

RADIO

REG.
U. S. PAT.
OFF.

THE NATIONAL TRADE MAGAZINE
AUGUST 1931

REMLER ANNOUNCES



Model No. 9. The dainty Remler Minuette weighs only 12 pounds. It is 12½" high, 10" wide and 6½" deep. Equipped with 4 tubes, including a Pentode, which makes for volume, this attractive little portable has the same "built in" features of mechanical and electrical excellence which characterize all Remler products. List Price \$29.90



Model No. 15. Standard size table Super-Heterodyne, with 7 tubes, employing the screen-grid circuit, including Mu and Pentode tubes. Housed in a cabinet originally designed for a receiver to be sold at a much higher price. Model 15 is unusually attractive. List Price \$49.50

Two new profit-proof receivers of standard REMLER QUALITY

Dealers are on the safe and certain ground of Remler dependability when they offer these revolutionary Remler values.

In their field, these receivers are particularly distinguished for their tonal qualities, and they are sturdily constructed to give trouble-free service. This means maximum profit to the dealer and friendly come-again customers. Remler's policy of dealer profit maintenance is a guarantee that the dealer will make a rightful and legitimate margin on every Remler sold.

REMLER COMPANY, Ltd.
2101 BRYANT STREET
SAN FRANCISCO, CALIFORNIA

A complete price range enables you
to CONCENTRATE ON BRUNSWICK



MODEL 11—Table model or midget type, walnut cabinet, carved grille. Superheterodyne 7 tubes. Color tone control, Brunswick Uni-Selector, full range volume control, dynatron oscillator, turret type tuning condenser, 9" dynamic speaker, power detector. List price, complete with Brunswick tubes. **\$79.50**

MODEL 12 — Miniature high-boy console. Recessed panel of rare crotched walnut veneer. Hand-carved grille. Superheterodyne 7 tubes. Color tone control, Brunswick Uni-Selector, full range volume control, dynatron oscillator, turret type tuning condenser, 9" dynamic speaker and power detector. List price, complete with Brunswick tubes **\$89.50**

MODEL 16 — Lowboy console, finished in American Walnut. Superheterodyne 7 tubes. Color tone control, Brunswick Uni-Selector, full range volume control, dynatron oscillator, turret type tuning condenser, 12" dynamic speaker and power detector. List price, complete with Brunswick tubes . . . **\$99.50**

MODEL 17 — Lowboy walnut console. Superheterodyne 9 tubes. Color tone control, Brunswick Uni-Selector, automatic volume control, dynatron oscillator, turret type tuning condenser, 12" super-dynamic speaker, two pentode tubes in output stage and power detector. List price, complete with Brunswick tubes. **\$139.50**

MODEL 33—Lowboy combination Radio-with-Panatrope, finished in American walnut. Superheterodyne 7 tubes. Color tone control, Brunswick Uni-Selector, full range volume control, dynatron oscillator, turret type tuning condenser, 12" dynamic speaker and power detector. List price, complete with Brunswick tubes **\$149.50**

MODEL 24 — Graceful six-legged highboy cabinet with arched French doors. Superheterodyne 9 tubes. Color tone control, Brunswick Uni-Selector, automatic volume control, dynatron oscillator, turret type tuning condenser, 12" super-dynamic speaker, two pentode tubes in output stage, power detector. List price, complete with Brunswick tubes **\$169.50**

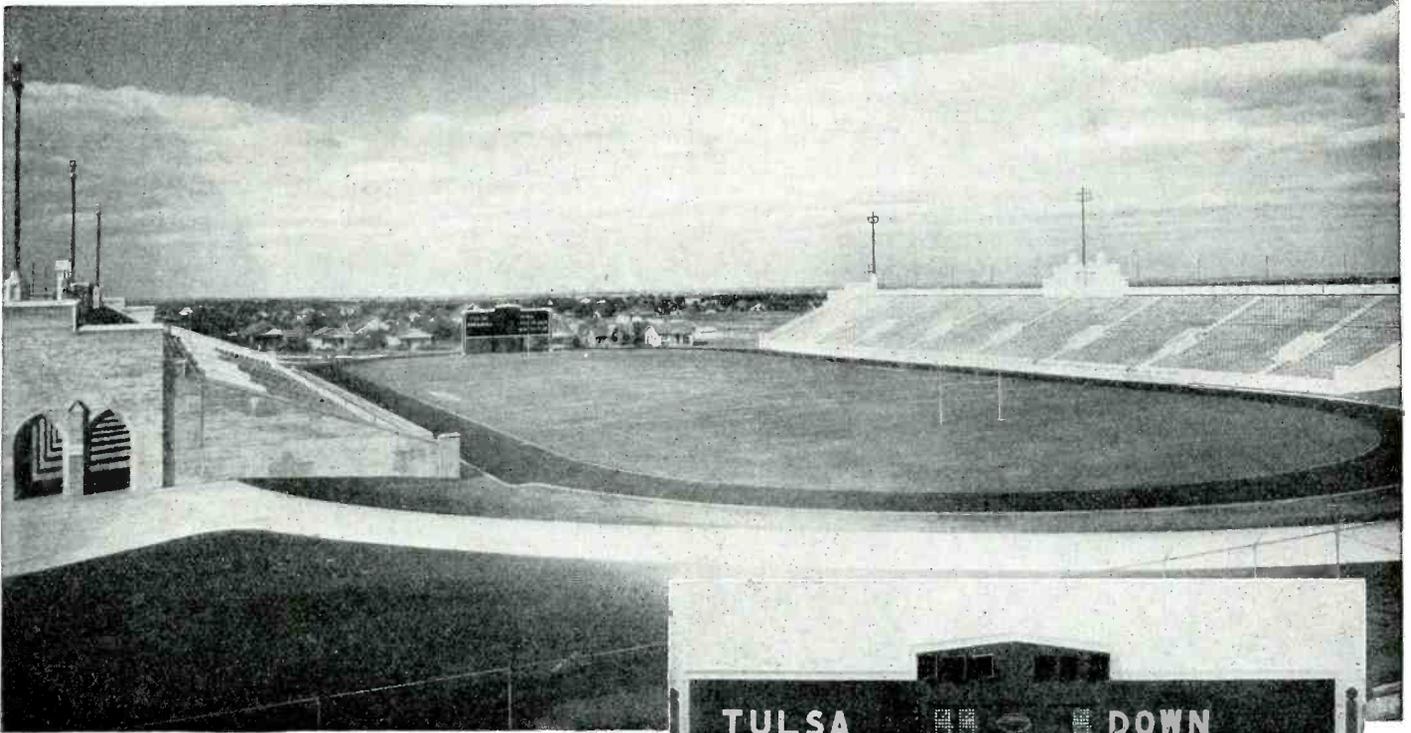


MODEL 12

The new Brunswick line has been received enthusiastically at dealer shows held during the past month in leading cities . . . Increased production permits the revision of prices announced for Brunswick instruments at the Chicago R. M. A. Show . . . The dealer who concentrates on Brunswick has an unparalleled opportunity for profit: the same distinguished line of high quality instruments in a price range that appeals to every prospect.

BRUNSWICK RADIO CORPORATION, NEW YORK—CHICAGO—TORONTO—*Division of* WARNER BROS. PICTURES, INC.

BRUNSWICK RADIO



University of Tulsa, Okla., Memorial Stadium, one of the most beautiful and modern stadiums in the country



“Thrilled with excellent reproduction of the WRIGHT - DECOSTER Reproducers”

... in the University of Tulsa Stadium

THE letter shown herewith is typical of many in our files regarding sound installations with Wright-DeCoster Reproducers in stadiums, ball parks, airports, fair grounds, arenas, auditoriums, amusement parks, dance pavilions, beaches, schools, etc.

Wright-DeCoster Reproducers are giving satisfaction wherever installed. Every installation is a booster for more sales. Take advantage of the unlimited possibilities for the sale of sound equipment.

Write for complete information and address of nearest sales office.

WRIGHT-DECOSTER, Inc.

2217 University Avenue St. Paul, Minn.
Export Dept.: M. SIMONS & SON CO., 25 Warren St., New York City
Cable Address: SIMONTRICE, New York



The Speaker of the Year

The University of Tulsa Tulsa, Okla.

October 22nd, 1930.

The Dodge Electric Co.,
318 South Boulder,
Tulsa, Oklahoma.

Gentlemen:

The Public Address System which you installed is giving complete satisfaction, and is far beyond my expectations.

We have had many favorable comments; some fans have stated that it lends the final finishing touch to the most complete stadium that they have ever seen. The representatives of the firms donating the Address System, i.e., Boswell's Jewelers, The First National Bank and Trust Co., The Mayo Hotel, and Vandever's Department Store, have expressed their appreciation, and complete satisfaction with this installation.

To say that I am well pleased is to put it mildly. I am thrilled with the excellent reproduction of the Wright-DeCoster Reproducers.

I wish to express to the members of your firm my personal appreciation for the high standard of workmanship, which is in evidence in the installation of this equipment, as well as of the other electrical work.

Sincerely yours,

By J. B. MILLER,
Director of Athletics.

JBM:K

Tell them you saw it in RADIO

Established
1 9 1 7

RADIO

REGISTERED
U. S. Pat. Off.

THE NATIONAL TRADE MAGAZINE

VOLUME 13, NUMBER 8



AUGUST, 1931

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K. N. FORD, Vice-President
L. D. McGEADY, Vice-President

H. W. DICKOW, President

J. H. CONDON, Vice-President
P. S. LUCAS, Vice-President

SUBSCRIPTION RATES: \$2.00 per year in the United States; Entered as second-class matter at the Post Office at San Francisco, California, under the Act of March 3, 1879.
\$3.00 per year in Canada and foreign countries.

SUBSCRIPTION ORDER

One Year . . . \$2.00. Foreign . . . \$3.00

"RADIO," 415 Lexington Ave., New York, N. Y.

Enter subscription to "RADIO" for _____ years at \$2.00 per year.

Name _____ Title _____

Street and No. _____ City and State _____

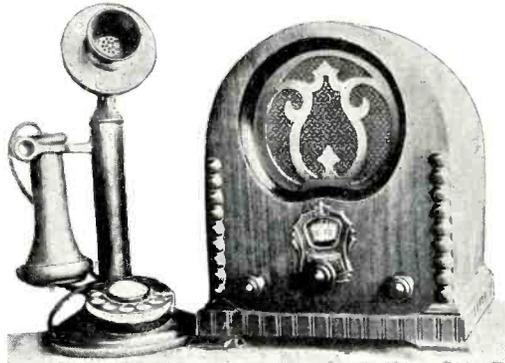
There is No Business Depression

PARAMOUNT Dealers ARE Making Money

Now....

Sold Direct to Dealers at a Net
Price of

\$16.95 [CASH WITH ORDER]



This is positively the fastest selling set we have ever manufactured. IT SELLS ON SIGHT. Dealers everywhere report they sell them faster than we can supply them. The tone quality is excellent. Get in on the PARAMOUNT LINE immediately.

Complete with Arcturus Tubes
\$15.95 in quantities of 6

Retail Price \$29.95

The Smallest Radio Made

Size 9 $\frac{3}{8}$ " High, 7 $\frac{1}{2}$ " Wide (inside measurements)

1932 Features - - - Sell on Sight

1 Pentode Tubes

Equal to 2-245 plus 1-227. This radio, smallest in size, incorporates the new pentode tube.

2 Full Dynamic Speaker

Perfect tone quality.

3 Screen Grid Circuit

Using 2 screen grid tubes to their utmost efficiency.

4 Tone Control

The sales talking point of 1931. We use the new full range control.

5 Selectivity Plus Distance

We have reports of distance of 1500 miles.

6 Illuminated Dial

Easy to see.

7 Quality all Through

Steel chassis, cadmium plated, oversized power transformers (shielded), heavy service resistors, electrolytic, self-healing filter condenser, 16 mfd., no hum. Cornell oversized bypass condenser and many features found only in high priced sets.

Fully Guaranteed For Three Months

NOW IT'S HERE » » » » AN AUTO RADIO

\$49.50
RETAIL PRICE

Complete . . . tubes, batteries, remote control, suppressors, speaker. Nothing else to buy. Uses the large pentode tube with three screen grids and full dynamic speaker. This radio is so small and compact it mounts on the steering wheel of most cars or on the dash. No holes to drill. Dealers discount 40%.

