB, SA, SG, TT, VTV  
 L. S. BRACH MFG. CORP., 55 Dickerson St., Newark, N. J., "Test-O-Lite"—NI  
 WM. W. L. BURNETT RADIO LABORATORY, 4814 Idaho St., San Diego, Calif.—CC, FM  
 BURTON-ROGERS CO., 755 Boylston St., Boston, Mass., "Hoyt," "Burton-Rogers"—AD, M, MM, SA, SG, TT, OHM, OI  
 CARRON MFG. CO., 415 S. Aberdeen St., Chicago, Ill., "Carron"—TW, Kits  
 CHANALYST—Service Instruments, Inc.  
 CLOUGH-BRENGLE CO., 2815 W. 19th St., Chicago, Ill., "Clough-Brengle"—AO, CRO, CT, M, MM, MOD, OHM, OI, RB, SA, SG, SPK, TT, VTV, VT  
 CONSOLIDATED WIRE & ASSOC. CORPS., Peoria & Harrison Sts., Chicago, Ill.—CT, OI, RB, SG, TT  
 DAYCO RADIO CORP., 201 Hickory St., Dayton, Ohio



**J**UST as the small case often holds the finest watch or the finest camera, the Simpson Testing Instruments illustrated here are one more example of "good things coming in small packages." They are the final answer to every need for compact but versatile testers—built for life-time service—moderately priced.

Like the larger Simpson Testers, these smaller instruments reflect the beauty of design, the unerring accuracy, and the downright dollar value that could only have been built into them by Ray Simpson and a group of associates who have made a life study of instrument building.

There is a Simpson Instrument covering every conceivable requirement—each built to that high standard which can only be described as Simpson. Ask for complete descriptions. See them at your jobber's.

### SIMPSON ELECTRIC CO. 5202 Kinzie St., Chicago, Ill.



#### MODEL 240 "HAMMETER"

A remarkable value in a pocket size (5 1/4 x 2 7/8 x 1 3/4") 3,000 volt, self-contained tester. Four A.C. and five D.C. voltage ranges at 1,000 ohms per volt; 0-15 - 150 - 750 - milliamps; 0-3000 - 300,000 ohms.  
Your price... **\$14.75**



#### MODEL 333 TUBE TESTER

The "most" tube tester ever offered at the price. Tests all tubes including new Loctal and other late types. Has double-filament switching. Only 7 1/2 x 10 x 5". Your price..... **\$26.50**



**MODEL 215**—The first small instrument with big 4 1/2 inch meter. Five A.C. and D.C. voltage ranges—five decibel ranges—0 - 10 - 100 - 500 milliamps; 0-250 microamps; 0-4000 - 400,000 ohms; 0-4 megohms.  
Your price... **\$25.75**

**MODEL 230**—Smallest A.C. - D.C. instrument on the market, yet has ranges of 0-10 - 250 - 1000 A.C. volts; 0 - 10 - 50 - 250 - 1000 D.C. volts; 0-10 - 50 - 250 D.C. milliamps; 0-1000 - 100,000 ohms.  
Your price... **\$14.25**



**MODEL 205**—Pocket size, but highest quality. Highest resistance ranges ever made in instrument of this size, 0-2000 - 200,000 ohms - 2 megohms. Volts, 0 - 10 - 50 - 250 - 1,000 D.C. only; milliamps, 0-10 - 500.  
Your price..... **\$13.25**

See them  
at your  
jobber

# SIMPSON

INSTRUMENTS THAT STAY ACCURATE

Triplett is the leading manufacturer of volt-ohm-milliammeters, combining 2% precision accuracy with economical prices

**TRIPLETT**  
MASTER UNIT



MODEL  
1200-A  
DEALER NET  
**\$23.83**

## The Tilting Twin Meter MAKES THIS VOLT-OHM- MILLIAMMETER RADIO'S No. 1 All Around Tester

### EXCLUSIVE TRIPLETT FEATURES:

- Resistance Readings to 3 Megohms
- Separate AC and DC Instruments in Tilting Twin Case, Accuracy of Each 2%
- Selector Switch With Contact Error Less Than 1/2% on M.A.

Considering its usefulness, flexibility and economical price, Triplett Model 1200-A, with its two separate meters is a natural choice for Radio's No. 1 all-around Tester. Every service dealer should own either the 1200-A or the adaptation of this model for special purposes as listed below.  
Readings: D.C. Volts—0-10-50-250-500-1000 Volts at 2000 ohms per volt; 1-10-50-250 M.A.; low ohms, backup circuit, 1/2 to 500; 1500 ohms, 1 1/2 and 3 megohms. A.C. 0-10-50-250-500-1000 Volts.

### OTHER MODELS

Model 1200-B . . . same as 1200-A but with DC movement and copper oxide rectifier for AC readings. Dealer Net . . . \$29.33

Model 1200-C . . . same as 1200-A but with 5000 ohms per volt DC. Dealer Net \$26.83

Model 1200-E . . . same as 1200-A but with 25,000 ohms per volt DC. Dealer Net \$31.17

Model 666 . . . Popular Pocket Size Volt-Ohm-Milliammeter. Dealer Net . . . \$14.00



THE TRIPLETT ELECTRICAL INSTRUMENT CO.  
193 Harmon Ave., Bluffton, Ohio

—Please send me more information  1200-A;  
 1200-B;  1200-C;  1200-E;  666.

Name .....

Address .....

City .....

State .....

## SERVICING EQUIPMENT—Cont'd

DEPENDABLE—Radio City Products Co., Inc.

DETERMOMM—Ohmite Mfg. Co.

TOBE DEUTSCHMANN CORP., Canton, Mass., "Tobe"  
—CT, IB

ALLEN B. DUMONT LABORATORIES, INC., 2 Main  
Ave., Passaic, N. J., "Dumont"—CRO, MOD

EXCEL—Hickok Electrical Instrument Co.

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza,  
New York, N. Y., "Ferranti"—Electrostatic volt-  
meter

HICKOK ELECTRICAL INSTRUMENT CO., 10514  
Dupont Ave., Cleveland, Ohio, "Excel," "Hickok"—  
AO, CRO, CT, FM, M, MM, MOD, OHM, OI, SA,  
SG, SPK, TT, VTV, VT

HOYT—Burton-Rogers Co.

ICA—Insuline Corp. of America

INSULINE CORP. OF AMERICA, 25 Park Place, New  
York, N. Y., "ICA"—AD, AO, M, TW, VTV, v1

JACKSON ELECTRIC INSTRUMENT CO., 129 Wayne  
Ave., Dayton, Ohio, "Jackson"—CRO, CT, MM,  
MOD, OHM, SA, SG, TT

LITTLEFUSE, INC., 4238 Lincoln Ave., Chicago, Ill.  
—F, NI

JOHN MECK INSTRUMENTS, 164 N. May St., Chi-  
cago, Ill., "Meck"—AO, DB, CRO, CT, MOD,  
OHM, OI, RB, SA, SG, TT

MEISSNER MFG. CO., 7th & Belmont Sts., Mt. Car-  
mel, Ill.—TW

MILLION RADIO & TELEVISION LABORATORIES,  
671 W. Ohio St., Chicago, Ill., "Million"—AD,  
AO, MM, OHM, OI, SA, SG, TT, VT

MONARCH MFG. CO., 3341 Belmont Ave., Chicago,  
Ill., "Monarch"—SG

MUTER CO., 1255 S. Michigan Ave., Chicago, Ill.,  
"Muter"—DB, RB

OHMITE MFG. CO., 4835 W. Flournoy St., Chicago,  
Ill., "Determinohm"—DB

PHILCO RADIO & TELEVISION CORP., Tioga & C  
Sts., Philadelphia, Pa., "Philco"—AO, MM, OI,  
SG, SPK, TT

POTTER CONDENSER CO., 565 W. Washington, No.  
Chicago, Ill.—CT

PRECISION APPARATUS CORP., 821 E. New York  
Ave., Brooklyn, N. Y., "Precision"—MM, OHM,  
SA, SG, TT, VTV

RADIART CORP., Shaw Ave., at 133rd St., Cleve-  
land, Ohio—VT

RADIO CITY PRODUCTS CO., INC., 88 Park Pl.,  
New York, N. Y., "Dependable"—AD, AO, CRO,  
CT, MM, SA, SG, TT

RADIOTECHNIC LABORATORY, 1328 Sherman Ave.,  
Evanston, Ill., "R-T-L"—TT

RANGER-EXAMINER—Readrite Meter Works

RCA MFG. CO., Front & Cooper Sts., Camden, N. J.,  
"RCA"—CC, FM, NI, OI, TW, VTV, VT, AD, AO,  
CRO, CT, IB, MOD, RB, SG

READRITE METER WORKS, 136 E. College Ave.,  
Bluffton, Ohio, "Ranger-Examiner," "Readrite"—  
AD, CT, M, MM, OI, SA, SG, TT

ROTO-RANGER—Simpson Electric Co.

R-T-L—Radiotechnic Laboratory

SERVICE INSTRUMENTS, INC., 406 Fourth Ave.,  
New York, N. Y., "Chanalyst"—VTV

SHALLCROSS MFG. CO., 10 Jackson Ave., Colling-  
dale, Pa., "Shallcross"—DB, IB, MM, OHM, OI,  
RB, SA

SIMPSON ELECTRIC CO., 5216 W. Kinzie St., Chi-  
cago, Ill., "Simpson," "Roto-Ranger"—M, MM,  
OHM, SA, SG, TT

SOLAR MFG. CORP., 599 Broadway, New York, N. Y.,  
"Solar"—CT

SPRAGUE PRODUCTS CO., Beaver St., North  
Adams, Mass.—Interference analyzer

SUNDT ENGINEERING CO., 4238 Lincoln Ave., Chi-  
cago, Ill.—NI, TV

SUPERIOR INSTRUMENTS CO., 139 Cedar St., New  
York, N. Y.—SG, CT

SUPREME INSTRUMENTS CORP., 414 Howard St.,  
Greenwood, Miss., "Supreme"—AD, AO, CRO, CT,  
DB, IB, M, MM, MOD, OHM, OI, RB, SA, SG, TT

TACO—Technical Appliance Corp.

TECHNICAL APPLIANCE CORP., 17 E. 16th St.,  
New York, N. Y., "Taco"—OI

TELEVISO CO., 341 N. Pulaski Rd., Chicago, Ill.—  
AO, DB, SG, VTV

TEST-O-LITE—L. S. Brach Mfg. Corp.

THORDARSON ELECTRIC MFG. CO., 500 W. Huron  
St., Chicago, Ill.—CRO kit, VTV

TOBE—Tobe Deutschmann Corp.

TRIPLETT ELECTRICAL INSTRUMENT CORP., 122  
Main St., Bluffton, Ohio, "Triplett"—AD, AO, CT,  
M, MM, MOD, OI, SA, SG, TT, VTV, CRO, OHM,  
VT

TRIUMPH MFG. CO., 4017 W. Lake St., Chicago,  
Ill., "Triumph"—AO, CRO, CT, MM, MOD, OHM,  
SG, TT, VTV, VT, AD, IB, OI, RB, SA

ULTRAMAR MFG CO., 303 W. Monroe St., Chicago,  
Ill.—CC, DB, FM, OI, SG

UNIT REPRODUCERS MFG. CO. 999 E. Main St.,  
Rochester, N. Y., "Hydro"—AD

UNITED MOTORS SERVICE, 3044 W. Grand Blvd.,  
Detroit, Mich., "United Motors"—CRO, MM, MOD,  
OHM, OI, SA, SG, SPK, TT, CT

UNITED SOUND ENGINEERING CO., 2233 Univer-  
sity Ave., St. Paul, Minn., "U.S.E."—AO, CRO

U.S.E.—United Sound Engineering Co.

EARL WEBBER CO., 1313 W. Randolph St., Chi-  
cago, Ill., "Webber"—CT, M, SA, SG, TT, VT,  
CRO, MM, OHM, SPK

WESTINGHOUSE ELECTRIC CO., Orange St., Newark,  
N. J.—M, MM

WESTON ELECTRICAL INSTRUMENT CORP., 614  
Frelinghuysen Ave., Newark, N. J., "Weston"—  
AD, AO, CT, M, MM, OHM, OI, SA, TT, VTV

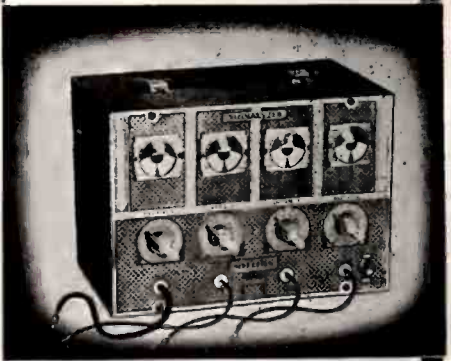
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## VACUUM TUBE VOLTMETER

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Net Price **\$24.95**  
Only .....

With new push-button range selection system.  
Reads up to 3,000 volts on 9 scales. Measures  
any type of voltage. Does not disturb circuit  
under test. Indispensable to the serviceman.



## SIGNALYZER FOR "CHANNEL" TESTING

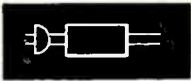
MODEL SY  
Net Price **\$24.95**  
Only .....

Checks RF, IF, AF and DC voltages in modern  
channel testing. Checks intermittent or dead  
sets. Co-axial cable. Does not disturb circuit  
under test. Complete with tubes. The last word  
in modern test equipment. Literature on request.

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RADIO AND TELEVISION LAB.  
697 W. Ohio St. Chicago, Ill.

## LINE FILTERS



Power filters . . . . . P  
Radio set . . . . . S

- AEROVOX CORP., 70 Washington St., Brooklyn, N. Y., "Aerovox"—P, S  
AMERICAN COMMUNICATIONS CORP., 1850 Broadway, New York, N. Y., "American"—P  
AUTOMATIC ELECTRICAL DEVICES CO., 324 E. 3rd St., Cincinnati, Ohio, "Filterad"—P  
AUTOMATIC ELEC. MFG. CO., 729 S. Front St., Mankato, Minn.—P  
L. S. BRACH MFG. CORP., 55 Dickerson St., Newark, N. J.—P  
CAVALCADE RADIO MFG. CO., 271 7th St., San Francisco, Calif., "Cavalcade"—S  
COLE RADIO WORKS, 86 Westville Ave., Caldwell, N. J., "Cole"—P  
CONSOLIDATED WIRE & ASSOC. CORP., Peoria & Harrison Sts., Chicago, Ill.  
CONTINENTAL CARBON, INC., 13900 Lorain Ave., Cleveland, Ohio, "Continental," "Filternoys"—P, S  
TOBE DEUTSCHMANN CORP., Canton, Mass., "Tobe Filterette"—P, S  
DUMONT ELECTRIC CO., INC., 514 Broadway, New York, N. Y.—P, S  
ELIM-O-STAT—Solar Mfg. Corp.  
ESPEY MFG. CO., INC., 67 Irving Pl., New York, N. Y., "Si-len-ser"  
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York, N. Y., "Ferranti"  
FILTERAD—Automatic Electrical Devices Co.  
FILTERETTE—Tobe Deutschmann Corp.  
FILTERNOYS—Continental Carbon, Inc.  
FILTERVOLDIS—Insuline Corp. of America  
GENERAL WINDING CO., 254 W. 31st St., New York, N. Y., "Gen-Win"—P, S  
GEN-WIN—General Winding Co.  
GIRARD-HOPKINS, 1437 23rd Ave., Oakland, Calif.—S  
INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y., "ICA Filtervolds"—P, S  
INTERNATIONAL TRANSFORMER CO., 39 W. 20th St., New York, N. Y.—P  
MEISSNER MFG. CO., 7th & Belmont, Mt. Carmel, Ill.—S  
J. W. MILLER CO., 5917 S. Main St., Los Angeles, Calif., "Miller"—P, S  
MONARCH MFG. CO., 3341 Belmont Ave., Chicago, Ill., "Monarch"—S  
PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa.—P, S  
PHILMORE MFG. CO., 133 University Place, New York, N. Y., "Philmore"—P, S  
POTTER CONDENSER CO., 1950 Sheridan Rd., North Chicago, Ill.—P, S  
RACON ELECTRIC CO., INC., 52 E. 19th St., New York, N. Y., "Racon"—P  
RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"  
SI-LEN-SER—Espey Mfg. Co., Inc.  
SNYDER, INC., Noble & Darien Sts., Philadelphia, Pa.—P  
SOLAR MFG. CORP., 599 Broadway, New York, N. Y., "Elim-O-Stat"—P, S  
TACO—Technical Appliance Corp.  
TECHNICAL APPLIANCE CORP., 17 E. 16th St., New York, N. Y., "Taco"—S  
TOBE FILTERETTE—Tobe Deutschmann Corp.  
UNITED TRANSFORMER CORP., 150 Varlek St., New York, N. Y., "UTC"—P  
UTC—United Transformer Corp.

## PLASTIC MOLDERS

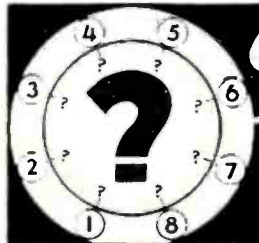


Cabinet molders . . . . . C  
Small parts molders . . . . . P

- AIREX—Electronic Products Co.  
ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass.—P  
AMERICAN PHENOLIC CORP., 1250 W. Van Buren St., Chicago, Ill., "Amphenol"—P  
AMPHENOL—American Phenolic Corp.  
ASSOCIATED ATTLEBORO MFRS., INC., Attleboro, Mass.

- AUBURN BUTTON WORKS, Auburn, N. Y.—C  
BARBER-COLMAN CO., Rockford, Ill.—P  
BOONTON MOLDING CO., Boonton, N. J.  
CHICAGO MOLDED PRODUCTS CO., 2140 Walnut St., Chicago, Ill.—C, P  
COLT'S PATENT FIRE ARMS MFG. CO., Hartford, Conn.  
HARRY DAVIES CO., 1428 N. Wells St., Chicago, Ill.—C, P  
DIEMOLDING CORP., Canastota, N. Y.—P  
DUREZ—General Plastics, Inc.  
ELECTRONIC PRODUCTS CO., 5356 E. 9th St., Los Angeles, Calif., "Airex"—P  
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa., "Erie"—P  
ERIE—Erie Resistor Corp.  
GENERAL PLASTICS, INC., North Tonawanda, N. Y., "Durez"—C, P  
INSULATION PRODUCTS CO., Richland St. & Annon Way, Homewood Station, Pittsburgh, Pa.—P  
INSUROK—The Richardson Co.  
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 So. Cicero Ave., Chicago, Ill., "Kellogg"—P

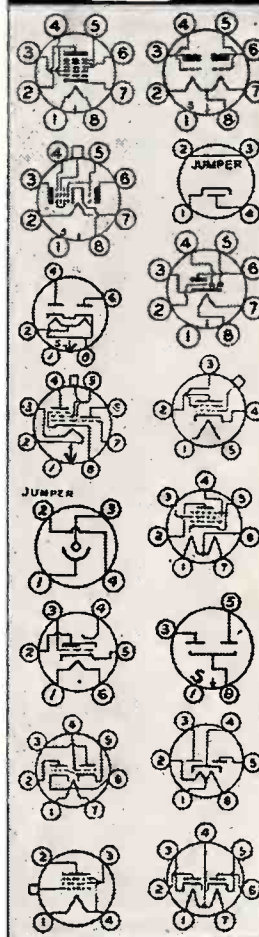
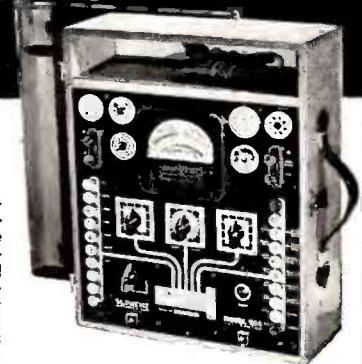
- KEYSTONE SPECIALTY CO., 1373 1/2 Cove Ave., Lakeland, Cleveland, Ohio—P  
KURZ-KASCH CO., Dayton, Ohio—C, P  
MEISSNER MFG. CO., 7th & Belmont, Mt. Carmel, Ill.—P  
ELMER E. MILLS CORP., 812 W. Van Buren St., Chicago, Ill.—P  
RECTO MOLDED PRODUCTS, INC., Brownway & B & O RR, Oakley, Cincinnati, Ohio  
REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif., "Remler"—C, P  
REMLER—Remler Co., Ltd.  
RESINOX CORP., 230 Park Ave., New York, N. Y.—Plastic molder  
RICHARDSON CO., 2738 Lake St., Melrose Park, Chicago, Ill., "Insurok"—C, P  
SYRACUSE ORNAMENTAL CO., Syracuse, N. Y.—C, P  
UNIVERSAL MOLDING CO., 16th & Vermont Sts., San Francisco, Calif.—C, P  
WARSAW BUTTON CO., 325 W. Huron St., Chicago, Ill.  
WATERTOWN MFG. CO., 127 Echo Lake Rd., Watertown, Conn.—C, P



## CAN YOU TEST THE TUBES

they'll announce

NEXT MONTH?



New filament arrangements just announced and to be announced are obsoleting thousands of tube testers. The demand for a better tube, one which would perform at higher frequencies, necessitated a mechanical change in tube design which resulted in the single-ended tube. This same mechanical change, primarily developed for television, has been incorporated in radio receiving tubes because of its many advantages. In changing the ordinary tube to a single-ended tube, filament termination can not be held constant; the grid gets the most consideration and the filaments have to look out for themselves.

At left are shown a few tube bases with different filament terminations. There are at present fifteen filament arrangements. But remember, there are 145 different filament terminations possible without considering center-tapped type filaments. Center tapped filament combination possibilities would raise this figure to several hundred. Most tube testers in use today are already obsolete—the oft-bragged about spare socket is of little or no help, and the constant purchase of adapters will soon equal the original cost of the tester. So the average service-man must buy a new tube tester—not just for TODAY'S tubes but for the tubes which will be announced next month or next year.

ONLY SUPREME HAS THE PATENTED "DOUBLE FLOATING" FILAMENT RETURN SELECTOR PUSH-BUTTON SYSTEM!

No matter how filament terminations roam—no matter if they are center tapped or not—the SUPREME MODEL 504 "TOMORROW'S TUBE AND SET TESTER" will check them. With SUPREME'S unique and exclusive "Double Floating" Filament Return Circuit, you just press a button and the tube's filament is automatically connected across the filament potential supply, regardless of the tube's base terminations.

The Model 504 is not only the world's most complete tube tester but it is also a complete set tester and a complete condenser analyzer. You need full information on the Model 504 so we urge you to see this remarkable value in tube and set testing equipment at your jobber's TODAY, or, write for full literature on this and many other completely new 1939 models of SUPREME test equipment. Brand new literature just off the press! Model 504 cash price, \$55.50; or \$5.09 cash and 11 monthly payments of \$5.09.

NOTICE: Even if you wrote us last week, you still don't have the new week, you still don't have the new week, illustrated literature, just off the press, covering the 504 and SUPREME'S complete 1939 line. Write for it TODAY!

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## INTER-COMMUNICATION SET

Plug-in and Talk • No Installation

Fool Proof  
Fully Licensed  
Guaranteed



Room to Room  
Upstairs and  
Down  
House to House  
Children's  
Playroom  
Nursery or  
Sleeping Quarters  
House or Garage

Operates on 110 volts AC or DC #47 Master Unit and Sub-Station Complete with

Wire READY-TO-USE. Will operate efficiently with added wire up to 500 feet without additional attachments. Weight 8 lbs. complete in air-cushioned cartons.

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COMPLETE

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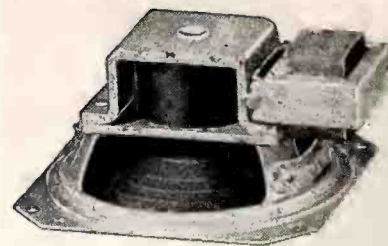
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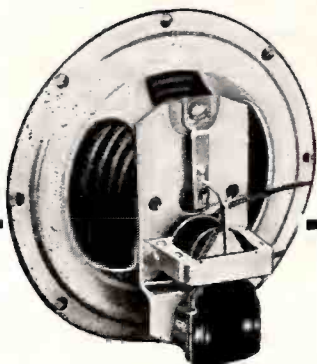
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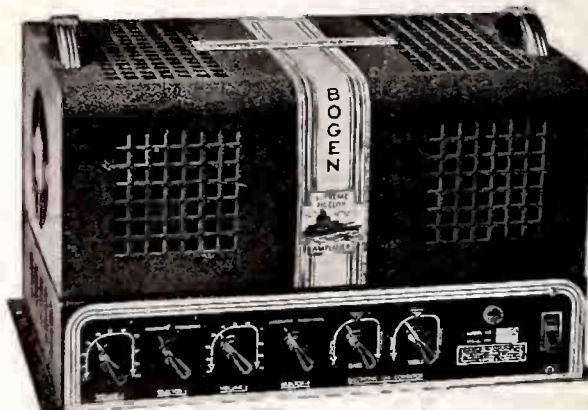
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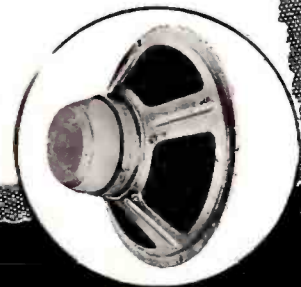
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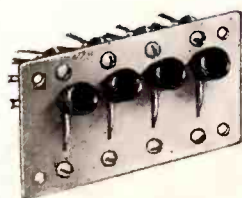
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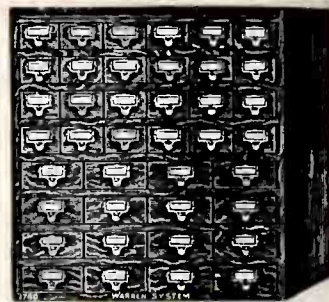


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 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark, N. J., "Weston"—R, TS  
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 NATIONAL MILL SUPPLY CO., 207 E. Columbia St., Fort Wayne, Ind.—A, C, P  
 NEWARK TRANSFORMER CO., 17 Frelinghuysen Ave., Newark, N. J.—AT, AU, CT  
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Crystals	CR
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Frequency measurements	FM
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 GENERAL ELECTRIC CO., Schenectady, N. Y.—P  
 GENERAL ENGINEERS, 2241 Garrett Rd., Upper Darby, Pa., "General Engineers"—AM, AV, COM, FC, M, P, SA, TM  
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 D. H. HARRELL, 7731 Essex Ave., Chicago, Ill.—A, VR  
 HARVEY RADIO LABORATORIES, INC., 25 Thorn-dike St., Cambridge, Mass., "Harvey"—AM, AV, COM, M, P, SA  
 HEINTZ & KAUFMAN, South San Francisco, Calif.—CON  
 HIPOWER CRYSTAL CO., 2035 W. Charleston St., Chicago, Ill., "Hipower"—CR  
 HOKE VERTICAL RADIATORS, 135 S. Market St., Petersburg, Va.—I, T  
 IDECO—The International Derrick & Equip. Co.  
 INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y.—AM, AK, A, CR, I  
 THE INTERNATIONAL DERRICK & SUPPLY CO., 375 Michigan Ave., Columbus, Ohio, "Ideco"—T, VR  
 CHARLES F. JACOBS, 270 Lafayette St., New York, N. Y.—Antenna Spreader  
 JEFFERSON-TRAVIS RADIO MFG. CORP., 198 Milburn Ave., Baldwin, N. Y., "Jefferson-Travis"—M, P  
 E. F. JOHNSON, Waseca, Minn., "Johnson Q"—A  
 KAAR ENGINEERING CO., 619 Emerson St., Palo Alto, Calif., "Kaar"—AM, AV, COM, FC, M, P  
 KNIGHT—Allied Radio Corp.  
 LAFAYETTE—Wholesale Radio Service Co., Inc.  
 LEAR DEVELOPMENT CO., 121 W. 17th St., New York, N. Y.—COM  
 LEICHTNER ELECTRIC CO., 4120 S. Wayne Ave., Fort Wayne, Ind.—Rotating Device for Beam Antennas  
 LINCOLN RADIO & TELEVISION CORP., 841 Jackson Blvd., Chicago, Ill.—AM  
 JOHN E. LINGO & SON, INC., 28th St. & Buren Ave., Camden, N. J.—A, T, VR  
 LOCKE INSULATOR CORP., S. Charles & Cromwell Sts., Baltimore, Md.—I  
 MARINE RADIO CORP., 91 Third Ave., New York, N. Y., "Marine"—AM, AV, BC, COM, M, SA  
 MILES REPRODUCER CO., INC., 812 Broadway, New York, N. Y.—AM, AV, BC, COM, M, P, SA  
 MIMS RADIO CO., P.O. Box 504, Texarkana, Ark.—A  
 PEERLESS RADIO MFG. CO., Division St. & Broadway, Albany, N. Y., "Peerless"—AM, AK, A, AV, BC, COM, CR, FC, M, P, SA  
 PETERSEN RADIO CO., Council Bluffs, Ia., "P. R. Crystals"—CR  
 PHOENIX RADIO PRODUCTS LAB., 2040 No. Holly Ave., Chicago, Ill.—AV  
 PIEZO ELECTRIC LABORATORIES, 612 Rochland Ave., New Dorp, N. Y.—BC, COM, CR, FC, SA, TM  
 P. R. CRYSTALS—Petersen Radio Co.  
 PRECISION CRYSTAL LABS., 1211 Liberty St., Springfield, Mass.—CR  
 PREMIER CRYSTAL LABS., INC., 55 Park Row, New York, N. Y.—CR, FX, FM, TM  
 PROGRESSIVE III—General Transformer Corp.  
 RADIO ENGINEERING LABS., INC., 100 William Ave., Long Island City, N. Y.—AM, BC, COM  
 RADIO ENGINEERING & MFG. CO., 26 Journal Sq., Jersey City, N. J., "Remco"—AM, AK, BC, COM, CC, FC, SA, TM  
 RADIO LABORATORIES, INC., 2701 California Ave., Seattle, Wash.—COM, FC, M, P  
 RADIOMARINE CORP. OF AMERICA, 75 Varick St., New York, N. Y.—COM, M  
 RADIO RECEPTOR CO., INC., 251 W. 19th St., New York, N. Y., "Radio Receptor"—A, AV, COM, FC, M, P, SA, T, TM, VR  
 RADIO TELEVISION INDUSTRIES CORP., 2 Linden St., Reading, Mass.—AM, AV, BC, COM, CC, FC, M, P, SA, TM