Member of
Los Angeles
Chamber of Commerce

LOS ANGELES RADIO MFG., CO.
3681 So. San Pedro Street
Los Angeles, Calif.

Manufacturers of
Quality Radios
Since 1925

Tell them you saw it in RADIO

R A D I E T T E

BY DR. RALPH L. POWER

LESS than ten times, in as many years of radio, have I felt the urge to dash off a page of editorial-advertising. But this new departure of Keller-Fuller in producing and marketing a sort of three-in-one set looks as though it is one of the year's real developments.

★ ★

Here is a set with a three-fold purpose. It makes an excellent outfit for the home. With the use of the autoverter, it becomes a first-class automobile radio. Then there is added usage in the form of a portable set to take to the mountains, seashore or desert.

★ ★

THE TROUBADOUR OPERATES EITHER ON 6 VOLTS D. C. OR 110 VOLTS A. C., WITH THE AUTOVERTER. CABLES, OF COURSE, ARE FURNISHED . . . ONE FOR THE HOUSE AND THE OTHER FOR THE CAR. JUST CHANGE THE PLUGS AND CABLES AND, LO AND BEHOLD, THE HOME SET IS OPERATING IN THE FAMILY BUS.

★ ★

Certain it is that the Radiette Troubadour and the Radiette Autoverter will create new production standards as well as new merchandising triumphs.

★ ★

History tells us that George Washington tossed a dollar 'way across the Delaware River. History once more repeats itself . . . George is no longer with us . . . but the dollar will go just as far nowadays as it did then. Dollar for dollar, the Keller-Fuller combination is bound to prove one of the outstanding buys of the season, both from the standpoint of the trade and of the ultimate consumer.

★ ★

MORE DETAILED INFORMATION WILL
BE FOUND ON THE OPPOSITE PAGE

Radiette

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Radiette

AUTO,
HOME,
PORTABLE

Here Is an Absolute Cure For the Summer Slump



Radiette Troubadour

This amazing new set has a tremendous appeal because of its unusual adaptability.

Simply detach the plug in the car, take the set into the house and plug it into the 110-volt alternating current.

In the car it may be installed with brackets behind the instrument panel or wherever it is most convenient. It uses a very small space, its size being only 12x15x5 inches.

The TROUBADOUR is finished in black leatherette in a sturdy, compact little carrying case, with a strong leather handle for convenient portability.

Many people have hesitated to buy a radio set for the car because the set could be used nowhere else. Here is the universal radio set. When not in use in the car, it serves in the den, the bedroom, at the camp or any place where electric current is available.

NO B BATTERIES
ELECTRO-DYNAMIC SPEAKER
PENTODE OUTPUT TUBES
SCREEN-GRID
7 TUBES IN ALL (the new 6-volt type)
EXTREME TUNING RANGE
(1800 KC to 550 KC)
BEAUTIFUL TONE
PERFECT SELECTIVITY
EXCELLENT VOLUME

RADIETTE TROUBADOUR operates at maximum efficiency either on the house current or in the car, because of the marvelous

RADIETTE AUTOVERTER

Easily and quickly installed. No batteries to buy or bother with. Works smoothly and efficiently from the six-volt automobile battery. A scientific and practical marvel of sturdy compactness and efficiency.



SAME
SET
AUTO,
HOME
OR
PORTABLE

The Set
\$62.50
With
Tubes

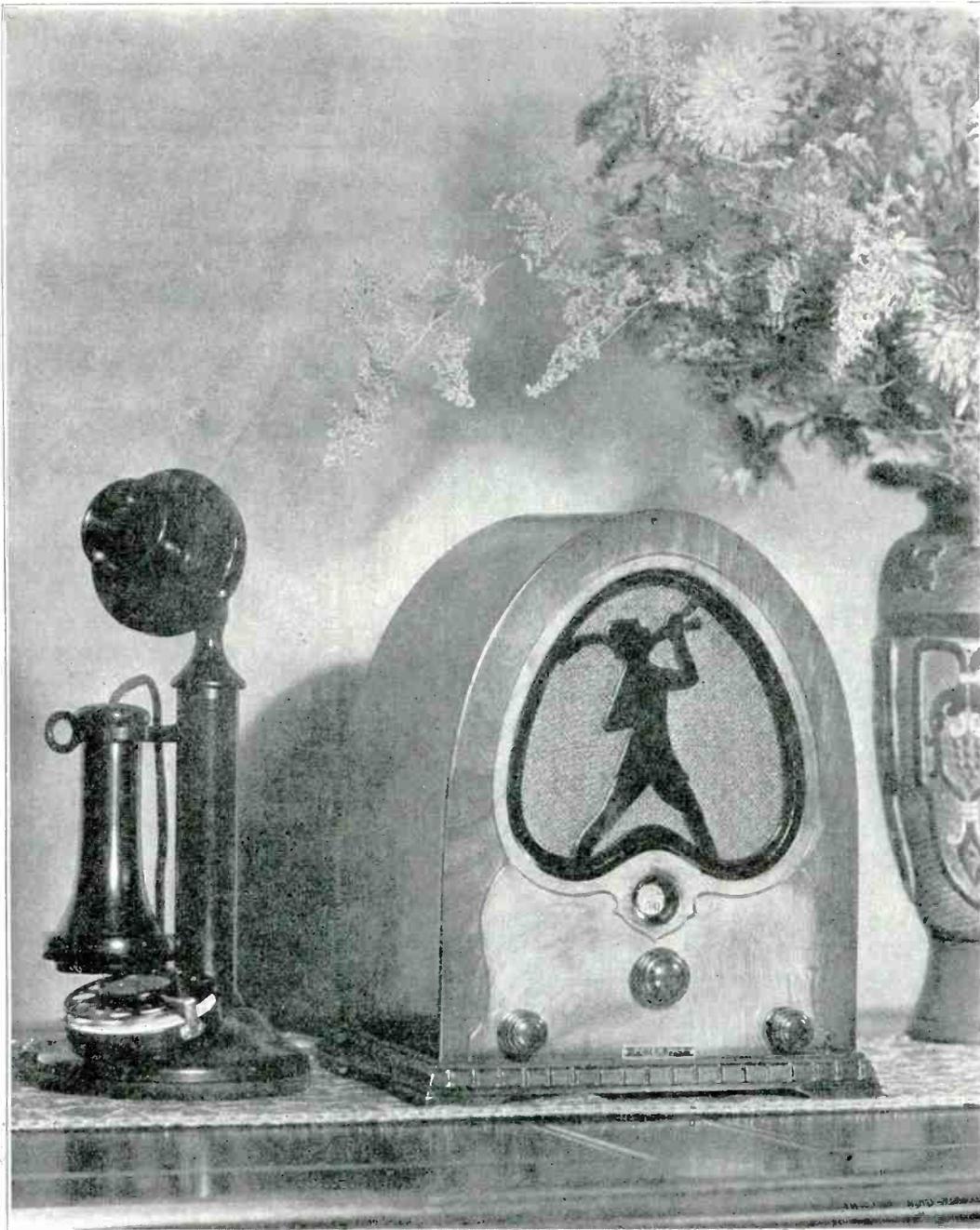
LIST PRICES

The Converter
\$27.25
Patent Pending

STANDARD DISCOUNTS

LICENSED UNDER PATENTS OF R. C. A. and affiliated companies

KELLER-FULLER MFG. CO., LTD.
1575 W. Jefferson - Los Angeles, Calif.



PETER PAN

A miraculous set made
possible by using the
full efficiency of the

PENTODE TUBE

NOT AS HIGH AS
YOUR TELEPHONE

JACKSON BELL COMPANY

LIMITED

LOS ANGELES

CALIFORNIA

Tell them you saw it in RADIO

LIST PRICE

\$29⁹⁵

COMPLETE WITH TUBES

PETER PAN Weighs Just Ten Pounds

◆ For home, office or camp it is ideal. Remember, it brings in the programs just as they are broadcast--faithful to both high notes and low notes due to an inbuilt neutral tone control. It holds its sweet tone over the full musical range at volume. In brief, it is a finely made radio in a handsome cabinet which modern advance in radio now makes it possible to offer at the lowest price ever placed on a modern radio. It is truly the miracle of radio.

FULLY LICENSED UNDER R. C. A.
HAZELTINE - LATOUR PATENTS

JACKSON BELL COMPANY

LIMITED

LOS ANGELES

CALIFORNIA

Tell them you saw it in RADIO

LIKE GOOD PROGRAMS, GOOD SERVICE DRAWS THE YEAR 'ROUND.



Supreme Oscillator Model 70,
Less Tube and Batteries, Dealers
Net Price, F.O.B. Greenwood, Miss. **\$49.75**

Supreme Output-Ohmmeter,
Dealers Net Price, F.O.B. Greenwood, Miss. **\$30.00**

Handsome carrying case of
hardwood for combined Oscillator,
Output-Ohmmeter, and
Accessories. Dealers Net Price,
F.O.B. Greenwood, Miss. **\$5.00**

Tubes and Batteries will be supplied at
current dealers net prices.



**Choose the Oscillator
that guarantees these
super-features**

Model 70 Exclusive Features

1. The only Oscillator covering all superheterodyne frequencies between 90 and 550 kilocycles, as well as all broadcast frequencies between 550 and 1500 kilocycles.
2. The only Oscillator calibrated for every frequency between 90 and 1500 KC.
3. The only perfectly shielded Oscillator with adaptability for external 110-volt D.C. or A.C. (of any frequency) power supply, as well as for use with its self-contained batteries.
4. The only commercial Oscillator which may be operated with or without modulation for the beat-note adjustments recommended by some radio manufacturers.
5. The only popular priced Oscillator provided with a vernier-movement tuning dial for fine adjustments.
6. The only commercial Oscillator built into a cast aluminum housing, with an aluminum panel covered with bakelite, so that the complete Oscillator can be removed from the carrying case when desired.
7. Completely controlled output.
8. Absolutely no readable leakage on the most sensitive receivers even when operated at full volume.
9. The only popularly priced commercial Oscillator accompanied with an attenuated output meter, combined with an accurately calibrated high-range ohmmeter.

MODEL 70 DOES

SUPREME
Testing Instruments
"SUPREME BY COMPARISON"

Another myth exposed—summer decline in radio use! More "Big Time" radio programs are booked through the summer of 1931 than ever before. It's the show that counts—not the season. Take a tip from the most successful radio advertisers and cash in on the demand of the radio audience for enjoyable service from their sets 52 weeks in the year. Like good programs, good service draws the year round. Supreme Instruments are to the radio-man what "TALENT" is to "BIG TIME." They give the kind of performance that knows no season, no competition, and that insures an ever growing, enthusiastic, following.

Meet the challenge of the new season for Ultra modern Service with the OSCILLATOR which more than fulfills present requirements. SUPREME 70—the OSCILLATOR, OUTPUT-OHMMETER, provides an unequalled flexibility in service ranges. The *only* OSCILLATOR you will want after you make comparisons. Ask your jobber. Or write for full data.

MODEL 90 FIRST IN PENTODE ANALYSES

First to provide all Pentode Tests and Analyses, Model 90 gives a real meaning to the standard "SUPREME SERVICE." The *one-meter* analyser that outperforms *multiple meter* instruments that sell for more than twice its low cost. This is the Analyzer used and so highly recommended by RCA Institutes. Let a demonstration prove how far ahead it really is in its field. Ask your jobber—or any jobber who seeks to offer his trade the best—to let you put it thru its paces. Better still, side by side, with any other testing instrument.

As ever, SUPREME DIAGNOMETER 400-B remains the choice of master service man and technician. Advertises itself by amazing daily performance.

**Satisfaction or
Your Money Back**

Supreme Instruments sell themselves. But are never sold until you are completely satisfied. Hence you can return within 10 days any Supreme instrument that does not fully qualify, "SUPREME BY COMPARISON," and get your money back.

SUPREME INSTRUMENTS CORP.

407 Supreme Bldg., Greenwood, Miss.

Distributors in all Principal Cities. Service Depots in New York, Philadelphia, Chicago, Seattle, San Francisco, Tacoma
Foreign Division: 130 West 42nd St., New York City
Cable Address: LOPREH, New York

Tell them you saw it in RADIO

**—and the Analyzer that
offers these advantages**

In addition to all regular analytical tests, the Model 90 provides—

1. Power pentode analyses without special pentode adapters which have exposed high potential terminals.
2. Measurements of power pentode space charge grid potentials.
3. Measurements of power pentode space charge grid currents.
4. Measurements of power pentode plate currents.
5. Measurements of power pentode plate potentials.
6. Measurements of power pentode control grid potentials.
7. Measurements of power pentode filament potentials.
8. Screen grid analyses without radio circuit oscillation.
9. Six (6) ranges for A.C. potential measurements up to 900 volts with "1,000-ohms-per-volt" meter sensitivity.

MODEL 90 DOES



Dealers Net Price,
F.O.B. Greenwood, Miss. **\$78.50**

25
INSTRUMENTS
IN
1

Radiotorial Comment

TELEVISION ADVERTISING

THE inauguration of regular television programs by the Columbia Broadcasting System during July, and especially the publicity given to its first program when the sound accompaniment was broadcast through all the stations in its network, has raised the question as to what television is going to do to and for radio. Will seeing by radio revolutionize the art as greatly as the talkie revolutionized the movie? Will visual advertising reach the same stage as audio advertising? Will a broadcast station without television accompaniment be as rare as a motion picture house without sound equipment? Will the sale of television receivers be as great as has been the sale of sound receivers?

AN affirmative answer to all of these questions seems to be more probable than a negative one—in due course of time. It must be recognized that all frequency allocations to the television broadcasting stations are issued by the Federal Radio Commission for experimental purposes only, as yet. Until commercial licenses are granted there can be no advertising by television. Nor does the limited number of "televisioners" who now have receiving equipment warrant even the nominal charge that would be made.

BUT all this will soon be changed with the advent of commercial television receivers which are about ready to come forth from the laboratories where they have been developed to a far greater degree of perfection than were the first commercial receivers for hearing voice and music. And with this excellence in a factory-built product, intricate in design and construction, but simple in operation, there is little likelihood of a recurrence of the hectic "parts" days of early radio.

THIS means a more stabilized business for the dealer in television equipment. To the man who already owns a modern radio he can sell a

separate television receiver. To the man who has an ancient set, or no set at all, he can sell a combination instrument for receiving the synchronized broadcasts of sight and sound.

PROGRESSIVE managements of broadcast stations are already making their plans for this new day in radio. There are many problems to be solved and much greater sums of money spent in putting on the combined programs. No longer can an actor read his part. It must be memorized and rehearsed just as carefully as for presentation on the legitimate stage. No longer will the crackling of turning pages be heard from loud-speakers. The actor must dress the part he plays. And the effectiveness of the radio drama will be enhanced accordingly.

IT is not expected that the public will long be satisfied to see merely the face of the artist who is singing or playing. During the early days much use will be made of motion picture film. But before long, the stations will be staging elaborate productions, at great expense, which the advertiser will pay.

TELEVISION will raise the standard of radio advertising by substituting the unobtrusive written word or picture for the obnoxious spoken word. "A picture is better than a thousand words," as the Chinese say. The radio advertising of the future will be through sight, rather than sound, leaving more time for the entertainment portion of the program.

WITH better service from the broadcasting stations will come a greater demand for combination receivers and better business for the radio dealer. It therefore behooves him in this time of adversity to prepare for the coming day of prosperity. Nor is it wise to put off until tomorrow the preparation that should be made today. For tomorrow, television, with all its wonders and its profits, will be with you.

What May the Public Expect From Television?

Excerpts from "Today and Tomorrow," a Statement by David Sarnoff, President of the Radio Corporation of America

THE instantaneous projection through space of light images produced directly from objects in the studio or the scene brought to the studio by remote control involves many problems. Special types of distribution networks, new forms of stagecraft, and a development of studio equipment and technique will be required. With these must come a new and greater service of broadcasting, both of sight and sound. A new world of educational and cultural opportunities will be opened to the home. New forms of artistry will be encouraged and developed. Variety and more variety will be the demand of the day. The ear might be content with the oft-repeated song; the eye would be impatient with the twice-repeated scenes. The service will demand, therefore, a constant succession of personalities, a vast array of talent, a tremendous store of material, a great variety of scene and background.

THERE is little in the field of cultural education that cannot be visioned for the home through the new facilities of electrical communication. Assume sufficient progress in the television art and every home equipped for radio reception may, at certain times, become an art gallery. The great works of painting and sculpture in the art galleries of Europe and America lie buried there, insofar as the vast majority of the earth's population is concerned. Television,

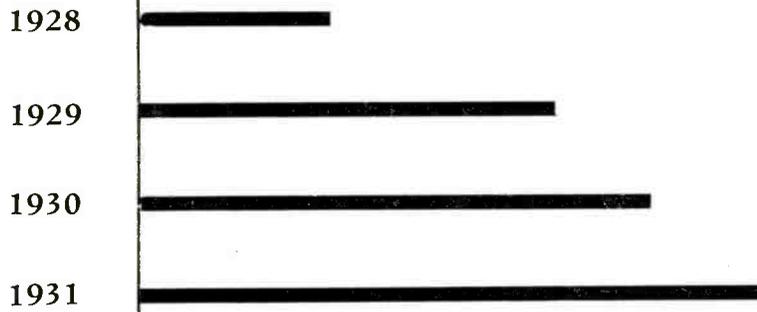
advanced to the stage when color as well as shadow may be faithfully transmitted, would bring these treasures vividly to the home. Conceive the exhibition of such works of art in the home, accompanied by comments and explanations by the proper authorities. Just as sound broadcasting has brought a new sense of musical appreciation to millions of people, so may television open a new era of art appreciation.

BUT even more appealing to the individual, is the hope that television may, at least in a measure, enable man to keep pace with his thoughts. The human being has been created with a mind that can encompass the whole world within the fraction of a second; yet his physical senses lag woefully behind. With his feet he can walk only a limited distance. With his hands he can touch only what is within reach. His eyes can see at a limited distance, and his ears are useful at a short distance only.

WHEN television has fulfilled its ultimate destiny, man's sense of physical limitation will be swept away, and his boundaries of sight and hearing will be the limits of earth itself. With this may come a new horizon, a new philosophy, a new sense of freedom, and greatest of all, perhaps a finer and broader understanding between all the peoples of the world.

Export Market Shows Astounding Growth

The chart to the left shows the export trade growth of American made radio receivers. Here are the figures in dollar volumes



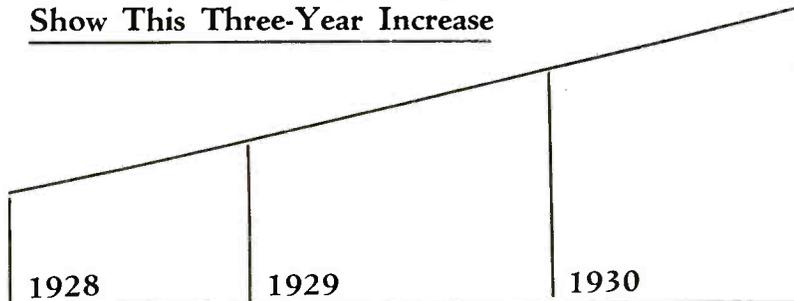
1928	\$ 4,549,825.00
1929	9,775,701.00
1930	11,549,621.00
1931 (5 months)	5,191,483.00

DOLLAR VALUE OF RADIO SET EXPORTS

The fall and winter season of the current year should show another substantial gain in export sales. Low priced receivers are now finding the largest market in foreign countries.

Number of Radio Receiving Sets Exported

U. S. Government Export Figures
Show This Three-Year Increase



In numbers of receivers exported, we find these figures of interest:

1928	96,341 Sets
1929	200,936 Sets
1930	245,192 Sets
1931 (5 months)	131,103 Sets

Of the above, the following proportion is for Canada:

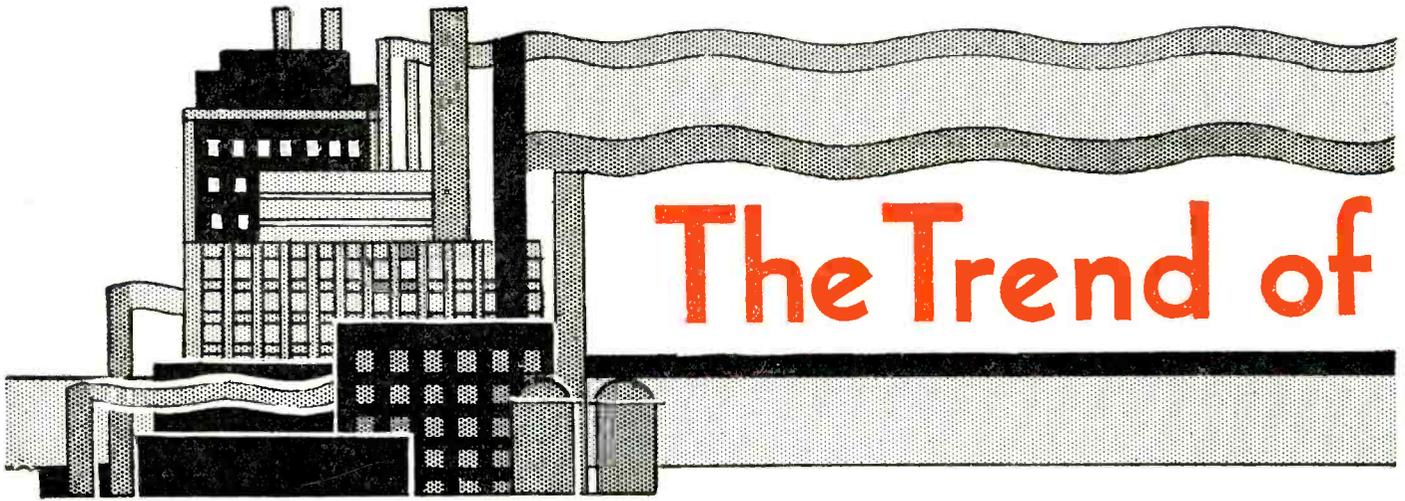
DOLLAR VALUE	1928	1929	1930
	\$2,449,666.00	\$3,443,815.00	\$5,406,233.00

(1931 reports not yet available)

NUMBER OF SETS	1928	1929	1930
	50,423 Sets	93,210 Sets	118,496 Sets

« « « FOREIGN TRADE INFORMATION » » »

Those radio manufacturers who desire to avail themselves of "RADIO's" export service should communicate with the publishers. Large numbers of requests for prices, etc., are received each month from export houses in most parts of the world. If you specialize in export trade we will send our monthly list of foreign trade wants.



The Trend of

PHILO T. FARNSWORTH'S cathode ray 400-line television receiver is now in the Philco laboratories. The inventor has moved into the Philco factory from where his first commercially successful talking-radio-picture receiver may be forthcoming. One of the more prominent Philco jobbers has circularized his dealers with an announcement that "when practical television is here Philco will have it." He advises his dealers to disregard all forms of television propaganda emanating from other sources . . . to continue aggressive selling of present-day radio receivers and ignore television rumors entirely until further announcements are made of the Farnsworth development.

THIS MUCH IS CERTAIN—television by cathode ray tube, as demonstrated by Farnsworth to a group of newspapermen, television by means of narrow-band transmission (alone capable of being put on the land-wire for station-to-station broadcast) is no longer in the experimental stage.

TELEVISION RECEIVERS will be on your sales floors at a time when the leaders of the industry have assured themselves that your prospects will have a fool-proof instrument available for home use. Not before. You will not offer for sale a contraption of windmills, purring motors and oil cans. The home owner or the apartment dweller will not welcome a whirling wheel in his drawing-room or boudoir. What he wants is something entirely noiseless in operation. Nothing in motion, other than the picture at which he is looking. He wants a talking-motion-picture-by-radio, just as he sees it in the theatre—yet smaller in size. Something just about a foot square. Just such an instrument is now being developed for you. Worth your while to stay in the radio business and wait for better days—if you can reduce your overhead and maintain your present sales quotas until television comes.

Prospect of Early Television May Boost RCA Stock

What is dubbed a "pre-television movement" by stock market informer Julius G. Berens is a movement on the part of Radio Corporation stock sponsors to lay the groundwork for a renewed and active campaign in the market. Says Berens, "The stock obviously must be considered purely speculative. Previous bull campaigns in the issue, with their high and mighty promises of confirmation in enormous earnings of the corporation, served only to prove the reckless disregard for the facts on the part of the stock's sponsors. Should the promised campaign in Radio get under way soon it is likely to be dubbed the 'pre-television' movement. It is just this hope with respect to television that encourages the bull sponsors."