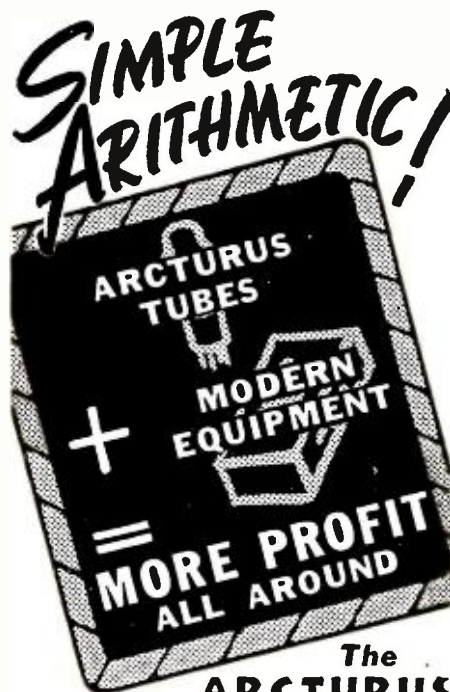
RADIO TRANSCEIVER LABS., 36-27 115th St., Richmond Hill, N. Y., "Radio Transceiver Labs.—AM, COM, UHF Trans.  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—AV, BC, CC, CR, FC, FM, M, P, SA, TM, AM, COM, BC  
 REMCO—Radio Engineering & Mfg. Co.  
 REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif., "Remler"—SA  
 SCIENTIFIC RADIO SERVICE, 124 Jackson Ave., University Park, Md.—CR  
 SKAGGS TRANSFORMER CO., 5894 Broadway, Los Angeles, Calif.—AM, AK, AV, BC, COM, CC, M, P, SA, TM  
 SOUND PRODUCTS, 704 N. Curson Ave., Hollywood, Calif., "Sound Products"—COM, M, SA  
 STANDARD TRANSFORMER CORP., 1500 N. Halsted St., Chicago, Ill.—AK  
 STREAMLINER—General Transformer Corp.  
 TECHNICAL PRODUCTS INTERNATIONAL, 135 Liberty St., New York, N. Y., "TechniPower"—AM, AK, SA  
 TECHNIPOWER—Technical Products International  
 TELEVISO CO., 341 N. Pulaski Rd., Chicago, Ill.—AM, AV, BC, COM, CC, M, P, SA, TM  
 TEMCO TRANSMITTERS—Transmitter Equipment Mfg Co.  
 TOPPING—Vihraloc Mfg. Co.  
 TRANSDUCER CORP., 30 Rockefeller Plaza, New York, N. Y., "Transducer"—VR  
 TRANSFORMER CORP. OF AMERICA, 69 Wooster St., New York, N. Y., "Clarion"—AM, COM, SA  
 TRANSMITTER EQUIPMENT MFG. CO., 130 Cedar St., New York, N. Y., "Temco Transmitters"—AM, AV, BC, COM, M, P, SA  
 TRIUMPH MFG. CO., 4017 W. Lake St., Chicago, Ill.—AV, FC, M, TM  
 UNITED CINEPHONE CORP., Div. United Electronic Industries, 43-37 33rd St., Long Island City, N. Y.—AV, BC, SA  
 UNITED TRANSFORMER CORP., 72 Spring St., New York, N. Y.—AM, AK  
 UTAH RADIO PRODUCTS CO., 320 Orleans St., Chicago, Ill., "Utah"—AK  
 VIBRALOC MFG. CO., 3691 Mission St., San Francisco, Calif., "Topping"—AM, M, P  
 MONTGOMERY WARD & CO., W. Chicago & N. Larr Sts., Chicago, Ill.—AM, AK, A, COM, CR, I, SA  
 WASHINGTON INSTITUTE OF TECHNOLOGY, McLaughlin Bldg., Washington, D. C.—FM  
 WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y., "Western Electric"—A, AV, BC, COM, CR, FC, M, P, SA  
 WESTINGHOUSE ELECTRIC CO., Chicopee Falls, Mass.—COM, P  
 WHOLESALE RADIO SERVICE CO., INC., 100 Sixth Ave., New York, N. Y., "Lafayette"—AM

## TUBES



Cathode-ray . . . . . CR  
 Industrial . . . . . I  
 Photo-cells . . . . . PC  
 Receiving (including rectifiers) . . . . . R  
 Transmitting . . . . . T  
 Voltage control . . . . . VC

AIREX—Electronic Products Co.  
 AMPEREX ELECTRONICS PRODUCTS CORP., 79 Washington St., Brooklyn, N. Y., "Amperex"—I, PC, T  
 ARCO TUBE CO., 227 Central Ave., Newark, N. J.—PC, R, T  
 ARCTURUS RADIO TUBE CO., 720 Frelinghuysen Ave., Newark, N. J., "Arcturus"—R  
 CETRON—Continental Electric Co.  
 CHAMPION RADIO WORKS, Div. of Consolidated Electric Lamp Co., Danvers, Mass., "Champion"—R  
 COLLINS RADIO CO., 2920 First Ave., Cedar Rapids, Ia.—R, T  
 CONTINENTAL ELECTRIC CO., Geneva, Ill., "Cetron"—I, PC  
 CROSLLEY RADIO CORP., 1329 Arlington St., Cincinnati, Ohio—R  
 CUNNINGHAM—Radiotron Div., RCA Mfg. Co.  
 DELCO—United Motors Service  
 ALLEN B. DuMONT LABORATORIES, INC., 2 Main Ave., Passaic, N. J., "Dumont"—CR  
 DURESITE—World Bestco Corp.



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(\*Offer good in U.S.A. only)

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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

## TUBES—Cont'd

HUGH H. EBY, INC., 2066 Hunting Park Ave., Philadelphia, Pa.—PC  
 EIMAC—Eitel-McCullough, Inc.  
 EITEL-McCULLOUGH, INC., 798 San Mateo Ave., San Bruno, Calif., "Eimac"—I, T  
 ELECTROCELL—F. Loewenberg  
 ELECTRONIC PRODUCTS CO., 5356 E. 9th St., Los Angeles, Calif., "Airex"—CR, I, T  
 FEDERAL TELEGRAPH CO., 200 Mt. Pleasant Ave., Newark, N. J., "Federal"—T  
 GAMMATRON—Heintz & Kaufman, Ltd.  
 GENERAL ELECTRIC CO., 1285 Boston Ave., Bridgeport, Conn.—R  
 GENERAL ELECTRIC CO., Schenectady, N. Y.—CR, I  
 HEINTZ & KAUFMAN, South San Francisco, Calif., "Gammatron"—T  
 HYGRADE SYLVANIA CORP., 500 Fifth Ave., New York, N. Y., "Sylvania"—R, VC  
 HYTRON CORP., 76 Lafayette St., Salem, Mass., "Hytron"—I, R, T  
 KEN-RAD TUBE & LAMP CORP., INC., Owensboro, Ky., "Ken-Rad"—R

F. LOEWENBERG, 10 E. 40th St., New York, N. Y., "Electrocell"—PC  
 NATIONAL UNION RADIO CORP. OF N. Y., 570 Lexington Ave., New York, N. Y., "National Union"—CR, I, PC, R  
 NEW YORK SUPPLY CO., 152 W. 42nd St., New York, N. Y., "York"—R  
 PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—R  
 PHOTRONIC—Weston Electrical Instrument Corp.  
 RADIOTRON DIV., RCA Mfg. Co., Harrison, N. J., "Cunningham," "RCA Radiotron," "RCA-Victor"—CR, I, PC, R, T, VC  
 RAYTHEON PRODUCTION CORP., 420 Lexington Ave., New York, N. Y.—R, T  
 RCA RADIOTRON—Radiotron Div., RCA Mfg. Co.  
 RCA-VICTOR—Radiotron Div., RCA Mfg. Co.  
 SPARKS-WITHINGTON CO., E. Ganson Ave., Jackson Mich., "Sparton"—R  
 SPARTON—Sparks-Withington Co.  
 SUPERIOR TUBE CO., Norristown, Pa.—Tube parts  
 SYLVANIA—Hygrade Sylvania Corp.  
 TAYLOR TUBES, INC., 2341 Wabansia Ave., Chicago, Ill., "Taylor"—I, T  
 TRIAD MFG. CO., INC., Blackstone & Fountain Sts., Partuucket, R. I., "Triad"—R  
 TUNG-SOL LAMP WORKS, INC., Radio Tube Div., 95 8th Ave., Newark, N. J., "Tung-Sol"—R  
 UNITED ELECTRONICS CO., 42 Spring St., Newark, N. J.—T  
 UNITED MOTORS SERVICE, 3044 W. Grand Blvd., Detroit, Mich., "Delco"—R  
 VICTOR—Radiotron Div.  
 WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y., "Western Electric"—CR, T  
 WESTINGHOUSE ELECTRIC & MFG. CO., East Pittsburgh, Pa.—I  
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark, N. J., "Photronic"—PC  
 WORLD BESTOS CORP., 52 Courtland St., Paterson, N. J., "Duresite"—PC  
 YORK—New York Supply Co.  
 ZENITH RADIO CORP., 6001 Dickens Ave., Chicago, Ill., "Zenith"—R

BIRNBACH RADIO CO., 145 Hudson St., New York, N. Y.—A, AN, HU, IC, M, S  
 DAVID BOGEN CO., INC., 663 Broadway, New York, N. Y.—MC, S  
 L. S. BRACH MFG. CORP., 55 Dickerson St., Newark, N. J.—A, AT, AN, ANT, FL, G, HU, IC, S, SI  
 CONSOLIDATED WIRE & ASSOC. CORPS., Peoria & Harrison Sts., Chicago, Ill.—A, AT, AN, ANT, CO, H, IC, M, MC, RC, S, SI, WS  
 CONTINENTAL WIRE CO., 110 Lafayette St., New York, N. Y., "Continental"—A, AT, AN, ANT, CO, HU, IC, M, MC, RC, S, SI  
 COPPERWALD STEEL CO., 9th St. & Allegheny Ave., Glassport, Pa.—A, AT, AN, ANT  
 CORDOHM—Ohmite Mfg. Co.  
 CORNISH WIRE CO., INC., 30 Church St., "Cornyco"—A, HU  
 CORWICO—Cornish Wire Co., Inc.  
 CRESCENT INSULATED WIRE & CABLE CO., Trenton, N. J., "Crescent"—A, AT, AN, ANT, CO, HU, IC, L, M, MC, H, S  
 DIAMOND BRAIDING MILLS, Chicago Heights, Ill.—CO, HU, IC, MC, RC, S  
 DRIVER-HARRIS CO., Harrison, N. J.—R

## A TRADE-MARK which is a HALLMARK in the RADIO INDUSTRY



It is your assurance of quality of materials, reliability of service and fairness of price. Listed below are typical radio products from the complete line on which you can get these plus factors when you specify Consolidated.

### RADIO WIRES

Hook-up wires — including Hi-Temp (75°C) colored rubber, bearing Underwriters' label.  
 Multiple conductor cables — cotton, shielded or rubber sheath.  
 Magnet wires.  
 Bare and Tinned copper wires.  
 Shieldings—bare or tinned.  
 Antenna Wires—rubber or cotton.  
 Special wire for built-in antennae.

### AERIAL KITS

Specially designed kits for all standard receivers, including high efficiency doublets. Special kits on order.

### AERIAL ACCESSORIES

Ground clamps, lead-ins, filters, lightning arresters, porcelain or glass insulators, etc.

### CONDENSERS

Electrolytic and By-pass.

### COILS

I.F., R.F., Antenna, Oscillator coils in air core or iron core types. Mica trimmed or permeability tuned units.

### VOLUME AND TONE CONTROLS

RESISTORS, Carbon Fixed

### AUTO RADIO AERIALS

Whip, top, running board, overhead, undercar types.

### AUTO RADIO ACCESSORIES

Lead-ins, suppressors, controls, escutcheons, etc.

### AERIAL AND LINE NOISE REDUCERS

### TEST EQUIPMENT

Dynamic conductance tube testers. "Magic Eye" tester, neon output meter, condenser analyzer, etc.

### PUSHBUTTON TUNING UNITS

### ELECTRICAL CORDS

AC-DC resistance cords, etc.

### AUTOMOTIVE WIRES

Rubber, lacquered, armored (primary and secondary)—shielded wires, etc.

All Consolidated products are fully guaranteed.

"The Protected Line"

**CONSOLIDATED**  
 WIRE AND  
 ASSOCIATED  
**CORPORATIONS**

516 S. Peoria St.

Chicago, Ill.