ONE OF HEARST'S newspapermen who edits the radio page says that a monument should be erected on the site where the Farnsworth television laboratory now stands. So impressed was he with the showing of a slow-motion television film of a Dempsey prize-fight that more space to television was devoted in a recent edition of the newspaper than at any other previous time.

FEATURE WRITERS for large national magazines have besieged the offices of "RADIO" for requests for photographs of the Farnsworth system. Forthcoming issues of these magazines will carry stories about television of varied types. For the protection of the radio dealer it is well to state here that the "queue" of any publicly-disseminated information is the cathode ray tube. The rest can be taken with a grain of salt.

The United States Patent Office has just granted to J. S. Van Horne, of the Van Horne Tube Company, a patent covering a tipless method of evacuating radio tubes and incandescent lamps.

AT THE MEETING of the board of directors of the Radio Corporation of America held on Friday, July 17, 1931, the following dividends were declared:

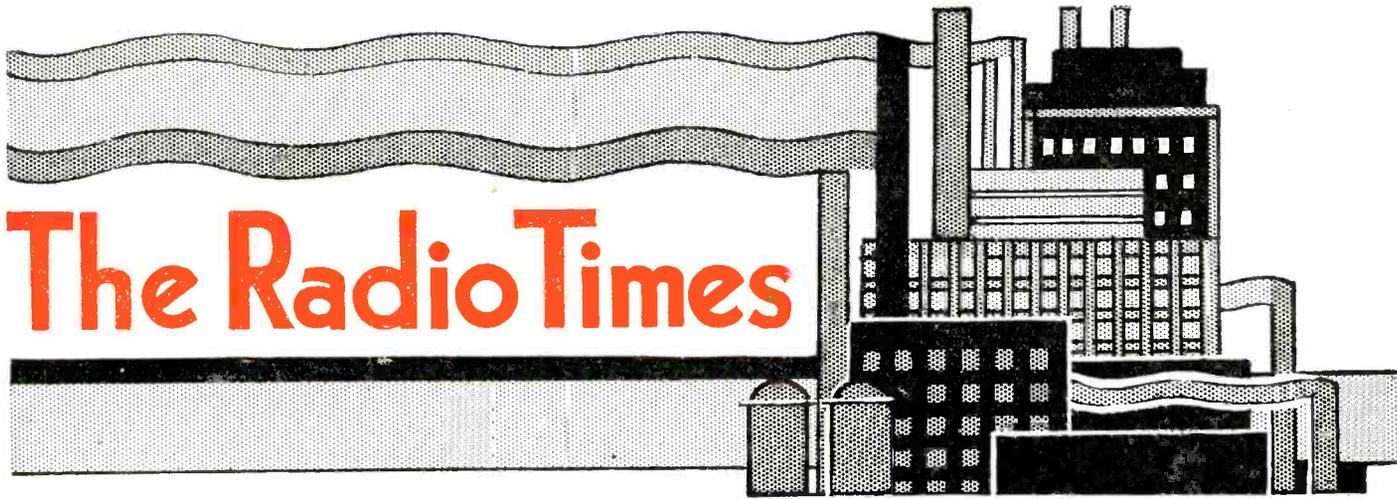
On the "A" preferred stock—1¾% (87½¢ per share) for the third quarter of 1931.

On the "B" preferred stock—\$1.25 per share for the third quarter of 1931.

The dividends are payable on October 1, 1931 to stockholders of record September 1, 1931.

PRODUCTION OF RADIO RECEIVERS is being steadily increased by the U. S. Radio & Television Corporation, manufacturers of U. S. Apex and Gloritone sets, to take care of rapidly accumulating orders, it is announced by J. Clarke Coit, president of the corporation. Production is now at the rate of 1,800 sets a day and this figure will be exceeded with the arrival of new machinery just ordered.

J. CLARKE COIT of Chicago, the newly elected president of the Radio Manufacturers Association, has called a meeting of the RMA Board of Directors at Niagara Falls, Canada, and it is probable that radio patent pooling will be a leading topic of discussion. Many leaders of the radio industry are hopeful that a solution of the long standing patent problems in the industry may be found within a few months and the industry stabilized, so far as patent problems are concerned, like the automotive and aircraft industries in this respect. The United States Department of Justice and the Radio Corporation of America, according to official announcement, are now discussing pooling of radio patents in the public interest, as well as that of the industry, and the Radio Manufacturers Association already has many of its members signed up in the RMA patent pool approved by the association's membership more than a year ago, but not yet in effect.



The Radio Times

PHILCO radio shipments during the months of June and July were nearly three hundred per cent greater than shipments made during the same period of 1930. Shipments during the spring also were reported to be 250 per cent greater than in the spring of 1930, which was Philco's banner year in point of sales.

Outlook for the radio business this fall has never been better, James M. Skinner, president of the company, declared in a statement to his distributing organization throughout the country. Mr. Skinner is at present in London surveying the export market there.

The company has been manufacturing radio sets only three years, and during that time has become the largest manufacturer of radio receivers in the world. Starting as a battery manufacturer 25 years ago with eighteen employes, the company has more than 6000 factory and 800 office, laboratory and sales employes on its payroll at the peak of the season.

Radio Tube Official Sees Many Constructive Factors Ahead

The immediate fall months ahead will find the entire radio industry in better position as to price and quality of product and in its merchandising set-up than at any time during the past decade, George K. Throckmorton, president of E. T. Cunningham, Inc., radio tube company, declared.

This strategic position in which the industry finds itself after more than a year and a half of stringency as a result of national business depression, gives every indication of making radio one of the first of our major businesses to recover normal operating stability, Mr. Throckmorton added.

Lists Constructive Factors

Among the major constructive factors listed by the Cunningham president as placing radio in an unusually favorable position to capitalize on the already evident up-swing of general business, are the following: elimination of many small and financially irresponsible manufactur-

ing and jobbing organizations; the inauguration of sounder merchandising plans in all lines of radio, including such important accessory lines as tubes; the production of more standard merchandise with a greater size and price variety, which has succeeded in bringing radio within the financial reach of practically every family; and last, the introduction of many technical improvements in radio which have resulted in a product far superior to that which the industry produced in previous years.

WESTINGHOUSE has added a \$37.50 mantel receiver to its line. It is the WR-14, with 6-inch dynamic speaker and pentode amplifier. The price includes tubes.

MORE THAN 50,000 CeCo TUBES were shipped from the factory of the CeCo Manufacturing Company in Providence, R. I., on a recent day in July.

It was the biggest CeCo shipment since the autumn of 1929 and one of the biggest shipments in CeCo history.

H. B. FOSTER, general manager of the Perryman Electric Company, announces that their back log of unfilled orders was three times that of last year, and that there was every possibility of this ratio increasing before September 1.

The radio industry in general is realizing, pointed out Mr. Foster, that while the sale of new radio receiving sets for the home may fluctuate with business conditions, the sale of tubes for replacement purposes continues to increase every year, and is only affected by a drastic breakdown in general business conditions, and even then only for a limited time.

"This is borne out," stated Mr. Foster, "by the fact that the orders on hand at the Perryman factory calls for our organization working at 75 per cent of capacity for the next four months, which would be a high rate of production even were general business conditions more propitious than they are at the present time."

DeFOREST RADIO COMPANY of Passaic, N. J., announces the appointment of D. E. Replogle as chief engineer. For the past two years Mr. Replogle, familiarly known as "Rep" throughout the radio industry, has been assistant to the president of the Jenkins Television Corporation, and in full charge of the engineering and production activities of that organization. He is responsible for the first successful television broadcasting service through Station W2XCR in New York City.

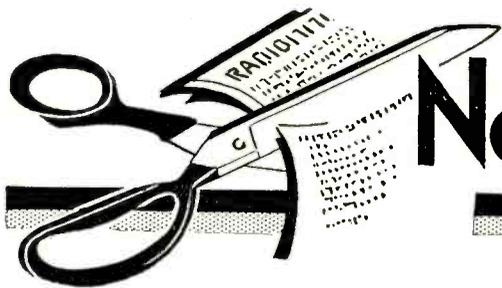
In his present position D. E. Replogle will head a staff of experienced engineers engaged in the further development and application of the DeForest line of products, which includes radio transmitters, transmitting tubes, special and industrial tubes, carrier current equipment, centralized radio systems and other items, quite in addition to a complete line of receiving tubes. He will also continue to guide the engineering activities of the Jenkins Television Corporation, whose products are manufactured by the DeForest Radio Company.

\$23,000,000 In Radio Suit

The \$23,000,000 damage suits filed against the Radio Corporation of America by eleven other concerns, alleging violations of the anti-trust laws, opened in the United States District Court at Wilmington, Delaware, on July 29th, before Judge John P. Nields.

The exact amount of the claims filed by the eleven plaintiffs amounts to \$23,350,000.

Gold Seal Electrical Company, \$4,000,000; DeForest Radio Company, \$4,000,000; Howard M. Ivins, receiver for Van Horne Company, \$4,000,000; Schickerling Products Corporation, \$4,000,000; Mellotone Tube Corporation, \$1,000,000; Sunlight Lamp Company, \$550,000; Universal Electrical Lamp Company, \$350,000; Diamond Vacuum Products Company, \$350,000; Continental Corporation, \$350,000; Northern Manufacturing Company, \$4,000,000; Vesta Battery Corporation, \$750,000.



News of the Month

Stewart-Warner Has Low-Wave Converter

A DISTINCTIVE feature of the models produced by the Stewart-Warner Corporation to celebrate their 25th anniversary is the new low-wave converter, which adapts practically any standard a-c set to low-wave reception.

"Short-wave broadcasts provide some of the most thrilling entertainment on the air today," declares W. J. Zucker, vice-president of the Stewart-Warner Corporation. "London, Paris, Rome, Berlin, stations in South America, Africa, China, Japan, and many other foreign countries, employ short-wave broadcasts, as do ships at sea, amateur stations, police and television transmitters. And, today, a great many people are interested in tuning in these foreign broadcasts direct."

The Stewart-Warner low-wave converter features single dial tuning and has coils which automatically adjust themselves to incoming waves, thereby eliminating the necessity for changing coils. This device is shown both as a separate unit for operation with any standard a-c receiver and as a built-in feature of several Silver Jubilee models.

MAGNAVOX may shortly begin legal action against Stewart-Warner, Stromberg-Carlson and Atwater-Kent for alleged infringement of dynamic speaker patents. Negotiations are under way to settle these suits out of court.

KELVINATOR net profits for the first quarter were in excess of \$1,414,467, equivalent to \$1.19 a share on 1,186,106 common shares. Cumulative shipments to June 22 were 89,853 units against 79,978 in 1930.

A. G. FARQUHARSON, secretary of Radio and Music Trades Association of Southern California, tells the radio industry that the Los Angeles radio show has been postponed until some time in October or early in November. The original plans called for a show in August but "because of the absence of anything startlingly new at the Chicago R. M. A. Show" the date has been postponed until the fall, at which time a larger public attendance is anticipated.

GRUNOW ABANDONS PLANS —At a special meeting held in Chicago by Wm. C. Grunow and more than a score of his business associates, it was decided to abruptly end the elaborate plans that have been in progress for the entry of the Wm. C. Grunow Company into the radio industry.

The company exhibited several new models of radio receivers during the R. M. A. show and had planned to commence operations in August.

"The unfavorable condition of general business throughout the country is the principal reason why we decided not to proceed further with our plans," said Mr. Grunow.

Mr. Grunow has no definite plans for the future and may go West for an extended vacation and rest, it was said.

L. D. YONT is now export manager for a new sales outlet, Browning-Drake Radio Corporation, exclusive sales agents for Browning-Drake Corporation. The product of the reorganized company is a receiver capable of covering the bands of 200-500 meters and 1000-2000 meters. The higher wavelength is required for reception in Australia and Europe. Browning-Drake's new receiver is a seven-tube superheterodyne with variable-mu and pentode tubes, continuous tone control and full vision dial. A change-over switch enables the receiver to operate on either the standard band or the band required for reception in foreign countries. Browning-Drake claims this receiver will pick-up American stations in foreign lands.