## WIRE



Antenna (receiving) . . . . .	A
Antenna (transmitting) . . . . .	AT
Antenna transmission (receiv.) . . . . .	AN
Antenna transmission (trans.) . . . . .	ANT
Concentric cable . . . . .	CC
Cords (attachment) . . . . .	CO
Flat woven cable . . . . .	FL
Guy . . . . .	G
Hook up . . . . .	HU
Insulated cable (multi-conductor) . . . . .	IC
Litzendraht . . . . .	L
Magnet . . . . .	M
Mike cable . . . . .	MC
Radio harness . . . . .	H
Resistance . . . . .	R
Resistance cords . . . . .	RC
Shielded . . . . .	S
Shielded ignition . . . . .	SI
Wire shield . . . . .	WS

ACME WIRE CO., New Haven, Conn.—A, L, M  
 ACORN INSULATED WIRE CO., 225 King St., Brooklyn, N. Y.—AN, ANT, HU, IC, MC, S  
 ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass.—CC, CO, FL, IC, MC, H, R, S  
 ALPHA WIRE CORP., 50 Howard St., New York, N. Y.—A, AT, AN, ANT, CC, CO, FL, G, HU, IC, M, MC, H, RC, S, SI  
 AMERICAN ENAMELED MAGNET WIRE CO., Port Huron, Mich.—A, HU, M  
 AMERICAN PHENOLIC CORP., 1250 W. Van Buren St., Chicago, Ill., "Amphenol"—CC, SI  
 AMPHENOL-American Phenolic Corp.  
 AMPERITE CO., 561 Broadway, New York, N. Y.—MC  
 ANACONDA WIRE & CABLE CO., 25 Broadway, New York, N. Y.—A, AT, AN, ANT, CC, CO, FL, G, HU, IC, M, MC, S, SI  
 VICTOR J. ANDREW, 7221 S. Francisco Ave., Chicago, Ill.—CC  
 BASSETT RESEARCH CORP., 211 Service Court, South Bend, Ind.—CC  
 BELDEN MFG. CO., 4647 W. Van Buren St., Chicago, Ill.—A, AT, AN, ANT, CO, FL, HU, IC, L, M, MC, RC, S, SI, WS

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We make fine, small SEAMLESS TUBING in various metals and alloys—and LOCKSEAM CATHODE SLEEVES under U. S. Patents.

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### SEALED CARTONS

1C7G . . . \$ .45	6A8 . . . \$ .35
1H4G . . . .35	6C5 . . . .35
1V . . . .30	6F5G . . .35
6A7 . . . .35	6K7G . . .35
6F7 . . . .40	6Q7G . . .35
2525 . . . .35	25L6G . . .35
41 . . . .30	1E5G . . .45
42 . . . .30	6L6G . . .45
55 . . . .20	6E5 . . . .35

We have a complete line of tubes. Write for prices.

**NEW YORK  
 RADIO SUPPLY CO.**  
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**You Ought  
to Know**

**What's in a wire  
—before you use it**

*From the  
Belden Catalog*

For line matching or auto transformers  
between antenna and receiver.

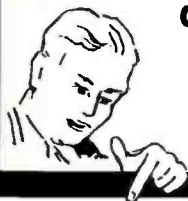
Number	Length in Feet	Description	Frequency (Kilocycles)	Surge Impedance (Ohms)	Power Factor (Per Cent)	Maximum Capacity per Ft. Between Condr. and Shield	Conductors
8206	50' spool	16 stranded 1/32" rubber,	100	33.0	2.0	64.5 mmf	
8206	250' spool	over-all tinned copper shield	1500	33.5	1.78	63.0 mmf	
			10000	33.8	1.52	62.0 mmf	
8207	250' spool	16 stranded 1/64" rubber,	100	65.9	2.88	57.5 mmf	
		over-all tinned copper shield	1500	70.0	2.44	55.0 mmf	
			10000	73.2	2.12	50.5 mmf	

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Wire for radio is a highly specialized product. Like a medical cure, it should only be used by experts—who know all of its characteristics. The Belden Catalog gives you, the radio specialist, this information clearly and honestly. Belden products live up to these standards—to do justice to your service work.

**You Ought  
to Know**

**What's in this  
complete  
wiring  
line**



**You Ought  
to Know**

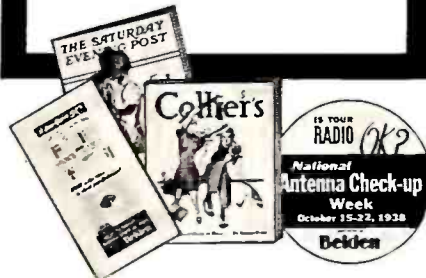
**What's behind  
the line  
to help you sell**



- Clear Channel
- All-Wave Antenna Systems
- 
- Power Line Filters
- 
- Broadcast Aerial Kits
- 
- Aerial Wire
- 
- Arresters, Lead-in Strips,  
Ground Clamps
- 
- All-Rubber Lead-in Wire
- 
- Transmission Line Cables
- 
- Coaxial Cables
- 
- Microphone Cable  
Shielded
- Rubber Sheathed
- 
- Shielded Multiple Conductor Cable
- 
- Glazed Cotton Multiple  
Conductor Cable
- 
- Rubber Sheathed Multiple  
Conductor Cable

Communicating System Cables

- 
- Armored Speaker Cable
- 
- All-Rubber Lamp Cord
- 
- Hook-up Wire
- 
- Magnet Wire
- 
- Replacement Wires for Test Prods
- 
- Litz Wire
- 
- Terminals
- 
- Indoor Aerial Wire
- 
- Head Phone Cords
- 
- A-C—D-C Resistance Cords
- 
- Auto-Radio Wires and Cables



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Belden Manufacturing Company,  
4613 West Van Buren Street, Chicago, Ill.

**DON'T GO HAYWIRE—GO**

**Belden**

**The Radio  
Wiring Line**

**WIRE—Cont'd**

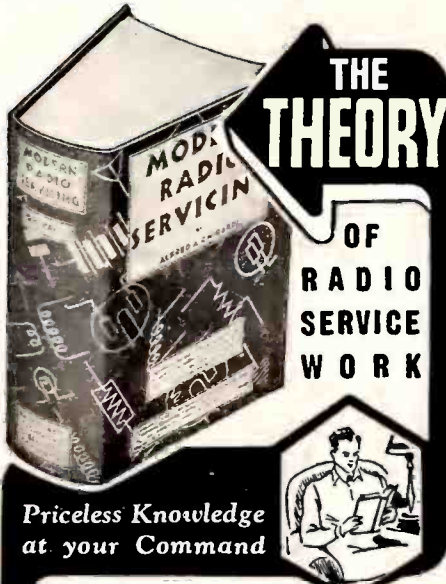
ESSEX WIRE CORP., 14310 Woodward Ave., Detroit, Mich., "S-X"—A, CC, CO, HU, IC, L, M, MC, H, RC, S, SI  
 GENERAL CABLE CORP., 420 Lexington Ave., New York, N. Y.—A, HU, M, MC, H  
 GENERAL CEMENT MFG. CO., 611 Lincoln Ave., Rockford, Ill., "G-C"—CO, FL, R  
 GENERAL INSULATED WIRE CORP., 53 Park Pl., New York, N. Y.—CC, CO, HU, IC, MC, S  
 E. J. GUTHMAN & CO., INC., 400 S. Peoria St., Chicago, Ill.—L, M  
 HOKE VERTICAL RADIATORS, 135 S. Market St., Petersburg, Va.—A, AT, AN, ANT, CC, G, IC  
 HOLYOKE CO., INC., 720 Main St., Holyoke, Mass.—IC  
 HUDSON WIRE CO., Winsted Division, 981 Main St., Winsted, Conn.—L, M  
 ISOLANTITE, INC., 233 Broadway, New York, N. Y.—CC  
 INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y.—HU, IC, B, RC, S, SI

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 So. Cicero Ave., Chicago, Ill., "Kellogg"—CO, HU, IC  
 LENZ ELECTRIC MFG. CO., 1751 N. Western Ave., Chicago, Ill.—A, HU, M, IC, S  
 LOWELL INSULATED WIRE CO., 171 Lincoln St., Lowell, Mass.—A, AT, CO, HU, IC  
 P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind., "Yaxley"—IC, MC, H  
 MEISSNER MFG. CO., Mt. Carmel, Ill.—L  
 MUTER CO., 1255 S. Michigan Ave., Chicago, Ill., "Spirashield"—WS  
 OHMITE MFG. CO., 4835 W. Flournoy St., Chicago, Ill., "Cordohm"—RC  
 PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York, N. Y.—A, AT, AN, ANT, CC, CO, HU, IC, M  
 PHILMORE MFG. CO., 113 University Pl., New York, N. Y., "Philmore"—RC  
 RADIO RECEPTOR CO., INC., 251 W. 19th St., New York, N. Y.—ANT, CC  
 REA MAGNET WIRE CO., INC., E. Pontiac St., Fort Wayne, Ind., "Rea"—M  
 JOHN A. ROEBLING SONS CO., Trenton, N. J.  
 RUPP'S ASSEMBLING & MFG. WORKS, 2341 N. Seminary, Chicago, Ill.—CO, IC, MC, H  
 SIMPLEX WIRE & CABLE CO., Cambridge, Mass.  
 SPIRASHIELD—Muter Co.  
 STATES CO., 19 New Park Ave., Hartford, Conn.—R  
 SWEDISH IRON & STEEL CO., 17 Battery Pl., New York, N. Y.—M  
 S-X—Essex Wire Corp.  
 TRANSDUCER CORP., 30 Rockefeller Plaza, New York, N. Y., "Transducer"—CC  
 TRIANGLE CONDUIT & CABLE CO., INC., Horace Harding & Queens Blvds., Elmhurst, N. Y.—A, AT, AN, ANT, CC, IC  
 WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y.—CC, CO, S  
 YAXLEY—P. R. Mallory & Co., Inc.

**NEW PATENTS ISSUED**

*Central Communication Devices, Inc.*, 140 W. 22nd St., N. Y. C., has acquired sole manufacturing rights to a patent allowing 15 claims. The principal feature of the invention is instantaneous two-way communication—it converts from a call receiver to two-way communication automatically without a talk-and-listen switch. The device is highly portable, using electric power lines for transmission. Tests in mines and steel plants have been successful at distances from 2 to 6 miles.

W. G. H. Finch, pres. of *Finch Telecommunications Laboratories, Inc.*, N. Y. C., has been awarded a patent on a new high-speed multiplex tele-



**THE THEORY OF RADIO SERVICE WORK**

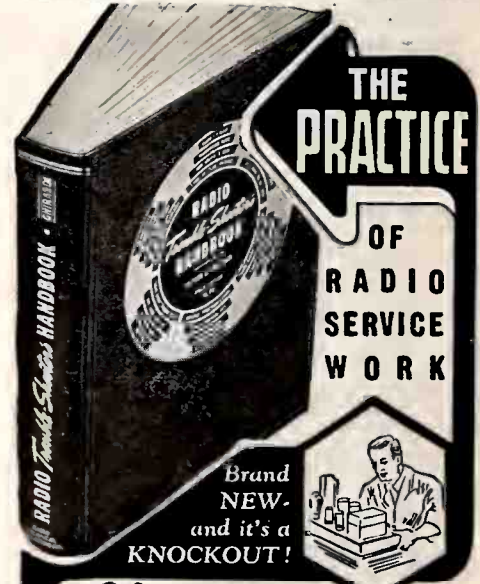
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- Interference elimination . . . . . IE
- Service manuals . . . . . S
- Sound systems . . . . . SS
- Television . . . . . TEL
- Tubes . . . . . T

AKRAD PRODUCTS CO., 362 Wooster Ave., Akron, Ohio—BT, S  
 AMERICAN RADIO RELAY LEAGUE, W. Hartford, Conn.—AT, BT, IE, T  
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 CALDWELL-CLEMENTS, INC., 480 Lexington Ave., New York, N. Y., "Radio Today," "Radio Year Book"  
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 RADIO, LTD, 7460 Beverly Blvd., Los Angeles, Calif.—AT, BT, IE, T  
 RADIO TODAY—Caldwell-Clements, Inc.  
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 JOHN F. RIDER, Publisher, 404 4th Ave., New York, N. Y.—S  
 SHERWOOD PRESS, Box 552, Edgewater Branch, Cleveland, Ohio—IE, S  
 SUPREME PUBLICATIONS, 3727 West 13th St., Chicago, Ill.—BT  
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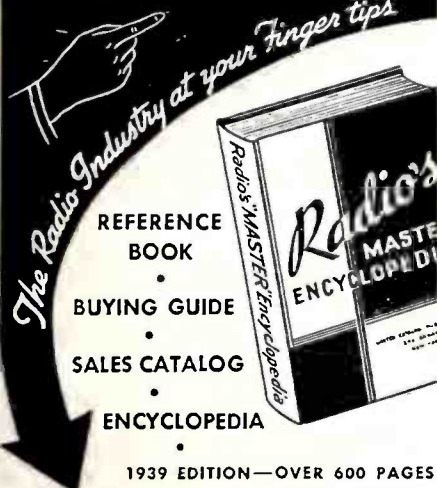
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communication system which enables the utilization of two or more carriers for simultaneous transmission of pictures, printing telegraphy, or teletype and speech or pictures and speech to remote points, through the use of simple apparatus which can be easily coupled to any telephone line.

Patents on a new fast facsimile system have also been granted W. G. H. Finch. The new system is three times faster than the old, Finch reports.

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CHECK YOUR RADIO, SIR?

LIKE YOUR CAR YOUR RADIO NEEDS CHECKING TOO!

WE RECOMMEND

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## RADIO TUBES

An attractive display is being distributed by Hygrade Sylvania jobbers to servicemen. It comes in two sizes, the large is for window and the small for counter display. The display is printed in eight colors and is designed to help the dealer and servicemen sell their services.

### Corner cabinet booster

To help dealers push sale of corner cabinet line of radios, Stromberg-Carlson has developed a new display. It consists of two hinged wings covered with wall paper, held in right angles by two gold-foil covered bars. The cross-bars contain the copy message and rest on a corner cabinet, which fits snugly between both wings. The wings give the effect of a room corner and saves dealer space.

### A Bantam buy

Assortment of 6 Hytron bantam tubes in a single package. handles replacement for 18 tube types. One each of following tubes: 6A8GT, 6J7GT, 6K7GT, 6Q7GT, 25L6GT, 25Z6GT, in individually-sealed cartons. Dealers' net price of \$2.39. Shields are supplied for tubes needing them. Packaged by Hytron Corp., 76 Lafayette St., Salem, Mass., to simplify dealers' and servicemen's needs.

# Rider

announces the most extensive and elaborate program of publishing in the history of Radio

## for 1939

John F. Rider, recognizing the difficulty presented by the many developments in Radio will, during the year, release a long list of new books especially written for the serviceman. Know Theory! Keep Ahead of a Fast Moving Industry.

## Television

Books on this timely subject will cover all phases—including Light—Photo-Electric. Cells—Synchronization.

## Radio Facsimile

The high state of development in this field makes it necessary that you know its theory. Rider will give it to you.

## Radio Servicing

There will be SIX new books that will tell, in the easy to understand Rider style, how to save time in servicing.

## And of course

Rider Manual Volume X will be issued in the Fall—covering 1939-40 sets. Many New Features!

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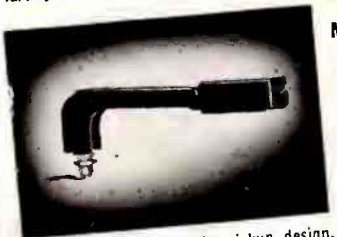
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● Plays twelve 10" or ten 12" records —repeats last record. Priced low, yet has all features of other changers, plus many exclusive WEBSTER features. The machine will not jam. Dependable and simple to operate. Light in weight and compact in size.



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● Does the job as effectively as ordinary motors costing more than twice as much. Thoroughly dependable, practically noiseless and vibrationless. Self-starting, constant speed, no "wow." Supplied in variety of voltages and cycles.



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Webster-Chicago phonograph accessories are up-to-the-minute designs, incorporating the latest features in fidelity reproduction, long life, freedom from service troubles, compact size and are thoroughly modern in appearance. The relatively low prices in both small and large quantities will surprise you. Complete details on request.

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- AMERICAN TELEVISION & RADIO CORP., 300 E. 4th St., St. Paul, Minn., "ATR"—A, F, INV
- ATR—American Television & Radio Corp.
- DELCO APPLIANCE DIV., General Motors Sales Corp., 391 Lyell Ave., Rochester, N. Y.—A, F
- ELECTRICAL PRODUCTS CO., 6537 Russell St., Detroit, Mich.—A, F, INV
- ELECTRONIC LABORATORIES, INC., 122 W. New York St., Indianapolis, Ind., "Electronic"—INV
- EXCEL—Hickok Electrical Instruments Co.
- HICKOK ELECTRICAL INSTRUMENTS CO., 10514 Dupont Ave., Cleveland, Ohio, "Excel"—A
- P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind., "Mallory"—A, F, INV
- MEISSNER MFG. CO., Mt. Carmel, Ill.—A, F
- OAK MFG. CO., 711 W. Lake St., Chicago, Ill., "Oak"—A, F
- RADIART CORP., Shaw Ave. at 133rd St., Cleveland, Ohio, "Radiart"—A, F
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**WAX WORTH WATCHING**

COUNT BASIE and his orchestra in a typically wild rhythm fest, playing Panassie Stomp and Do You Want to Jump, Children? The VC is by James Rushing—Decca 2224.

LARRY CLINTON and his band in a particularly sultry version of Deep Purple, with Study in Red on the reverse side. Bea Waine VC's—Victor 26141.

ARTIE SHAW and his boys come through again with Jungle Drums and It Had to Be You. A typical Shaw arrangement—Bluebird B10091.

BING CROSBY backed by John Scott Trotter and his band records a smooth number in the popular old Lonesome Road, and Just a Kid Named Joe—Decca 2257.

BENNY GOODMAN is backed by an All-Star band in his recording of Blue Lou and The Blues. Here's blues done up brown—Victor 26144.

MAXINE SULLIVAN comes through with the ever popular Night and Day and It Ain't Necessarily So—Victor 26132.

CHICK WEBB and his orchestra heats up a nice wax in Gotta Pebble in My Shoe and Who Ya Hunchin'. The VC is styled by Ella Fitzgerald—Decca 2231.

AL DONAHUE gets his boys in the groove on Tattooed Lady with the vocal by Paula Kelly, and Alexander's Swingin'—Vocalion 4562.

GUY LOMBARDO and his Royal Canadians smooth out current favorite, The Umbrella Man, sung by the trio; and We Speak of You Often, with Carmen Lombardo on the VC—Decca 2221.

WILL OSBORNE and his band put the trombone trio through their paces in Anywhere I Hang My Hat and Just a Kid Named Joe. Will himself does the VC—Decca 2225.

"FATS" WALLER, backed by his band, riffs off the piano in San Anton' and Baby Brown—Bluebird 10109.

DUKE ELLINGTON and his orchestra go wild on Boy Meets Horn, with Rex Stewart singing; and Old King Booji—Brunswick 8306.

TOMMY DORSEY and his orchestra playing a choice version of Hold Tight, with VR by Skeets Herfurt and Symphony in Riffs—Victor 26163.

ANDREWS SISTERS, with Bob Crosby and his Bob Cats, really singing Begin the Beguine and Long Time No See—Decca 2290.

RUSS MORGAN and his orchestra having a time with Eli Green's Cake Walk and Goodbye My Lady Love—Decca 2266.

DICK TODD with orchestra singing Penny Serenade exactly right, and Little Lad, both with "The Three Reasons" as the girls' trio—Bluebird B10144.

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**RECORDS**

**The easy way to**  
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**Economical, too.**

Closer stock-check—no sudden "outs"  
No confusion—serve more customers.  
Write for illustrated folder  
Layout suggestions free



Above—Unit No. 101—The perfect set-up for a free-standing floor display and selling unit. Upper part—250 10" or 12" records. Lower part—for record or album stock; 650 10" or 12" records. Matched grain American Walnut veneer panels and recessed channeled maple base. Also available with painted finish at lower price. Size—3' 6" long, 5' 3" high, 15 1/2" deep.

Cabinets for display or storage.  
Any inventory—large or small  
Add a unit as you grow



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**27-01 BRIDGE PLAZA NORTH,**  
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Specialists in store modernization and store equipment, serving many nationally-known retailers.

# Television and Facsimile Stations

## Television Stations

Location	Call	Wave Length	Power in KW	
			Video	Audio
Boston, Mass.	W1XG	6½ & 4	½	
Bridgeport, Conn.	W1XA	6½ & 4	10	3
New York, N. Y.	W2XAX	6½ & 4	7½	7½
New York, N. Y.	W2XBS	6½ & 4	12	15
Camden, N. J. (Portable)	W2XBT	3 & 1¾	0.4	0.1
New York, N. Y.				
Long Island City, N. Y.	W2XDR	6½ & 4	1	½
Passaic, N. J.	W2XVT	6½	.05	.05
Schenectady, N. Y.	W2XD	1½	.04	0
Albany, N. Y.	W2XB	4	10	3
Camden, N. J., (Portable)	W3XAD	2½	½	½
Philadelphia, Pa.	W3XE	6½ & 4	10	10
Camden, N. J.	W3XEB	6½ & 4	30	30
Philadelphia, Pa.	W3XP	1½	.015	0
Springfield, Pa.	W3XPF	6½ & 4	¼	1
Los Angeles, Calif.	W6XAO	6½ & 4	1	0.15
Manhattan, Kansas	W9XAK	150	½	½
Kansas City, Mo.	W9XAL	6½ & 4	0.3	0.15
W Lafayette, Ind.	W9XC	150	1½	0
Iowa City, Iowa	W9XK	150	1	0
Iowa City, Iowa	W9XUI	6½ & 4	.1	0
Chicago, Ill.	W9XZV	6½ & 4	1	1
Mobile—Portable	W10XX	6½ & 4	.05	.05

Bold face type shows stations operating on 4 and 6½ meter bands.

## Facsimile Stations

### BROADCAST BAND—

### EARLY MORNING HOURS ONLY

LOCATION	STATION	FREQUENCY	POWER
Fresno, Calif.	KMJ	580 kc	1 kw
Sacramento, Calif.	KFBK	1490 kc	10 kw
Chicago, Ill.	WGN	720 kc	50 kw
Des Moines, Iowa	WHO	1000 kc	50 kw
Detroit, Mich.	WWJ	920 kc	5 kw
St. Paul, Minn.	KSTP	1460 kc	25 kw
Newark, N. J.	WOR	710 kc	50 kw
Buffalo, N. Y.	WBEN	900 kc	1 kw
Cincinnati, Ohio	WLW	700 kc	50 kw
Cincinnati, Ohio	WSAI	1330 kc	5 kw
Cleveland, Ohio	WCLE	610 kc	500 w
Cleveland, Ohio	WHK	1390 kc	1 kw
Nashville, Tenn.	WSM	650 kc	50 kw
Newport News, Va.	WGH	1310 kc	250 w

### SHORT WAVE

Detroit, Mich.	W8XTY	8 metres	150 w
Jackson, Mich.	W8XUF	8 metres	100 w
St. Louis, Mo.	W9XSP	8 metres	100 w
St. Louis, Mo.	W9XZY	8 metres	100 w
Sargents Purchase, N. H.	W1XMX	8 metres	500 w
Long Island City, N. Y.	W2XR	150,8.3 m.	1 kw
New York, N. Y.	W2XUP	8 metres	100 w
New York, N. Y.	W2XBF	8 metres	1 kw
Cleveland, Ohio	W8XE	8 metres	50 w
Cincinnati, Ohio	WXNU	8 metres	1 kw

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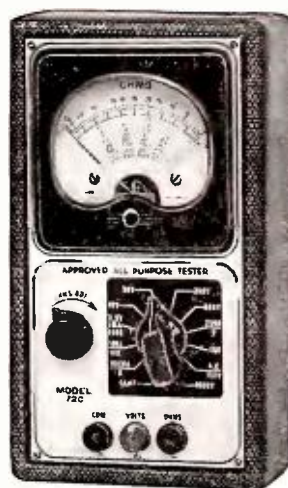


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D.C. Volts—0-2.5-10-50-250-500-2500  
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 Decibels— —10+19, —10+38, —10+53  
 Ohms—0-2,500, 25,000, 250,000  
 Output Ranges—0-15-150-1500  
 D.C. Amperes—0-10-25  
 3" Square 0-1 MA D'Arsonval 2% Meter  
 Housed in New Leatherette Case  
 Model 1200E Complete ..... **\$1295**  
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A.C. & D.C. Mu'ti-Purpose Tester



#### SPECIFICATIONS

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 A.C. Volts—0-15-150-1500  
 D.C. MA.—0-1-10-100-1 Ampere  
 Decibels— —10+19, —10+38, —10+53  
 Ohms—0-2,500, 25,000, 250,000  
 Output Ranges—0-15-150-1500  
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 14 Gauge Frosted Etched Panel  
 Model 720 Complete With  
 Battery and Instructions, Net ... **\$785**  
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 Test Unit ..... **\$585**

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A.C. & D.C. Laboratory Analyzer



#### SPECIFICATIONS

9" Round D'Arsonval (1000 ohm per volt) Meter  
 D.C. Volts—0-15-150-750  
 A.C. Volts—0-15-150-750  
 D.C. MA.—0-1-15-150-750  
 A.C.-MA—0-15-150-750  
 Capacity—.0005-1mfd. .05-200 mfd.  
 Ohms—0-500, 500-5 Megohms  
 Decibels— —10+19, —10+38, —10+53  
 Output Ranges—0-15-150-750  
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 Watts—.006000 to 600  
 Housed in Leatherette Cabinet  
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RT339

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

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# Service Notes

## Aeroscope antenna

Loop antennae were used on some of the first broadcast receivers, but as the first antennae of this type were large and cumbersome and would not fit into the cabinets, their advantage was offset by the inconvenience they presented.

To eliminate the troublesome antenna wire and to make the small sets as nearly portable as possible the engineers have developed small shielded loops which also effect a distinct reduction in local static disturbances, and an increase in selectivity.

There are three factors that effect the signal pickup of the loops, according to Admiral's engineers.

1. *The physical dimension.* The mean dimension must be as large as possible for the best signal pick-up; also the loop must be sturdily constructed in order not to disturb the alignment of the set.
2. *Q of the loop.* The coil must also have good electrical qualities known as Q. The higher the Q, the better the selectivity.
3. *Effect of metal chassis.* To eliminate the effect of the close proximity of the chassis, a plate of non-magnetic material is placed between the loop and the chassis. This also serves as one side of an electrostatic shield.

Noise reduction is obtained in two ways, by the directional properties of the Aeroscope, and the use of the electrostatic shield.

By placing the set so that the noise source is at right angles to the flat surface of the loop, or zero response, a large increase in signal to noise ratio is obtained. The shield prevents electrostatic charges from making a cir-

cuit through the antenna to ground by shunting them into the ground directly, at the same time allowing magnetic waves to reach the loop.

In remote sections where the pick-up on the loop would not be adequate for reception of distant stations, an outside antenna may be used, as the Aeroscope provides for its use. A very good antenna is necessary in order to show any improvement in signal pick-up of an electrostatically-shielded loop.

## Round-table discussion

Rubbing shoulders with radio servicemen from coast to coast . . . frequently addressing gatherings here and there . . . always ready to listen to the problems of servicemen and to advise them—Charley Golenpaul of Aerovox picks up a lot of questions in the course of a month, some of which are answered below:

**Q. Why do set manufacturers designate their component parts by their own part numbers? Why don't they state the characteristics?**

**A.** The answer to this question is quite obvious. Set manufacturers identify their parts by special parts numbers in order to compel servicemen to go to their own set distributors for necessary replacement parts. Otherwise the serviceman would go to any parts jobber and secure any standard type condenser of about those characteristics, to use as a replacement. From the set owner's standpoint, this exact-duplicate policy of set manufacturers as well as certain condenser manufacturers, assures a replacement which will restore the set to its original *new* condition. This is the purpose of special type numbers.

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ON ANY MAKE  
NEW LOW RATES QUICKER SERVICE COMPLETE NEW EQUIPMENT

Tubes Tested Free

80% All Parts Needed  
Carried in Stock

EVERY JOB  
GUARANTEED



A view of our shop showing part of our equipment.

These Are the Merits Upon  
Which We Invite Patronage:

1. We employ honest, well experienced technicians.
2. We buy only the very best materials and equipment.
3. We do not tolerate misrepresenting statements or charges to our customers.
4. If we make a mistake WE MAKE IT GOOD, regardless.
5. We charge HONESTLY for what services we perform.
6. We guarantee all work, and that no parts are used unless needed.