JOSEPH D. R. FREED, president of Perryman Electric Co., says that more than 60 per cent of the inboard motor boats on exhibition in New York show rooms are radio-equipped and built-in aeriels are found in practically all new boats on display. "The growth of radio as an integral part of motor boating and yachting," says Mr. Freed, "forced our experimental engineers to perfect a tube especially adapted to the distinct requirement of this type of equipment and the P237, P236 and P238 resulted, all three functioning at their best in broadcast receivers designed for boating, automobiling and camping."

R. H. MACY'S Department Store in New York will install a single antenna system from which 104 radio receivers of different types can be operated. The RCA "Antenaplex" will be used.

VICE-CHANCELLOR ALONZO CHURCH advised the receivers for Earl Radio Corporation to consider action against the Radio Corporation under the Sherman anti-trust and Clayton acts. Receivers were further instructed to bring suit against the directors of the company on charges of irregularities in the conduct of its affairs.

"BY PARTICIPATING with a group of some of the biggest stores in the country in the purchase of the factory's entire output — by eliminating intermediate costs—we can offer the new Grebe superheterodyne at 98.50 complete," says the first newspaper announcement of one of the large chain of department stores which has allied itself with others in a contract to buy exclusively all of the sets that Grebe makes. The small dealer can no longer boast of a Grebe franchise.

ANNOUNCEMENT WAS MADE by Mr. W. F. McAuliffe, sales manager of Kolster Radio, Inc., that Sanford Radio Corporation had been appointed distributor for Kolster Broadcast Receivers in the New York City territory.

TRUMAN P. GAYLORD, 60, vice-president of the Westinghouse Electric and Manufacturing Co., East Pittsburgh, Pa., died suddenly recently (July 5) in Shelby, Michigan, his boyhood home, where he had been visiting his mother.

FRED L. DAMARIN is once more with the Dubilier Condenser Corporation in the capacity of western sales manager. Mr. Damarin, who resigned his position as sales manager of Tung Sol Condensers, Inc., in order to rejoin the Dubilier organization, makes his headquarters at 330 S. Wells street, Chicago.

"Radio Advertisements are NOT doing a good job"

— says R. M. KLEIN

General Manager, F. A. D. Andrea, Inc.



R. M. Klein

ARE radio ads addressed to the general public doing a good job? Are they doing even a fair job?

In the last analysis, of course, any criticisms of current advertising in the radio field can only be matters of personal opinion, and what one advertising manager might consider real hot copy, another might argue to be merely mediocre.

However, in one respect at least, radio advertising to consumers is not doing the job it should. Copy, in too many instances, is too general and unimpressive. This is true in any field today, but from the type of advertising appearing daily, it is quite evident that many copy writers have yet to grasp this elementary principle.

It is not enough to say that a certain set will bring forth a clearer tone or that it is more selective than other outfits.

If a set is really more selective, then it is the duty of the advertiser to tell exactly why and how that particular outfit performs better. If it has a clearer tone, then the prospective buyer should be told exactly why the tone is clearer.

RETURN to an ad which announces that a certain set is fitted with Pentode tubes. What does the name Pentode mean to the average reader? Absolutely nothing. The chances are that a person reading of these tubes and not

knowing what Pentode meant, would not even hesitate to think about it but would pass it by and completely forget about it a few minutes later.

But had that advertisement, in as few words possible, taken the trouble to explain just what are Pentode tubes, how they function and why they improve a radio set, the reader is more than likely to have the name Pentode planted in his or her mind in a favorable manner. That is, even though soon after, they forget how this tube functions, they, in all probability, will recall that they at one time

had been favorably impressed. In other words, a pleasant taste had remained.

In situations such as these, it is likely that such a person, even though totally ignorant of what Pentode tubes are, will nevertheless counsel others to be sure that the new radio contains this type of tube. It is one of the peculiarities of human nature, and this desire to make others believe that one is well versed on most any topic, often leads persons to repeat statements which they do not thoroughly understand, sometimes to the detriment of a product and at other times in its favor.

The automobile field furnishes an excellent example of this. This year, for instance, you see numerous Auburn machines and on every side you are likely to hear persons saying that they are the best to buy. Were you to pin any of these persons down to facts and demand why they say Auburns are the best buys, they would tell you that they heard it from "So-and-So."

AUTOMOBILE copy as a whole, though, has shown a remarkable improvement and in a number of cases exemplifies just what I have been saying should be done more often with radio sets, or with any advertising, for that matter.

Take this recent ad, for instance, headed "The Keener Your Judgment of Value, the Greater De Soto's Appeal."

The copy then went on to say: "In an automobile value means performance, appearance, comfort, safety and economy. The new De Soto Straight Eight measures up to the most exacting standards in all these things. A big 77-horsepower engine gives it more speed than you'll ever need; acceleration unequaled by any other car within sight of its price; flexibility; smoothness."

"Sweeping, graceful lines, a long rakish hood with a narrow-profile radiator, handsome upholstery and fine interior fittings give it an appearance of which any owner will be proud. A scientifically-designed spring suspension, combined with hydraulic shock absorbers, contributes superb riding qualities. Safety is assured by internal weatherproof hydraulic brakes, unisteel body—integrated with the frame and free from seams or joints—and extreme steering ease. Judged by any basis of comparison, the new De Soto Straight Eight gives you the most for your money! That's value!"

This is all an ad should be and I'd be well satisfied to see all of Fada's copy built along the same lines. In the first place, the heading says something worthwhile and is arresting.

The opening statement repeats what everyone desires in this particular product and then goes on, point by point, to prove that this car can satisfy in each instance. The ad is both interesting and convincing and easily understood by all but the poorest minds.

I cannot see how anyone could possibly disagree when I say that the copy which I have repeated just above is far superior to the type of ad which merely says the product is the best in its field or that it performs better than any others. Superlatives have been used too often—or I should say abused too often—to have any favorable effect on actual buyers.

SOMETIMES an ad strikes me as being prepared by someone who knew very little if anything about radios. This simply cannot be done—that is,
(Continued on Page 30)

What About This "Dirt-Cheap" Radio Merchandise?

THERE has been a great hue and cry about the gradually declining prices of radio sets ever since the business began to show enough signs of prosperity to attract the crowds into the ranks of the manufacturers. The last two years has called forth a hullabaloo, because radio prices have dropped almost out of sight. The announcements of new lows immediately following the Trade Show have brought forth a renewed burst of nationwide criticism from dealer, jobber and trade press.

Just what is going to follow this consistent price reduction? What is it going to mean to the dealer and jobber and manufacturer? The trade in general is agreed that the new merchandise that is selling for a fraction of what the public used to pay for radio sets is demoralizing the industry; that it cannot be sold profitably or serviced properly. Therefore, they agree, this industry must remain on the rocks until the \$29.50 radio set has passed into history and a minimum list price established around sixty dollars. A noble ideal; just as noble as world-wide peace, international agreement on the drug problem, and legislation against thirst. Now that we have the \$29.50 (and cheaper) radio set how are we going to get rid of it? Back tracking is a difficult feat for one person; fifty or a hundred cannot expect to accomplish it.

Manufacturers who are building the extremely low priced receivers (many of them, at least) have not entered this field by choice. There is little or no profit in the manufacture of this type of set for the legitimate fabricator who has invested money in the business. Yet he knows his surest way "out" is to refuse to manufacture what the public has been taught to demand, even though he had no part in that teaching. He is being asked some very pertinent questions about these receivers. "How can the dealer hope to stay in the radio business by selling profitless stuff?" "Why should a customer spend \$100 or more for a radio set when he can get a fair amount of entertainment from a very cheap set?" "Do people appreciate the difference?" Those and many others. Naturally the manufacturer is blamed for this pitiful condition of affairs; rather should we say the manufacturers are blamed as a body for the works of one or two.

His usual comeback is to the effect

Will the \$29.00 Set Put the Dealer Out of Business?

RADIO PRESS ASSOCIATION
(Affiliated with the National Federation of Radio Associations)
32 WEST RANDOLPH STREET
CHICAGO

Minneapolis, Minn.
301 Tribune Annex
July 27, 1931

RADIO
Pacific Bldg.
San Francisco, Calif.
Gentlemen:

List prices on radio are too low. Dealers and jobbers throughout the country are protesting to their manufacturers that they cannot make any profit on the low prices of radio.

It seems to me that every trade paper should hammer away at this situation and not only endeavor to get all manufacturers to raise their list prices on all models from \$10 to \$20 per set, but point out to dealers that in selling extremely low priced sets they do not have any chance whatever to make any dollar profit if they pay any attention at all to their cost of doing business.

We are writing this to all of the leading trade papers, although we know that a number of them have already started campaigns along this line.

Yours very truly,
RADIO PRESS ASSOCIATION.
(Signed) H. L. CORY.

that the cheap receivers can be sold as another of those many "extra" receivers for the home, or for the vacation cottage down by the sea, or for the office. This maneuver passes the buck to the dealer, who can't deny that he has not done his best to crash the gates of these markets. But all this conversation is childish prattle. One lonely fact stands out; a fact amid beacoup fiction. **The dirt cheap radio receiver is here. It is acceptable to the public. It will remain here.** The public has the final say in every industrial problem; if it ever wel-

comes a product, that product is here to stay. Industry has never yet been able to refuse the public anything it wanted. The combined organizing powers of Mussolini, Stalin, Mohammed and Brigham Young could not keep the dirt cheap receiver off the market. Once all the manufacturers agreed to lay off, four hundred more would pitch their tents and go to work.

There is an interesting term familiar to psychologists of late: "Wish-thinking." It means that you think something is true because you wish it to be true. Everyone in existence must have a friend or a relative who is perfectly sure of some point in spite of all logic and reason to the contrary, merely because he subconsciously desires it to be so. So it is with this cheap radio set proposition. We wish we never had heard of them. They're all wrong; they're ruining the industry; therefore they are doomed.

No matter how much they are hurting the industry, common sense tells us the dirt cheap radio is not doomed. Not while the public dictates its desires to those of its ranks who have set themselves the task of satisfying those desires. The cheap radio is here. And it may become cheaper. Those who are not interested in taking it under their wings may quit reading this script right here, if they have not left us long ago. Those who don't intend to give up the ship might get a little encouragement from some comparisons with other lines of industry. Comparisons may be odious to those whose arguments they "show up" but they are very helpful to those who can see two sides of the question.

A living room chair can be bought for fifteen dollars. Most of us spend around sixty bucks apiece for a couple of comfortable overstuffed chairs that are bought to last until the kids begin to use them for fortresses. Some people pay two hundred dollars for a straight-backed imitation of an uncomfortable Elizabethan. They are very proud of it; insist that their friends sit in it, and send them home to the arnica bottle. Some people pay a thousand dollars for a piece of the Mayflower's tremendous cargo of freight; admire it from a distance.

Most people ride around in automobiles that cost six or seven hundred dollars, on terms. Fords, Chevies, Plymouths and many others serve the average family's every transportation

need. Another large class of people spread themselves a bit and pay fifteen hundred or two thousand dollars for the added comfort and class of a larger car. The chosen few buy automobiles with silver hardware ranging in price up to eight thousand plunks. The manufacturers of Duesenburg, Packard and Cadillac continue to thrive through the years in spite of price competition that is as tough as any run up against by the manufacturers of expensive radio sets. One man may buy an overcoat for \$22.50; his neighbor will pay a hundred and twenty-five. The first man isn't much worried about the looks of his coat; he buys it to keep himself warm; necessary evil idea. His neighbor has a weakness for dressy appearance. He gets up in the morning and looks at the thermometer, hoping the mercury has hit bottom. He is conscious of his coat and would never be satisfied with a cheap one. One man goes fishing with tackle worth a lowly five spot; another catches less fish but enjoys himself just as much casting a six-bit leader on the end of a six dollar tapered line, running through the grommets of a thirty-five dollar rod.

A rug can be had for twenty dollars. A good Chinese can part you with two thousand dollars, while most of us are satisfied with a one hundred dollar Wilton which covers as much floor and can be walked on in the presence of the wife without fear and trembling. Pianos can be bought for a hundred and fifty simoleons. The musical ear demands an instrument costing six or eight hundred. Those who can, usually cough up with a couple grand for one.

And so on and on. Will someone please come forward and tell us why the radio business is so much different than every other business? Throw in a com-

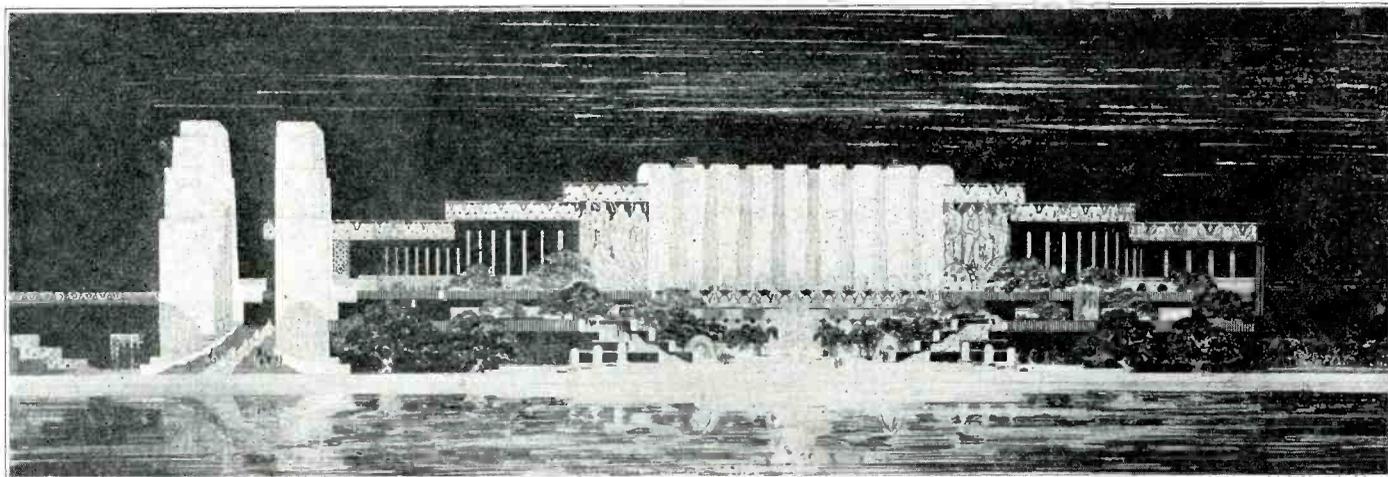
plete explanation of why we can't sell dirt cheap sets to the people who are either not able to appreciate radio values or cannot afford to buy themselves a more expensive set; and why, in spite of a hundred and fifty types of dirt cheap receivers people who can afford it can't be persuaded to part with a hundred dollars and get something they will be proud of and enjoy listening to. Also tell us why people who are riding in Rolls-Royces, sitting on Louis the Third's favorite stool, and wading up to their ankles in a fine Persian rug, will not be

Manufacturers Announce Mantel Sets to Sell for Less Than \$30.00

THE NEW THINGS of the month include the \$29.95 mantel set by the midget pioneer, Jackson-Bell, with whom Alex M. Hirsch is now associated. Another of the newer things is the Remler \$29.90 four-tube receiver with dynamic speaker and four Arcturus tubes. And another is the Remler console super-heterodyne with multi-mus and pentodes at \$49.50 list, with Arcturus tubes. Then follows the new Radiette universal AC-DC-auto-or-home combination receiver which requires no "B" or "C" batteries for its operation. A small General Electric motor, driven from the storage battery of the automobiles, furnishes the "B" and "C" power. But when the set is removed from the car and installed in the home it becomes an AC 110-volt portable receiver. This new Radiette device is called "Auto-verter." Alone, it lists for \$27.25. The set itself, \$62.50. And the combination of the Autoverter and the radio set, \$89.75.

just as proud to make their friends listen to Rudy Vallee from a thousand dollar Gothic highboy.

Don't let anybody tell you differently. People buy according to what they can afford. Due to this depression—surely you have heard it mentioned—we are completely incapacitated when it comes to fixing the blame for the buying trend toward low-priced sets. We say it has been the dirt cheap receiver that brought it on. Maybe so. Maybe, also, the dirt cheap receiver was a depression measure and has been responsible for sales that would not otherwise have been made. When times return to normalcy people will buy according to their whims and fancies instead of getting by as cheaply as humanly possible. Those who have learned to appreciate the entertainment and musical values of various radio receivers will stretch themselves to the point of buying the set that will give them reproduction that will satisfy their craving for things a little better than those that satisfy the herd. Those who have furnished themselves with dirt cheap sets are now developing that taste and discrimination that will make them junk their present music boxes and buy good ones when the optimistic times are here again. RADIO contends that the dirt cheap set has its place. We admit that right now, during the depression, it is slopping over in places set aside for more expensive receivers. But we feel absolutely certain that once the buying public gets over its big scare, the dirt cheap job will be locked into the border lines marked off for it, and every radio dealer will have a shelf full of them for those who can't afford a better one. He will feature, however, the fair priced, attractive looking, fine sounding radio receiver he could safely sell his mother-in-law.



Radio Exhibition Hall at Chicago's World's Fair

Ground was broken July 20th on the Electrical Group, designed by Raymond Hood of New York, and the fifth structure of Chicago's 1933 World's Fair. It will house the exhibits of electricity, telephone, telegraph and radio; will be 1,200 by 300 feet, two stories high and of striking modernistic

design. Steel and special wallboard will form the exterior. White, yellow, red, black and blue will be the dominant colors. The structure will be embellished with hanging gardens and paved terraces. It will be located on Northerly (Adler Planetarium) Island, south of Sixteenth Street.

◆ IN 1921 ◆

The Radio Boom Began 10 Years Ago

. . . . The Nation Was in the Throes of a Serious Business Depression But Radio Sets Sold for \$125.00

Today ten years later we again find something to look forward to

Just Ten Short Years

TURNING back the pages of RADIO to the files of 1921 we find that in that year the transmitting amateurs grudgingly gave up their place in the sphere to the new type of amateur, immediately labelled the B. C. L., or broadcast listener. 1921 marked the beginning of the great radio boom which reached its zenith four years later. Newspapers were reproducing pictures of the DeForest Wireless Telephone which was in operation in the California Theatre in San Francisco . . . the first commercial wireless broadcasting station in the world. The Doctor himself was there trying to make it work. The mogul in charge was none other than Dick Klein, now the level-headed sales manager of the FADA organization. Associated with him was E. M. Sargent, now a manufacturer of short-wave receivers. At the microphone of the "world's first broadcasting station" was a thin-faced Cockney announcer, J. Legge-Willis, whose half-witted jocosity was enjoyed solely by himself. Ruth Phipps, the best looking chorus girl in a cheap burlesque show, stood before the microphone and had her pictures taken for the newspapers, which was about all she could do. But that old DeForest wireless telephone marked the beginning of what is today recognized as one of the accepted indoor sports . . . music and speech by radio—without wires! Some call it entertainment, even today.

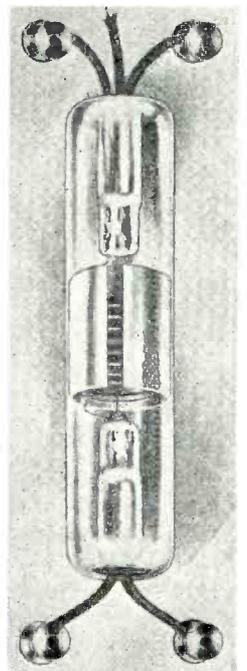
With the successful opening of the DeForest station and the more successful publicity campaign for radio broadcasting in general, the manufacture of many new types of "wireless telephone receivers" began in earnest. Amateurs who knew how to read radio circuits opened "factories" in basements and kitchens and garages, and manufactured regenerative receivers . . . two wooden balls with wire wound around them, a vario-coupler and a tube, or a piece of galena. Not the least of these was the Chicago Radio Laboratory, better known now as the Zenith Radio Corporation. Also in the field were Clapp-Eastham, from which the General Radio Company was later formed. Parts were to be had from a multitude of manufacturers. Pacent was a radio supply house, dealing in headphones of a then exclusive and highly efficient type. Manhattan Electric Supply Company, Mesco, was a manufacturing and jobbing outlet, selling everything from wire to complete

boxes of parts with which the fan could build his own radio set. The word "loud-speaker" had not yet been coined; horns were stolen off the family phonograph, attached to a single headphone receiver, and continued to answer to the name of "horn." Some of them were wood but most of them were tin. They sounded "tinny"; they were "tinny"; but the nation marveled at the wonders of wireless telephony. Young boys and old men were building their own receivers by the hundreds of thousands. The parts business was booming. Long before 1921 Elmer T. Cunningham was selling long, skinny "audiotrons" . . . now called vacuum tubes for some funny reason . . . and he got \$7.50 for each and every one of them. They looked like frankfurters. Sometimes they acted like frankfurters . . . they sizzled. Followed the Moorhead valve in competition to E. T., but Moorhead died a short time later and Cunningham swung his memorable deal with the Radio Corporation in which he

The Cunningham Tube, Ten Years Ago

Elmer T. Cunningham's first tube was called "The Audiotron." You who were in the business ten years and more ago recall this familiar "frankfurter." \$5.00 was the selling price. Special amplifier tubes sold for \$7.50.

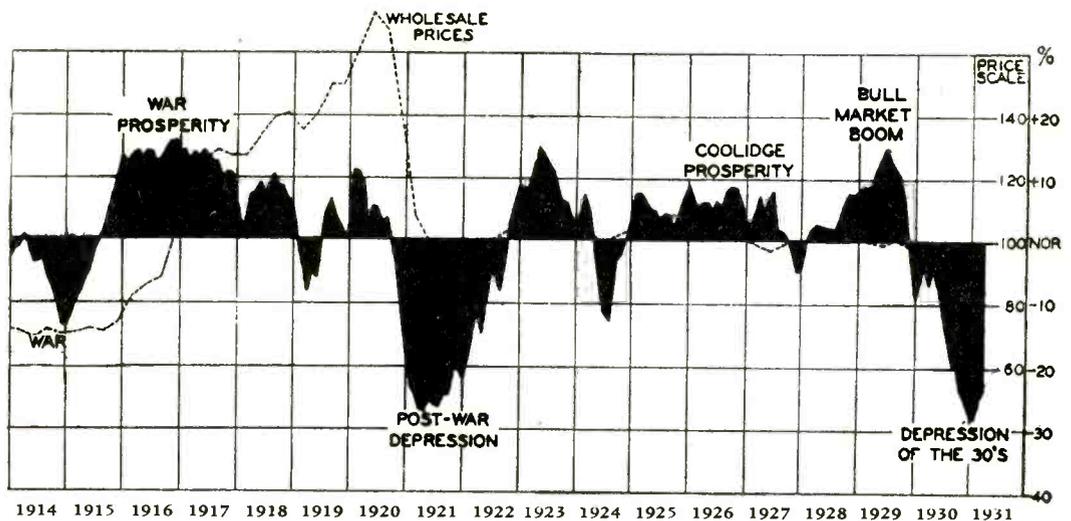
For the second time in the last few months RADIO calls its readers' attention to an era in the history of the radio industry: an era that may be more comparable to the stage through which we are passing today than most of us realize. And each time we delve into what has gone before we rise to the surface with a more optimistic point of view than hours of searching the present horizon will give us. There is a very strong possibility that history may begin to repeat itself during the next twelve months if—well, you can't have a gold rush without the discovery of gold.



FIGURES DON'T LIE

This chart tells the story. Look what happened ten years ago. Right at that "low bottom" the radio boom began. Then make a quick jump to 1931—look at that curve . . . the depression of today. **RIGHT HERE** a new era in radio is beginning—

TELEVISION!



was legally permitted to manufacture and sell his tubes. Under this license his alliance with the R.C.A. continued through the years and today Cunningham is president of the R.C.A. Radiotron Co., Inc.