PHONE 1266 INSTANT SERVICE

"OLDEST, LARGEST AND BEST EQUIPPED SHOP IN AUGUSTA"

## AUGUSTA RADIO COMPANY

316 NINTH STREET

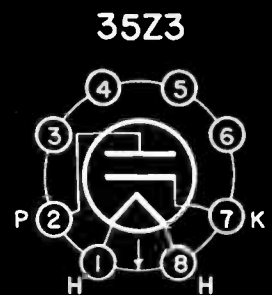
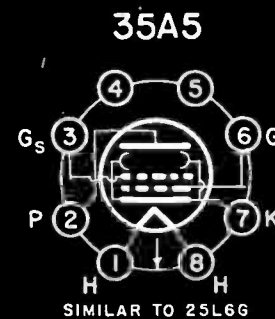
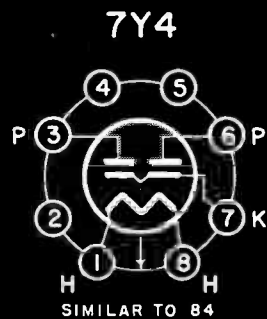
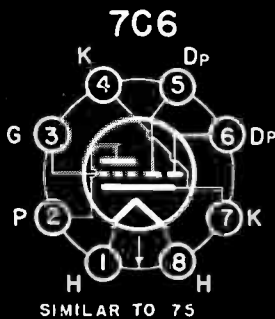
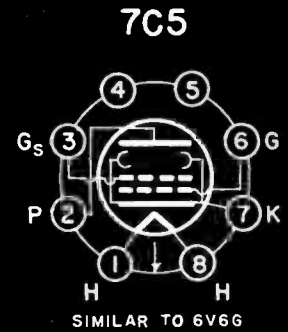
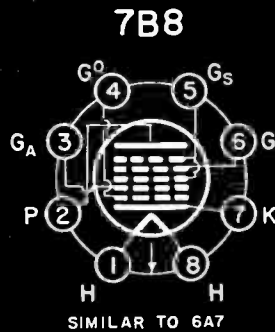
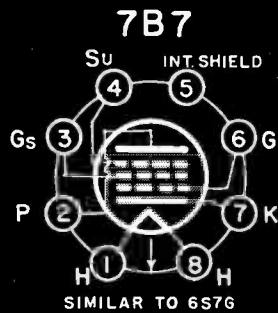
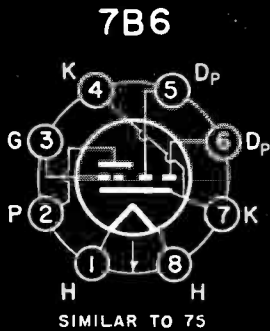
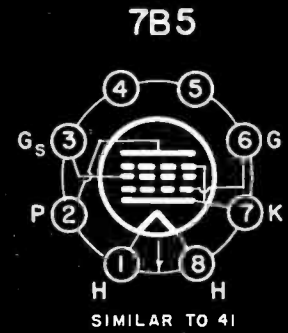
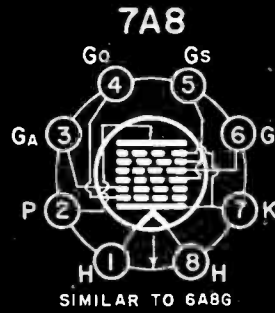
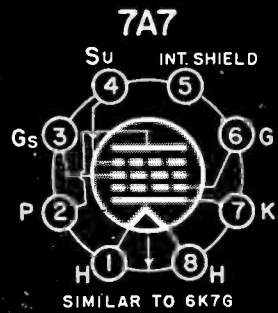
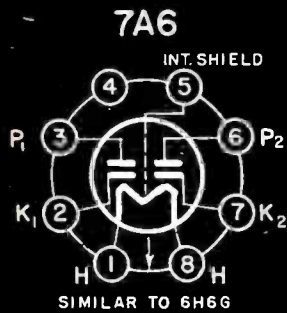
ROBT. W. WILSON, Owner

TELEPHONE 1266

In medium-sized cities, newspaper advertising brings good returns according to Bob Wilson, whose advertisement is shown above.

# LOKTAL TUBE BASE CONNECTIONS

(BOTTOM VIEWS)



**Q.** How can we overcome competition of certain mail order and other houses that sell direct to consumers? Especially the sale of replacement parts to set owners who are trying to by-pass the servicemen? What do manufacturers do to protect the serviceman against this competition?

**A.** A good question—and one frequently asked. Too much stress is placed on this so-called competition which, upon analysis, dwindles down to almost nothing. Let's get specific: Of course reputable parts manufacturers make every reasonable effort to safeguard your trade prices and discounts. It's to their best interests to do so. Houses handling such parts are urged to sell at regular prices and discounts, so that all jobbers get an even break. But when it comes to sorting servicemen from non-servicemen, there's the rub. Remember, even at this late date, most servicemen still have no printed business stationery. So if the mail-order or other house receives an order by mail for replacement parts, expressed in genuine servicing language, even to specific types, values, etc., how can it know that this is not a genuine serviceman's order. It simply can't.

The greatest thing you as a serviceman have to sell is your **SERVICE**, and not merchandise. In other words, it's your knowledge and skill that count most in servicing. It isn't so much your ability to buy parts at trade discounts. If parts are bought at wholesale prices by someone who is not entitled to the trade discount, in most cases that someone doesn't know how to install the parts, and

the genuine serviceman may eventually be called in to fix the set anyway. If you will only stop to consider that of all the customers whose sets you've serviced since you have been in business, very few of them really were capable of making their own repairs.

In short, don't waste time worrying about that so-called mail-order or other competition on discounts.



## A GOOD NAME GOES A LONG WAY

Ken-Rad makes a complete line of quality radio receiving tubes, backed by a continuous record of over 40 years in the manufacture of electric lamps.  
**KEN-RAD TUBE & LAMP CORP.**  
 OWENSBORO, KENTUCKY, U.S.A.  
 Address: Export Dept.,  
 116 Broad St., New York, U.S.A.  
 Cable Address: Minthorne, N. Y.

# ★ KEN-RAD ★

DEPENDABLE RADIO TUBES

**We hobnob with  
BIG SHOTS**



You are known by the company you keep. Which must account for our world-wide reputation. For in our stock of over 50,000 radio items are the finest names in the industry. It's not that we're social climbers. We hobnob with leading manufacturers because we believe in giving our customers what they want— at prices they like to pay. We find it pays all around. Send for our new FREE catalog.

**WHOLESALE RADIO SERVICE CO.**  
100 SIXTH AVE., NEW YORK, N. Y.  
CHICAGO, ILL. • ATLANTA, GA. • BOSTON, MASS.  
BRONX, N. Y. • NEWARK, N. J. • JAMAICA, L. I.

**WORLD'S FAIR**  
accommodations **FREE!**  
arranged

Not one cent of extra cost for this complete service to

**BUSINESS GROUPS • PRIVATE PARTIES  
INDIVIDUALS**

—a service covering room reservations—**WORLD'S FAIR ADMISSIONS—SIGHTSEEING TRIPS—RETURN TRANSPORTATION, etc.**

We are expert VISIT-MANAGERS.

You can profit by the experience of millions of people in crowded cities at previous fairs. You can plan your visit intelligently and sensibly with our aid and without obligation.

**SIX DAY TOUR**, with room assured, including 3 admissions to World's Fair, Motor Coach and Boat Trip around New York, complete Guided Tour of Radio City and Rockefeller Centre—\$16.95 PER PERSON.

If you want more time to play and more money to spend, let us arrange or manage your visit.

**MAIL THIS COUPON**

Central Sightseeing Bureau, Inc.  
55 West 42nd Street, New York

Send full details as follows:

Number of persons in party .....

Length of visit .....

Traveling by—  
 Automobile  Bus  Air  Boat  Rail

My name .....

Company name .....

Street address .....

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

**Service Notes**

Your main worry is to be sure you can tackle servicing with the necessary skill, experience, and test equipment.

**Q.** What are we going to do about the serviceman who under-sells the other fellows because he uses inferior parts?

**A.** This is another instance of a problem which eventually solves itself. Such a serviceman should be allowed to take all the business he can get temporarily, hard as that may be, because he eventually runs himself out of business by virtue of his work not standing up. The quality is remembered long after price is forgotten. Reputation, in the long run, is your main stock in trade and the very best advertising you can do, particularly in a small community. So let the service gyp sell at lower prices by reason of cheap parts. His customers will eventually come to you to get satisfactory service.

**Do you remember when?**

It's only a few years ago that radio servicemen were complaining about the unnecessarily great number of tube types, which then totalled thirty-one. The date is October 17, 1931, according to a Sylvania price list which was discovered in our files.

Thinking that the servicemen would be interested in the listing and the prices, RADIO TODAY is reproducing the data:

Old Type	1931	1939	Old Type	1931	1939
No.	Price	Price	No.	Price	Price
SX-112A	\$1.50	\$1.00	SX-231	\$1.60	\$1.00
SX-120	3.00	2.25	SX-232	2.30	1.75
SX-171A	.90	1.00	SY-233	2.75	1.50
SY-171C	2.75	1.00	SY-235	1.60	1.25
SX-182B	2.25	2.00	SY-236	2.75	1.25
SX-183	2.00	2.00	SY-238	1.75	1.25
SY-199	2.75	1.50	SY-239	2.75	1.25
SX-199	2.50	1.50	SX-240	3.00	1.00
SX-200A	4.00	2.25	SX-245	1.10	1.00
SX-210A	.75	.80	SY-247	1.55	1.50
SX-210	7.00	2.75	SX-250	6.00	2.50
SX-222	3.00	2.00	SX-280	1.00	.80
SY-224	1.60	1.25	SX-281	5.00	2.25
SX-226	.80	.80	SY-485	1.75	2.00
SY-227	1.00	.80	SY-551	1.60	1.25
SX-230	1.60	1.00			

In 1931 there were only 4-prong and 5-prong tube bases to worry about. Even in 1939 more than 50 per cent of the replacement tubes sold are taken from this group of 31 tubes listed above and most of this volume is being done in only 10 different tube types.

**RSA news**

A television demonstration and a technical lecture will be two of the high spots at the biggest serviceman convention ever staged when RSA members meet in their Second Annual Convention June 16 and 17.

The National Radio Parts Trade Show has set aside Friday and Saturday as days when technical attendants will be in the booths to answer servicemen's questions and show their wares. Arrangements are being made for reduced fares on railroads and bus lines from chapter cities.

"Present and Future Possibilities of the Serviceman" was the subject of a recent talk by Sam Harper of the Clough-Brengle Company at the Allen-

**-RADIO  
SERVICE-**



"I wanna get it fixed, but I'm a plumber's helper, so you've got to give me 40 per cent off on the parts."

town, Pa., chapter. Mr. R. Perron of the same company addressed Boston members on "Dynamic Testing."

**CHAPTER NEWS**

The Executive Board of the Flint, Michigan, chapter used initiative and objected to a free service call ad in classified telephone directory, and got immediate action. At the same meeting the members adopted a price schedule of suggested minimum service charges.

A talk on "cut-throat" prices and appointment of a committee to investigate same were the highlights of a Bridgeport, Conn., meeting.

Armstrong's system of frequency modulation was explained by George Devine of G-E to the Chicago chapter.

Jobber visitors at Duluth, Minn., said that the tube business was coming back to servicemen and that leaks in parts business were very meager.

The bill pending in the Tennessee Legislature for the licensing of radio servicemen was discussed at a Nashville, Tenn., meeting.

In Pittsburgh, Pa., "Idle Time—What It Costs" was the subject of a talk by Bert Bregenzler.

Compulsory price maintenance for members was causing friction in the Quincy, Ill., group and was therefore eliminated.

Methods of competing with merchants and chain stores offering tube discounts of 40 per cent were suggested in Steubenville, Ohio.

A Board of Radio Regents was formed at Washington, D. C., to make "Member RSA" mean something concrete and reliable to the public. A credit reference bureau and an employment bureau were established and the Regents Board was instructed to study rules and penalties to insure an accurate check on members' business ethics.



# New Booklets

Allied Recording Prod. Co., 126 W. 46th St., New York, N. Y.—two-color catalog illustrating and describing recorders, turntables, and other Allied products.

Thordarson Elec. Mfg. Co., 500 W. Huron St., Chicago, Ill.—Spring-Summer edition of Catalog 400-CX listing new transformers for serviceman, p.a. engineer and amateur.

Stoll Radio Co., 116 Franklin St., Peoria, Ill., modern complete chart on ballast tubes. Prepaid, 25c.

Belden Mfg. Co., 4613 W. Van Buren St., Chicago, Ill.—catalog giving information on all characteristics of radio and antenna wires.

Supreme Instruments Corp., Greenwood, Miss.—catalog describing new test equipment.

Dial Light Co. of America, Inc., New York, N. Y.—catalog of pilot light assemblies and signal indicator jewels.

R. C. A. Mfg. Co., Inc., Harrison, N. J., Commercial Engineering Section.—Receiving tube characteristics chart 1275-B (2-39) booklet gives tube characteristics, shows socket connections with RMA designations.

Clarostat Mfg. Co., 285 N. Sixth St., Brooklyn, N. Y.—Service Manual with accurate volume control data covering all standard sets.

American Television & Radio Co., St. Paul, Minnesota.—Catalog 139 describing complete list of vibrators, vibrator-operated and rectifier power supplies. Copy of ATR Vibrator Guide and Equivalent chart also available.

Service Instruments, Inc., 404 Fourth Ave., New York, N. Y.—80 page booklet that gives complete info about true dynamic testing and Rider Chanalyst. Has hard covers, heavily illustrated. 25c.

F. W. Stewart Mfg. Corp., 340 W. Huron St., Chicago, Ill.—1939 auto radio remote control catalog illustrates instrument panel mountings, controls, accessories; also specifications on auto radio controls.

Sonora Radio & Television Corp., 2626 W. Washington Blvd., Chicago, Ill.—Complete price story on "Package Plan" models and descriptive literature and prices on entire Sonora line.

Solar Mfg. Corp., 599 Broadway, New York, N. Y.—Bulletin T-1 on television capacitor standards, types and sizes.

Dual Remote Control Co., Inc., 505 Guaranty Bldg., Detroit, Mich.—booklet presenting Ducon dual controls, back-seat controls, front controls and accessories.

A. Bitter Construction Co., 27-01 Bridge Plaza North, L. I. City, N. Y.—catalog showing planned merchandising equipment and installations for records.

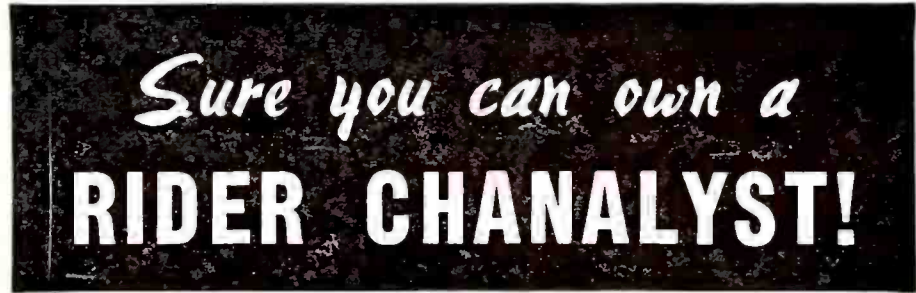
Electro Products Labs., 549 W. Randolph St., Chicago—catalog of "A" and "B" eliminators and power supply units operating on storage battery, wind charger or any six volt source of DC power.

Meissner Mfg. Co., Mt. Carmel, Ill.—Vibrator replacement guide telling which vibrator to use in what set.

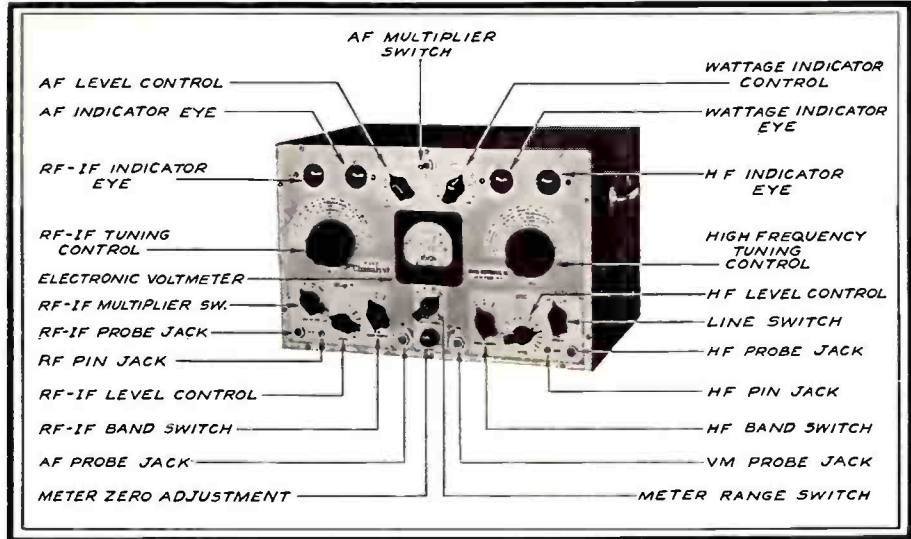
Universal Microphone Co., Inglewood, Cal.—a new edition of Practical Wax Recording in a handy pocket size, and reduced to 25c.

B-L Electric Mfg. Co., 19th & Washington Ave., St. Louis, Mo.—Bulletin No. R-38 describing metallic rectifiers for low-voltage power units, including auto-radio packs and battery chargers.

Atlas Sound Corp., 1447 39th St., Brooklyn, N. Y.—Spring-Summer sound catalog containing new "Chandelier" speakers, P. M. units, etc.



**NATIONAL UNION WILL GIVE YOU ONE IF YOU BUY 80 N. U. TUBES AND/OR ELECTRO CONDENSERS PER MONTH**



**ASK YOUR NATIONAL UNION JOBBER HOW TO GET A CHANALYST FREE**

The CHANALYST is a great piece of modern high efficiency test equipment . . . an invaluable asset to your service business. It is guaranteed by John F. Rider and approved by National Union Engineers. Now YOU can own one.

**Come on!**

**BUILD CUSTOMER CONFIDENCE WITH NATIONAL UNION TUBES and CONDENSERS!**

NATIONAL UNION RADIO CORP.  
Newark, New Jersey RT-339

Who is nearest Nat. Union Jobber?

Name.....

Street.....

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

*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, 1½, 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. 15-C-9, Chicago.

Send me, Free, your Radio and Parts Catalog for Spring.  
Name .....  
Address .....

**In case you  
don't know**

**... you are READING**

—the largest issue of RADIO TODAY in almost two years—having:

—the largest advertising volume in ANY radio trade paper in 21 months.

—the largest number of advertisers.

—the largest buying power circulation.

—the lowest advertising rate per thousand readers.

Here, in radio's outstanding trade paper—combined with the 4th Annual Radio Trade Directory—you see radio's greatest procession of products passing in front of all radio markets.

Use this Directory Issue as your buying guide. But take care of it. The edition is LIMITED. Additional copies are NOT available. Keep it handy for daily reference.

**RADIO  
TODAY**

480 Lexington Avenue, New York

**More New Things**



**Portable with cover**

★ 4 tube super-het 12½ lb. portable with removable hinged cover. Well balanced for easy carrying. Single-pack, long-life batteries. P. M. speaker. Airplane cloth cover. \$34.50 list. Espey Mfg. Co., 67 Irving Pl., New York, N. Y.—RADIO TODAY.



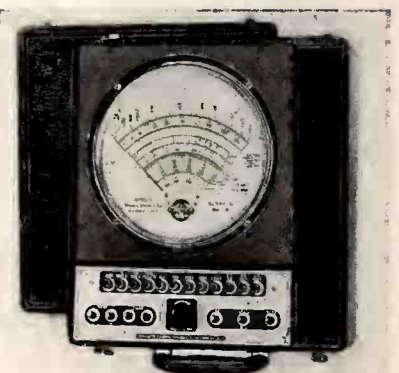
**Portomatic battery portable**

★ 7-tube super-het with self-contained batteries and loop aerial. Batteries automatically disconnected on AC-DC operation. Pilot light, colored indicator. Model U17-A, Aero-Tweed cover, \$43.50 list, less batteries. Port-O-Matic Corp., 1013 Madison Ave., New York, N. Y.—RADIO TODAY.



**2-in-1 midget tubes**

★ Miniature tubes designed for small AC-DC receivers. Type 32L7GT may be used in conventional half-wave rectifier and beam power amplifier circuits. Type 12B8GT has pentode section used as conventional RF or IF amplifier and triode section as biased or grid-leak detector. Arcturus Radio Tube Co., Newark, N. J.—RADIO TODAY.



**Portable multi-range meter**

★ Leatherette encased portable multi-range meter. Push button operation. DC voltage ranges of 0/2.5/10/50/250/500/2500; AC, 0/15/150/1500; DC ma., 0/1/10/100/1000; Ohms 0/2500/25000/250,000; DC amps 0/10/25. Also output and decibel ranges. Frosted aluminum two-tone panel. \$20.95 net. Approved Technical App Co., 57½ Dey St., New York, N. Y.—RADIO TODAY.

Electronic Laboratories, Inc., 122 W. New York St., Indianapolis Ind.—bulletin on "Converters, Polarity Changers and Vibrators," also a new sheet showing heavy duty vibrators.

**EVERYTHING IN RADIO!**

**A COMPLETE SOURCE FOR YOUR RADIO NEEDS!**

Our immense stock of radio sets, parts and supplies enables you to purchase your entire needs on one order. The Big BA catalog is an encyclopedia of the Radio Industry. You will find all your Nationally Known Favorites shown in this Book and it's FREE for the asking. BA service is better than ever—practically every order is shipped the same day it is received.

**Write for Big New Wholesale Catalog**

**BURSTEIN-APPLEBEE CO. 1012-14 MCGEE STREET KANSAS CITY, MISSOURI**



## Radio's Master Encyclopedia

Buyers, retailers, spec writers, manufacturers of radio and allied products, will find much of value in United's new catalog. Described as a combination reference book, buying guide and sales catalog, it contains listings, illustrations, specs, and prices of parts and equipment. Its condensed form adds to the ease of finding desired information. More than 600 pages make the book over an inch thick. \$2.50 in U. S. A. postpaid; \$3.00 elsewhere. United Catalog Publishers, Inc., 258 Broadway, New York, N. Y.—RADIO TODAY.

## Bargain tickets to N. Y. World's Fair

Mr. William S. Paley, Chairman and President, Columbia Broadcasting System, has been appointed sponsor of New York World's Fair advance ticket sale to the radio industry. Four types of bargain tickets are being offered including: Souvenir Books containing five general admission tickets and six concession admission tickets. Face value: \$5.40. Sales price: \$3.75, available during the advance sale only; non-transferable season ticket with identifying photograph for \$15.00, entitling owner to unlimited admission; non-transferable twenty admission ticket with identifying photograph for \$7.50, advance sale only; children's non-transferable season ticket with identifying photograph salable to children between three and fourteen years of age, including high school students, at \$5.00, entitles the owner to unlimited admissions.

## Selling Up

(Continued from page 22)

convinced that their radio is as much an investment as their furniture.

"Department stores and furniture houses are educating the public to furnish homes in 18th Century, Swedish Modern, or some other distinctive style. That's *their* job. Show your high priced market that ugly sets aren't artistic, aren't practical. That's *your* job!" concludes Mr. Weisburgh.

To attract the rather neglected "connoisseur" Sparks-Withington Co. is promoting "Limited Editions" models which bid fair to take midget radios out of the low-profit field. Rare woods such as Brazilian Rosewood, Satinwood, mahogany and walnut to feature beauty, and limited production to make them exclusive, are the merchandising angles used to stimulate sales and more attractive profit.

"It is our opinion," states H. R. Wall of Sparton, "that women make most of the purchases of small radios which would, if distinctively styled, be placed in conspicuous locations in the home. Assuming that their purchase of a radio is similar to that of a hat or coat (where they desire to have something different), our 'Limited Editions' plan will give the purchaser a pride of ownership, not ordinarily realized.

"In selling a five tube superhet, in

a rare wood cabinet, the dealer is afforded an excellent sales argument. He has only a limited number of these radios for his area. Since it is only human nature to want that which is rare, it means real selling power. By using a special display and a booklet giving the salient features of each set, a dealer may give the consumer added value and achieve a larger margin of profit."

Many dealers are saying that it's easier to sell down than to sell up. There's logic in this and no one knows it better than the clothier. When he puts a beautiful suit of clothes on you "just for fit" he knows you'll be disgusted with the cheaper suit you

came in for.

The same thing applies to expensive radio sets and refrigerators, says Mr. McLaughlin of J. E. Fitzgerald Co., Union City, N. J. He starts selling price items "on the street" by window displays of his manufacturers' best items, then follows it through by devoting almost his entire space inside to the biggest and best. When Mr. McLaughlin was asked what he thought of business indications in '39, "I'm still happy about '38," he replied.

All in all, the concerted opinion of radio dealers seems to be, "It's hard work to sell up, but brother, it's worth it!"

# TAKE IT WITH YOU

## A PRACTICAL Portable RADIO. Operates on 110 VOLTS A.C.

### or SELF CONTAINED BATTERIES

USE IT ANYWHERE

in the home, office, hotel or wherever A.C. is available.

Also

a real companion for all your outings — fishing, hunting, boating, camping, etc.

## PORTABLE "55"

TWO RADIOS IN ONE

Here are a few of the features that make it the most outstanding Portable Radio on the market.

Low cost operation — uses 4 flashlight cells and two small 45 volt B's, (battery life, exceptionally long). Also operates on 110 Volts A.C. Automatic cut-off switch completely disconnects batteries when used on A.C.

Directional Loop Antenna, adjustable for maximum signal and minimum noise.

Write immediately for full particulars on this new and unusual type of portable radio.

## SETCHELL CARLSON, Inc.

2233 UNIVERSITY AVE.

ST. PAUL, MINN.

Position of Antenna for Coast-to-Coast and foreign reception.

Antenna mounts in rear of case for average use.



Licensed by R.C.A.

Territories Available for Distributors and Dealers

## "PINCOR" Rotary Converters

Provide the most dependable means for converting direct current to alternating current. Particularly well adapted for operating radio receivers, public address systems, power amplifiers, signs, A.C. motors, etc. Available in two standard classifications "DA" and "TR"—both with or without filter—engineered for converting 6, 12, 32, 110 or 220 volts D.C. to 110 or 220 volts A.C., 40 to 2,000 watts. There is a "Pincor" converter for every requirement. Write for complete descriptions and data.



Pioneer Gen-E-Motor Corporation  
Dept. R-2C, 466 W. SUPERIOR ST., CHICAGO, ILL.  
Without obligation please send me "PINCOR" Rotary Converter Catalog and Data.

NAME .....  
ADDRESS .....  
CITY ..... STATE .....

especially in Television —  
**"A LITTLE KNOWLEDGE  
 IS A DANGEROUS THING!"**

For a new art, a new concept of standards and performance. New parts—engineered with full knowledge of Television's requirements. For higher voltages—wider safety margins.



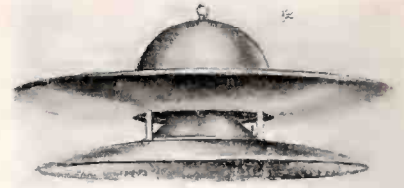
**SOLAR**

**TELEVISION CAPACITORS**

The highest standards ever built into commercial condensers give absolute dependability. Engineers will be interested in a copy of Bulletin T-1 on Television Capacitor Standards, Types and Sizes. Free on request.

**SOLAR MFG. CORP., 599 Broadway, New York**

**New Things**



**360° speaker**

★ "Chandelier" speaker projects sound evenly over 360 degree range with maximum amplification, minimum acoustic feed-back in any location. Various sizes available. Model L-360 for 12 in. cones, \$27.50 list. Atlas Sound Corp., 1447-51 39th St., Brooklyn, N. Y.—**RADIO TODAY**.

The following list of new products will be described in the April issue of **RADIO TODAY**. Advance information may be obtained by writing the manufacturer.

Radio and talk-back equipment—Bell Sound Systems Inc., 1183 Essex Ave., Columbus, Ohio.

Pee-Wees and portables—Detrola Radio Corp., 3630 W. Fort St., Detroit, Mich.

"Radio Library"—Halsion Radio & Television, Inc., Cambridge & Tremont Sts., Meriden, Conn.

Test equipment kits—Carron Mfg. Co., 415 S. Aberdeen St., Chicago.

Musical instrument amplifying adapter—Transformer Corp. of America, 69 Wooster St., New York, N. Y.

Mobile P. A. system—Operadio Mfg. Co., St. Charles, Ill.

Replacement volume controls—Consolidated Wire & Assoc. Corps., 516 S. Peoria St., Chicago, Ill.

Push-button analyst—Radio City Products, 88 Park Place, New York, N. Y.

AC-DC super-het—Warwick Mfg. Corp., 1700 W. Washington Blvd., Chicago, Ill.

Radial cone speaker projector—University Labs., 195 Chrystie St., New York, N. Y.

Radio-phono combination—Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.

Electric shaver filter—J. W. Miller Co., 5917 S. Main St., Los Angeles, Cal.

Gas-engine generator—Eicor, Inc., 515 S. Laffin St., Chicago, Ill.

AC-battery portable—Setchell-Carlson, Inc., 2233 University Ave., St. Paul, Minn.

Dynamic mikes—Shure Bros., 225 W. Huron St., Chicago, Ill.

Turret bandswitch—Coto-Coil Co., Inc., 71 Willard Ave., Providence, R. I.

Standard frequency record—Universal Microphone Co., Ltd., Inglewood, Cal.

Portable sound system—Ray-Lab, Inc., 211 Railroad Ave., Elmira, N. Y.

Wire-wound controls & rheostats—International Resistance Co., 401 N. Broad St., Philadelphia, Pa.

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

## PORTO-MATIC

SCORES AGAIN WITH  
ANOTHER NEW RADIO SENSATION

### The DUO - POWER PORTABLE RADIO



**PLAYS ON ITS OWN POWER OR  
AC-DC CURRENT . . . no aerial,  
no ground, plug-in optional. . .**

*Write for literature describing the complete  
line of portables for every purse and purpose.*

#### THE PORT-O-MATIC CORPORATION

"The House of Portables"

1013 MADISON AVE.

N. Y. C.

## Don't Let TELEVISION Catch You Napping!



**Train for Your Share  
of Profits . . . NOW!**

Are you awake to the great money-making possibilities that stretch out before you in Television and Facsimile work? Here are two phases of Radio that will literally recruit an army of Servicemen in a new multi-million dollar industry. Will you be prepared to get on this enormous payroll? Competition demands that you know your "stuff." As in all phases of Radio Service and Installation work, you must have a better-than-average technical knowledge to do more jobs quicker and with greater efficiency . . . with greater profits. That's why SPRAYBERRY ADVANCED "MASTER SERVICE TRAINING" was developed. Includes over 50 new lessons, clear and simply written, on almost every essential Radio repair subject, including latest TELEVISION and FACSIMILE instruction. It's a compact, "all-meats" type of Training in Set Testing, Repairing, Parts Testing, Trouble Shooting, etc.