With a broadcasting station in operation, with a few thousand home-made receiving sets in use, the first public radio show was promoted. Held in San Francisco it drew the fire of the local newspapers with much gusto. The event was ridiculed and roundly scored. We recall from memory the headlines which appeared in one newspaper, to wit:

*"Small Boys Stage Wireless Show"
"Mother's Clotheslines Used
for 'Aerials'"*

The reporter gave his version of the first wireless show to the rewrite man, who passed it to the editor, who passed it to the janitor, who rewrote it again, and when the story finally appeared in print it drew such attention from readers that a crowd of excitement hunters flocked to the small hall where the show was staged and enough admission tickets were sold at a dime apiece to net a profit of \$640.00 to those who promoted the "non-profit" affair. But the profits did not last long. The chairman of the show committee had bought himself a

Ford for \$650 a few days before the show opened. He needed the car in his work on the show. The bus was stolen from in front of the "exhibition hall" and the show committee, feeling sorry to learn of the loss, contributed the \$640 show profits to the man who lost his Ford.

Those "small boys who used mother's clotheslines for aerials" were at the show in force. Among them were Ellery W. Stone, later made president of Kolster, E. G. Danielson of the Remler factory, and many others who later became outstanding figures in the modern radio industry.

AT that time the first loudspeaker was announced. It wasn't called a loudspeaker; it was called a Magnavox, whether you were familiar with the original Latin or not. When a man went into a store to buy a loudspeaker he merely asked for a Magnavox. An advertising man was hired to tell the world about this new development; a man who was first introduced to the speaker on the Magnavox "proving grounds" and promptly was inspired to sketch the head of a lion which adorns the Magnavox to this day. The public paid \$75.00 for

their speakers ten years ago. Finally they got them for \$47.50. Today the decimal point has moved over one or two places towards the \$.

Where are the profits of yesteryear? Where are those radio dealers who drove home in Packards and Cadillacs? Those who bought radio securities at two bits and sold them at 4000% profit? These reminiscences are interesting, but now it's time to put them to some use. It is easy to remember how good times "uster was," but it is just as easy to forget the struggles we went through in those good old days. In 1921 and 1922 there was a business depression, verging on a panic, that was practically every bit as popular a subject for conversation as that through which we are now passing. Take a good long look at the business chart reproduced here. 1921 doesn't seem to be quite up to what one would consider necessary with which to set the stage for a big boom in any line of business, especially one untried and unproved as that of wireless entertainment. It was a dangerous year, but when radio made its introduction the people wanted it, and when the people want a thing they'll buy it, depression or no depression. The radio business boomed, while everything

(Continued on Next Page)

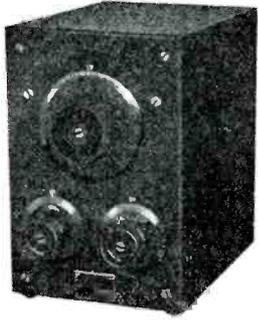


**Magnavox
\$75.00**

This was the first dynamic speaker. Advertised in "RADIO" ten years ago for \$75.00, list, Magnavox made radio history . . . and fat profits for the dealer. Today you can buy dynamic speakers for a few dollars. But where are the profits?



This Thing Sold for \$110, Ten Years Ago



"Believe It, or Not" You Paid \$125.00 For This Westinghouse Receiver and Amplifier

TWO little boxes, one like that shown on the left, and another similar in appearance and housing an amplifier, were sold at retail for \$125.00, a product of Westinghouse. Hundreds of thousands were sold at this price. Premiums were often paid for "preferential deliveries." And at the right you see the "TRESKO RADIO" of ten years ago. This little box, with a few coils, nuts and taps, was the beginning of the now gigantic Crosley Radio Corporation.



else struggled along against odds. The people paid prices for radio sets that would have sent shivers up and down the spines of washing machine and sewing machine dealers. The depression couldn't curb the ever gaining popularity of radio.

AT this point in our story those who remember all the good and bad points of interest in the radio business in 1921 will have begun to chirp up and cast a weather eye out for a repetition of this era. It won't come—for radio, as it is today. It will come—if the radio

industry offers the public something as startling as radio was in 1921. The public wants new things; it will buy them. But there's no use, just between those of us in the business, to go on kidding ourselves about the status of radio. We haven't offered the public anything new for several years; that is, nothing but slight improvements in their reception of radio programs. We've given them new features that make the set slightly more efficient; we've evolved a dictionary full of new and high sounding names, most famous of which is screen-grid; but we haven't come out with anything anywhere near as new to the world and

as different from what it was accustomed to as was radio in 1921.

HOW about TELEVISION? Will it do it? Some say yes; some say no; Nothing new in that fact. But RADIO wishes to go on record for holding fast to the opinion that television is the answer to the radio dealer's prayer; that television will bring back the gold rush days of 1921 and succeeding years of radio prosperity. It's NEW! The people will want it in their homes, good or bad, knowing that it will get better. And the dear old 1931 depression will go the way of all good doldrums.

World's Best Entertainment Is Being Peddled

THAT the world's best entertainment is being peddled by the majority of radio manufacturers is the keynote of a statement issued by William J. Barkley, vice-president of the DeForest Radio Company.

"Twenty-five years after the introduction of the DeForest audion or practical radio tube upon which is founded the present-day radio industry as well as allied industries," states Mr. Barkley, "we see the sad sight of a world of entertainment being peddled about to the point where the public has lost all sense of proper appreciation. Radio sets and particularly radio tubes are now offered at such low prices that the entertainment for which they stand becomes too cheap to appeal to the public. Also, in making the low price grade, radio sets and radio tubes have in many instances been so reduced in quality that present-day programs are positively ruined at the receiving end.

"When we assume an average of three hours per day for radio programs in the average home, we have an annual total of 1,095 hours. Certainly the high-grade entertainment offered by leading stations compares well with the usual picture theatre. Twenty-five cents per hour would seem reasonable. The radio entertainment is worth at least \$250.00 per year, especially since a number of

persons can listen in at one time. Properly presented to the public, a set of new tubes once a year should be worth \$25.00 beyond doubt. And yet tube manufacturers have been frantically slashing prices until tubes bring in one-third that amount or less. What a Steinway would do for this industry in selling, rather than peddling, its art!"

New Officers of Hygrade Sylvania Corporation

THE officers of the Hygrade Sylvania Corporation, successor to Hygrade Lamp Company of Salem, Massachusetts, Sylvania Products Company and Nilco Lamp Works, Inc., of Emporium, Pennsylvania, manufacturers of incandescent lamps and radio tubes, have been elected as follows:

Chairman of board, Edward J. Poor.
President, B. G. Erskine.
Treasurer, Frank A. Poor.
Vice-presidents, Walter E. Poor and Guy S. Felt.
Clerk and secretary, John S. Leary, Jr.

Assistant secretary, M. F. Balcom.
The directors are: E. J. Poor, B. G. Erskine, F. A. Poor, G. S. Felt, W. E. Poor, J. P. Hale and W. E. Erskine.
Three brothers—F. A. Poor, E. J. Poor and W. E. Poor—founded the Hygrade Lamp Company in 1901.

The Hygrade Sylvania Corporation

has modern factories at strategic distributive locations—Salem, Massachusetts; Emporium, Pennsylvania, and St. Marys, Pennsylvania.

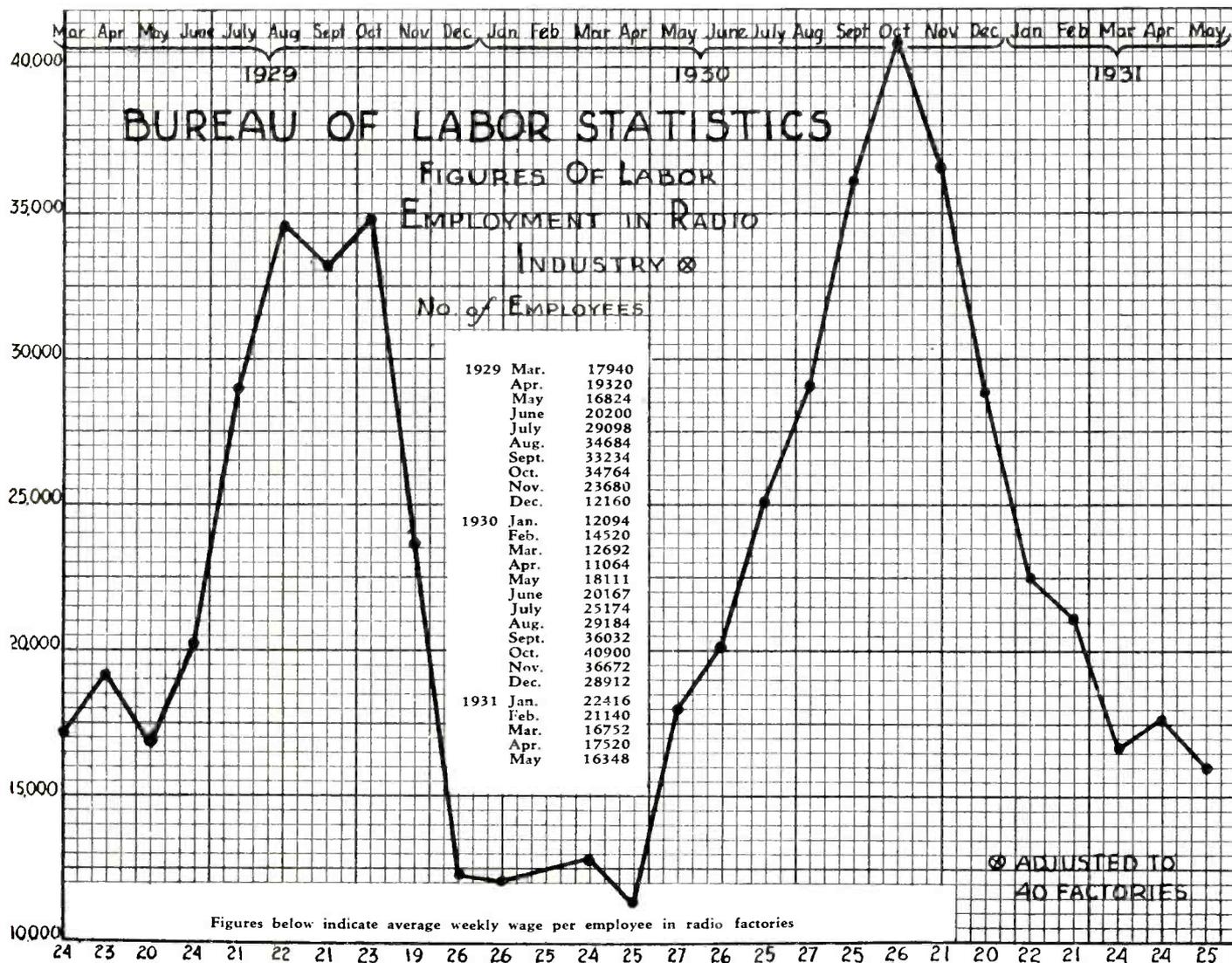
The combined factories cover eight acres of floor space, devoted to the exclusive manufacture of incandescent electric lamp bulbs and radio tubes.

These factories are producing 90,000 incandescent lamp bulbs and 50,000 radio tubes each working day. The present number of employes is two thousand.

COMMEMORATING the twenty-fifth anniversary of the invention of the DeForest audion or practical vacuum tube upon which the present-day radio industry is founded, the DeForest Radio Company of Passaic, N. J., has just issued an attractive souvenir booklet. This booklet tells the brief story of the audion, early broadcasting days, the first trans-continental telephone and first trans-oceanic radio telephone experiments, and other developments leading to the achievements of today. A copy may be had for the asking.

PAUL S. WEIL is once again associated with Frank Kiernan & Co., New York advertising agency, specializing in radio and electrical accounts. Mr. Weil is one of the pioneers of the radio industry—having been identified with the advertising and merchandising end for over twelve years.