**DO BETTER JOBS . . . QUICKER**

It shows you the easiest ways of doing the hardest jobs. Shows you time-saving short-cuts besides training you in actual business-getting methods. Many Servicemen have easily paid for this Practical Course out of increased earnings. Sold on terms as low as \$3.00 down—\$3.00 per month with iron-clad MONEY-BACK Agreement.

Don't fall into the rut of being satisfied with your present earnings. Self-improvement is the surest way to greater usefulness and bigger Pay. Let me send you complete information at once. For your own sake, don't put it off.

#### RUSH Coupon for FREE Facts

SPRAYBERRY ACADEMY OF RADIO  
1400 C University Place, N. W.  
Washington, D. C.

Please send, without obligation, complete details  
of your MASTER SERVICE COURSE.

Name .....

Address .....

City .....

State .....

(Paste on penny postcard or mail in envelope)

# JOBBERS

## BAGLEY RADIO COMPANY

1216 D STREET, SAN BERNARDINO, CALIF.  
**PROFITABLE LINES**  
 Traveler Radio & Television Corp. House radios  
 —Auto sets—portables.  
 Condenser Products Co. Standard Paper & Electrolytic Capacitors—Special types made to order.  
 Attractive Prices.  
 Write for Quotations of Your Requirements.

## ELECTRIC & RADIO CO.

INCORPORATED 1910  
**WHOLESALE ONLY**  
 ONLY NATIONALLY ADVERTISED LINES  
**Butte, Montana**  
 Address for mail  
 Room 7, First National Bank Bldg.  
 Territory covered  
 Montana, Idaho and Wyoming

## HUDSON VALLEY ASBESTOS CORP.

170 CENTRAL AVE. ALBANY, N. Y.  
 Wholesale distributors of . . .  
 Motorola Car and Home Radios •  
 Stromberg Carlson Radios and Sound  
 Systems • Taco Aerials.  
 Serving Eastern New York, Western  
 Massachusetts and Western Vermont.

## BURSTEIN-APPLEBEE CO.

1012-14 McGEE ST. KANSAS CITY, MO.  
 Our immense stock of radio sets, parts  
 and supplies enables you to purchase your  
 entire needs on one order. You will find  
 all your Nationally Known Favorites in  
 this big book which is FREE for the asking.  
 Practically every order is shipped the  
 same day it is received. Write for Catalog.  
**EVERYTHING IN RADIO!**

## ADIRONDACK RADIO SUPPLY

40 CLYDE ST. BOX 403, GLOVERSVILLE, N.Y.  
**100% Wholesale—covering northern  
 and eastern New York State—  
 Radio, Photographic, and Auto-  
 motive products.**

## REPRESENTATIVES

### JOHN J. KOPPLE

60 EAST 42ND ST. NEW YORK, N. Y.  
**Manufacturer's Representative**  
 COVERING:  
 New England, New York,  
 New Jersey and Philadelphia, Pa.  
**Pioneer in Radio**

# Trade Flashes

## Majestic reorganized

A complete change in directorate, increased working capital, and an aggressive operating campaign, are announced by *Majestic Radio & Television Corp.*, Chicago. Former directors, who were with one exception, also directors of *Davega Stores Corp.*, and N. L. Cohn, former president of *Majestic*, have resigned. An option has been acquired on all *Majestic* stock owned by *Davega*.

*Stewart-Warner Corp's* Vice-President and General Sales Mgr., *F. A. Hiter* predicts one of the biggest volume sales years since the inception of the radio industry.

*Belden Manufacturing Co.*, Chicago, announces, with profound sorrow the death of *Joseph Congdon Belden*, President of the company, on Feb. 17 at his home in Chicago.

*Ansley Radio Corp.*, New York, N. Y., has acquired the old Cornell-Dubilier plant in the Bronx, New York City, for its future manufacturing operations. The plant was originally built as a piano factory, and later used for making radio parts, so it is perfectly adapted for *Ansley's* radio and piano manufacturing.

The *Aerovox Corp.*, now of New Bedford, Mass., announces the opening of its New York Sale Office at 347 Fifth Ave. The phone number is MUrray Hill 5-3858. Sales representatives in that area will work out of the New York office.

*Dan Fairbanks*, genial sales manager of the Merchandise Division of *International Resistance Co.*, left February 25th for an extensive swing through the Southern and Western territory. All told, *Dan* expects to cover approximately 10,000 miles during a six week period.

Rush of business for *Continental Radio & Television Corp.*, on the new *Admiral* small sets, has necessitated the addition of a third production line in the factory. Production has been increased about 40 per cent, the daily output being raised from 2,100 to 3,000 radios since Feb. 8th.

*Meissner Mfg. Co.* have assigned Northern N. Y. State to *Harry B. Segar* in addition to his own territory. *John O. Olsen* is representing Erie, Pa.

*Warren E. Brennan* has been appointed *Admiral* sales rep to cover Ohio and Michigan.

New *Stromberg-Carlson* distributor in most of Nebraska and part of Iowa, is the *H. C. Noll Co.*, Omaha, Nebraska, one of Nebraska's oldest appliance concerns.

*David Kaufmann's Sons*, Baltimore, Md., and *Appliances, Inc.*, Cincinnati, O., have been appointed distributors for *Stewart-Warner* radios, according to an announcement by *L. L. Kelsey*, radio division sales manager.

*Klaus Radio & Electric Co.*, Peoria, Ill., has issued a 1939 parts and equipment catalog.

New *Admiral* distributors recently appointed are: *Benton-Bailey Co., Inc.*, Richmond, Va.; *H. I. Sackett Electric Co.*, Buffalo; *Baldwin-Hall Co., Inc.*, Syracuse; *Kemp Equipment Co.*, Rochester; and *W. B. Davis Electric Supply Co.*, Memphis, Tenn.

## Philco-New York shows all-year merchandise

Merchandise that will be seasonable throughout the year was the theme of the showing sponsored by *Philco-New York*, local jobber, at the Hotel Savoy-Plaza recently. Air-conditioning units, refrigerators, electric ironers, washing machines, auto-radios, home radios, and the new television receiver were shown to convince New York dealers of the value of carrying salable merchandise all year 'round.

The television demonstration and the refreshment room were great attractions. Far-seeing retailers, however, found that the ice-man sells coal for a good reason; and that air-conditioning and electrical appliances are necessary adjuncts to the successful radio dealer's stock-in-trade.

## Channels of radio tube distribution

The following figures recently compiled by National Radio Parts Distributors Association dramatically show the distribution of radio tube sales in 1938.

Initial equipment .....	35,500,000
Export .....	6,750,000
Radio parts distributors to dealers.....	18,500,000
Set distributors to dealers.....	5,000,000
Retail mail order houses to consumers...	5,000,000
Chain stores to consumer.....	2,500,000
Wholesale mail order houses to dealers, servicemen and consumers .....	500,000
Manufacturers direct to dealers.....	500,000
TOTAL ..	74,250,000

To the dealer or serviceman worried about the competition from mail order houses and cut-rate chain stores, these figures should prove interesting. Eliminating the 35,500,000 tubes in new sets and the 6,750,000 exported, 32,000,000 tubes were left for retail to consumers. Of these, dealers and servicemen have had the lion's share, selling over 24,000,000 tubes, or about 75 per cent of the total replacement business.

# Janette Rotary Converters



## FOR CONVERTING D.C. TO A.C.

● Built especially for radio and sound apparatus—capacities 110 to 3250 volt amperes—with or without all wave filters. Dynamotor construction—economical to operate—ruggedly built for years of trouble-free service—used or recommended by the largest manufacturers of radio and sound apparatus throughout the world ●

**WHY EXPERIMENT — INSIST ON A JANETTE**

ASK FOR BULLETIN 13-1

**Janette Manufacturing Company**

556-558 West Monroe Street Chicago, Ill. U. S. A.



# 5-TUBE NEW TYPE SUPER— JUST PLUG IN AND PLAY!

Move from room to room. New 150-milliamperè tubes. No antenna. No ground. 6-station automatic tuning.

Here is Belmont's super powerful indoor Portable Super Model 519. Plug into any 110 volt socket, AC or DC. Styled to the minute. Optional ivory or walnut bakelite cabinet. Streamlined dial. Powerful built-in antenna. AVC 540-1650 KC. Dynamic speaker. Size 6½" x 10" x 5¼". Shipping weight, only 8 lbs.

*Make Way for*  
**BELMONT RADIO**  
**and TELEVISION**  
*Outstanding New Radios*

**NEW and DIFFERENT!  
PLAYS ANYWHERE—EVERYWHERE**

*Especially designed for low drain • Has new 1.4 volt tubes • Compact—POWERFUL SUPERHET • Built-in antenna • Knobs and dials concealed and protected • Everything on the air—wherever you go.*

Now you can sell radio for a thousand new uses—to a market that is growing like wildfire. Plays indoors, outdoors—anywhere, even while walking. The ideal companion for every form of recreation or travel. Uniquely designed weather-proof airplane case, comfortable to carry. 5" speaker, 540-1650 KC. Size, 11¾" x 13" x 4½".

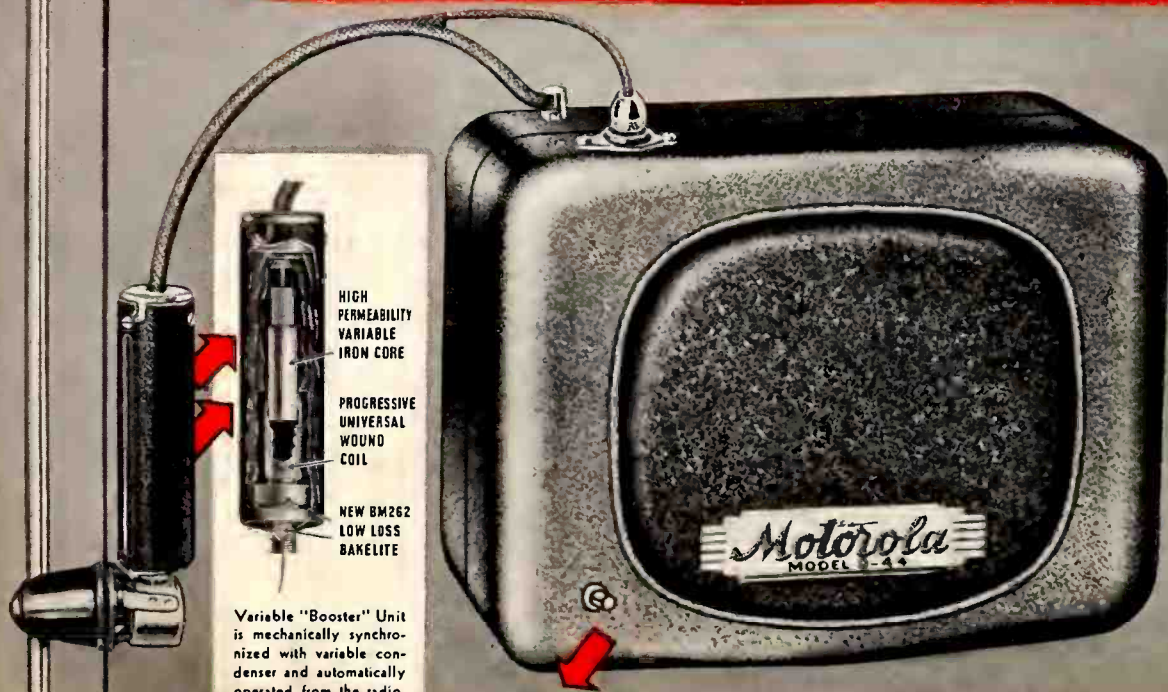


**• UNIQUE DESIGN • WEATHERPROOFED LUGGAGE •**

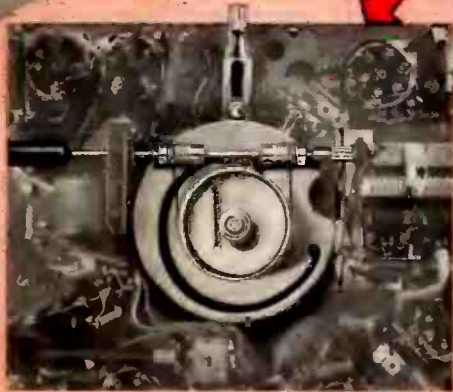


# Motorola "BOOST-O-MATIC"

*The Auto Radio that Has Taken the Country by Storm*



Automatic  
**BOOSTS**  
Station Signal  
Pick-Up  
**15**  
**TIMES**



Showing the large cam within the receiver which controls the tuning of the variable "Booster" Unit.

**WITH AUTOMATIC VARIABLE SENSITIVITY UNIT MATCHED TO "BOOSTER" AERIAL**

The "Boost-O-Matic" automatic variable sensitivity unit consists of a matched and tuned coil in the aerial by which the tuning is varied automatically through the movement of a high permeability iron core within the "Booster" coil. The variable condenser on the radio is connected to this "Booster" aerial unit by a mechanical link so that when stations are tuned the aerial is also automatically tuned giving 15 times increased aerial efficiency.

**FITS and MATCHES ALL CARS**

**SPECIFICALLY DESIGNED for LOW-SIGNAL AND METROPOLITAN "DEAD SPOT" AREAS**

With this new Motorola sensitivity development it is now possible to pick up stations in low signal areas not ordinarily obtainable on the average car radio. "Boost-O-Matic" is also in demand in metropolitan areas troubled with fading and "dead spots." Its extremely sharp selectivity makes it ideal for all localities where station signals run together and garble. Extremely great usable sensitivity with better than ever signal-to-noise ratio. The "Boost-O-Matic" has sensitivity enough to drive around in cities with aerial entirely telescoped.

6 Tubes; 3-gang tuning condenser; Push-Button Tone Control; Self-contained 6" Electro-Dynamic Speaker. With 60" or 90" Super-Cowl "Booster" Equipped Cowl Aerial.

**\$44<sup>95</sup>**

**COMPLETE WITH 60 INCH "BOOSTER" AERIAL**

With 90 Inch "Booster" Equipped Super-Cowl Aerial \$1.00 Additional



**Write, Telephone or Wire**

**Your Motorola Distributor**

**GALVIN MFG. CORPORATION • CHICAGO**