Chart Showing Radio Employment Conditions



N. E. L. A. and Census Figures

(FOR ADDITIONAL INFORMATION SEE NEXT ISSUE)

State—	Number of Families	No. of Homes Receiving Electric Service	No. of Radio Sets	State—	Number of Families	No. of Homes Receiving Electric Service	No. of Radio Sets
Alabama	592,530	155,526	56,491	Nebraska	343,781	208,292	164,324
Arizona	106,630	61,147	19,295	Nevada	25,730	15,970	7,869
Arkansas	439,408	100,191	40,248	New Hampshire	119,660	104,272	53,111
California		1,489,171		New Jersey		950,150	
Colorado	268,531	173,253	101,376	New Mexico	98,820	28,182	11,404
Connecticut	389,596	340,322	213,821	New York		3,099,932	
Delaware	59,295	35,662	27,183	North Carolina	645,245	200,149	79,329
Dist. of Columbia	126,014	*380,687	67,880	North Dakota	145,382	51,220	59,352
Florida	377,823	204,849	58,446	Ohio		1,319,348	
Georgia	654,009	197,917	64,908	Oklahoma	565,348	231,852	121,973
Idaho	108,515	66,015	32,869	Oregon	267,690	203,590	116,299
Illinois		1,589,547		Pennsylvania		1,766,061	
Indiana	844,463	590,867	351,540	Rhode Island		162,441	
Iowa	636,905	382,186	309,327	South Carolina		100,097	
Kansas	488,055	290,611	189,527	South Dakota	161,332	67,586	71,361
Kentucky	610,288	234,702	111,452	Tennessee		202,758	
Louisiana		159,428		Texas		567,624	
Maine	198,372	152,946	77,803	Utah	116,254	97,852	47,729
Maryland and D. C.	380,687	386,087	165,465	Vermont	89,439	62,855	39,913
Massachusetts		1,035,762		Virginia	530,092	222,329	96,569
Michigan	1,183,157	937,036	599,196	Washington		384,949	
Minnesota	608,398	400,275	287,880	West Virginia	374,646	151,187	87,469
Mississippi	472,354	84,155	25,475	Wisconsin	713,576	534,201	364,425
Missouri		558,556		Wyoming	57,218	30,623	19,482
Montana	137,010	68,902	43,809				

novel card. It is designed for the dealer who asks his prospects to come in and twist the dials for themselves. Each card is made up for a fifteen-minute period, dropped into an ornamental holder which is placed on top of the radio sets used for that purpose and changed each quarter hour. A well designed holder might have a place into which a picture of a popular star could be dropped as well as the program card.

Another card giving the high-lights of the evening's program might be left with the radio set which has been delivered to the home for demonstration purposes. It is used with the idea of holding the prospect down; working on the theory that the family will be more readily sold if it gets interested in one particular program and hears it through rather than spending the evening jumping from one station to another. It is good psychology and has never been given the consideration it deserves. If the set is left for more than one evening the salesman can use the card as an excuse to drop around each day and put in his work.

These cards will cause the dealer a lot of trouble; that is to be expected. But they are worth it. They form a tangible step in the advanced methods of merchandising radio; in selling radio enter-



Phillips Lord, Creator of Seth Parker

tainment rather than a piece of merchandise the eye can see and the ear can hear. A high school boy or girl could handle the job of preparing them very nicely, once he or she had learned to pick the programs that appeal to those who buy.

The dealer or one of his salesmen can pick the programs at his breakfast table, if he wishes, and leave the detail work to the hired help. Whatever way you work it, you will find that **selling radio programs will help bring your business back!**

Plan Additional Service to Public at New York and Chicago Radio-Electrical Shows

Dealers to Have Sales Offices Within Madison Square Garden and Coliseum

A PLAN for providing immediate buying contact for the half million odd prospects who annually attend the Radio-Electrical World's Fair, Madison Square Garden, New York City, in September, and the Chicago Radio-Electrical Show, in the Coliseum, in October, has just been announced by G. Clayton Irwin, Jr., general show manager.

The plan is distinctly a merchandising method quite in step with the times developed to take advantage of the interest in radio and household electrical products generated by the expositions themselves.

Leading dealers, jobbers and manufacturers who assisted the management of the shows in a survey to determine the worth of the then contemplated innovation were firm in the opinion that the additional service would be appreciated by the public. Likewise they heard in prospect the pleasant sound of the cash register.

"The industry agrees," said Mr. Irwin in announcing the plan, "that the half million who pay to inspect the new models in the Garden and the Coliseum, decidedly are interested in new merchandise. Admittedly it is easier to sell a prospect at the moment his interest is at the highest point. That moment is during the shows and within the buildings in which they are held.

"Stimulated by the presence of a million dollars' worth of new products in the exposition hall, the crowds and the feature events which are a part of the shows, a powerful psychological situation is created which overwhelms the buyer and makes saying 'yes' many times easier than at any other time. Such a psychological situation simply cannot be created in any store for no single store is so large, nor is there the crowd of tens of thousands."

How the Plan Works

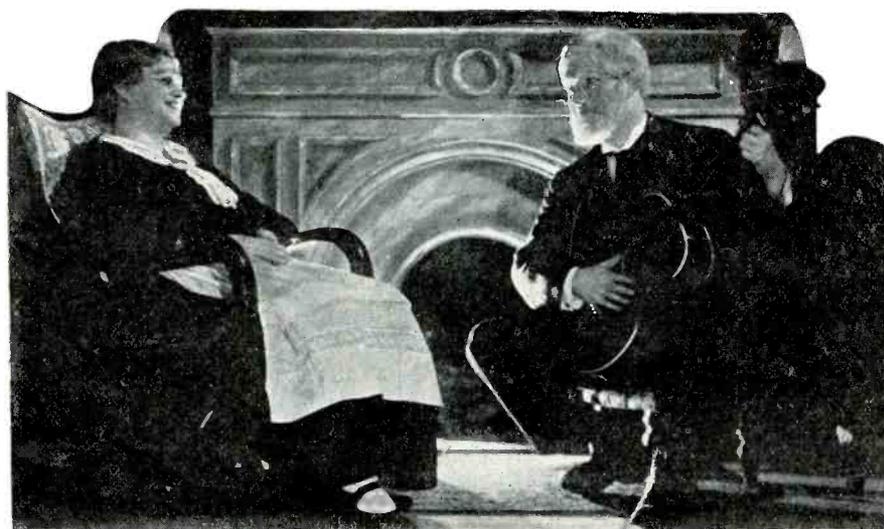
Key dealers in the New York and Chicago areas may have assigned to them sales offices within Madison Square Garden or the Coliseum. Prospects attracted by a manufacturer's exhibits will be received courteously by the booth attendants and turned over to the proper dealer handling that line. All negotiations thereafter are between the dealer and the prospect and are carried on in the dealer's own space.

The invitations to buy will thus be extended by men whose daily contact with the consuming public has developed a technique for closing sales.

NOW ON THE AIR (1:15—1:30)		
KC.	STATION	PROGRAM

You may try this set at your home if you wish

Exhibit B



Ma and Seth Parker at Home

TOBE Filterette

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VOL. 2, NO. 8

AUGUST, 1931

CANTON, MASS.

Specifications of Filterettes Used for Filterizing Motor Generators and Synchronous Converters

Filterette Installations Must Meet Code Requirements

THERE are two classes of small inverted synchronous converter used in direct current districts, to obtain alternating current for the operation of radio apparatus. One class is designed to be permanently connected to the D. C. and A. C. lines. The filterizing of this type of apparatus was described in the July issue of this magazine. The other class of converter is connected to the D. C. line by means of an attachment cord and plug, and to the A. C. line by means of an attachment card and a separate connector.

Filterizing Plug-in Type Converters

These converters are generally small units rated at one-quarter kilowatt or less. Consequently, plug-in Filterettes rated at 5 amperes, 110 volts, are usually satisfactory for application to the converters. The Filterettes recommended are Tobe No. 110-PO and No. 110-PL.

To prevent the feed-back of interference into the D. C. line, Filterette No. 110-PO must be connected in series with the input leads to the converter. To install this Filterette, first cut off the attachment cord of the converter at a point not over 6 inches from the frame of the machine. Then fasten a standard attachment plug to the remaining short converter cord and insert this plug in the Filterette receptacle. Next connect a wire, not over 8" long, to the Filterette binding post and to a carefully cleaned part of the converter frame. Be sure that all of the finish is removed from the

frame of the machine at the point where the return wire is connected in order that the R.F. resistance in the Filterette return circuit may be kept at a low value.

To install the Filterette No. 110-PL at the A. C. side of the converter, first cut the Filterette attachment cord to a length of 6" or less. Then strip the conductors of the cord and connect them to the A. C. output terminals of the converter. Be sure to tape, or bind, the cord

two cords may be spliced together. Note: The return wires from both Filterette binding posts must be connected to the same spot on the converter frame.

In the installation of these plug-in type Filterettes, the precautions already given as regards short connecting leads between Filterettes and motor-generator or converter, short return connections and minimum resistance of return circuits must be observed. Small converters such as are likely to be connected to the D. C. and A. C. lines by means of attachment cords and plugs are seldom provided with field rheostats. The application of the two Filterettes in the manner described should, therefore, provide satisfactory reduction of interference. If it fails to do so, the machines should be carefully inspected for possible defects as Filterettes are intended to suppress only the interference due to the normal operation of electrical apparatus and should not be used to suppress interference due to defective electrical equipment.

Relation of Filterettes to Converters Used with Farm Lighting Plants

When an inverted synchronous converter is driven from a 32 volt farm lighting plant, its output is in the vicinity of 21 volts A. C. It is, therefore, necessary to use a transformer to step up the converter output to 110 volts to operate the radio receiver. In an installation of this type the Filterette must be connected between the converter and the transformer, and the transformer must be

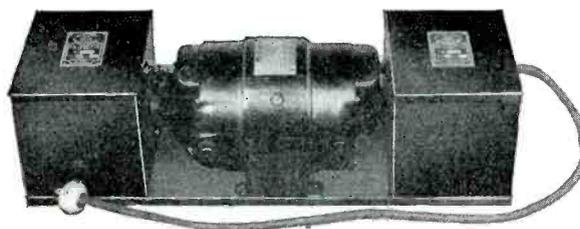


Figure 1
Two-Section Filterette applied to a 32-volt Westinghouse Converter. The Transformer for stepping up the converter output from 21 volts to 110 volts is contained in the Filterette Section at the left.

at the point where the conductors separate so that the outer insulation of the cord will not fray out. If the converter has a cord and receptacle instead of output terminals, cut the cord close to the converter and attach the female end of a separable connector to the end of the cord. Then cut the Filterette attachment cord to a length of 6" or less and attach the male end of the separable connector to this cord. Finally connect together the two parts of the separable connector and fasten a short wire to the Filterette binding post and to the converter frame. If the Filterettes are to be left in place, the

located near the converter rather than near the receiver.

In the special Filterettes which the Tobe Filterette Laboratories have developed for application to Westinghouse 32 volt inverted synchronous converters, the transformer and Filterette are constructed in one unit. Figure 1 shows a Filterette of this type. Special Filterettes for other Westinghouse Converters are also available. When writing for information on these Filterettes be sure to give all name-plate data of the converter, including model number, D. C. amperes, D. C. volts, A. C. amperes and A. C. volts.

Suggestion for Mounting Filterettes

Whenever Filterettes are used they must be installed in strict accordance with the requirements of the National Electric Code. Figure 2 is a photograph of a workman-like Filterette installation. The converters shown are one kilowatt units operating from a 220 volt D. C. line and delivering 110 volts A. C. In making this installation there is constructed a strap iron frame of suitable dimensions to provide a base for the converter, as well as mounting for the two Filterettes. A number 231 Filterette, rated at 220 volts, 10 amperes, is mounted on the frame at the D. C. side of the converter, and is connected to the machine with a short piece of BX. In the same way a number 131 Filterette, rated at 110 volts, 10 amperes, is mounted on the frame at the A. C. side of the converter. When this construction is used, the converter and Filterette may be handled as a single unit, and, if need be, may readily be moved to various locations where alternating current may be required in the building.

There is one precaution which must be observed when a Filterette installation of this type is made, that is that the metal framework is welded together; or if it is bolted, that lock nuts are provided to preclude any possibility of loose joints. The reason is that such loose contacts, even though they are not in the electrical circuit of the converter, are likely to cause radio interference which will be difficult to locate. The BX used to connect the Filterettes and the converter must be so installed that its sheath makes contact with the metal parts of the associated apparatus only where fittings are provided. In other words, no slack is allowable in the BX. If slack is

unavoidable the BX sheath should be bonded to any metal with which it might come in contact. It is not enough to assume that all metal parts of the installation are normally bonded together. The bonding must be provided at the actual point of contact. In this way all parts of the installation which might be of different radio frequency potentials are connected together.

Summary

Analysis of the operation of an inverted synchronous converter indicates that radio interference, originating at the D. C. side of the machine, is fed back in to the direct current supply line from which it may be radiated. It is also conductively impressed on the alternating current lines supplied by the converter, since the armature of the machine is carrying both alternating and direct current in the same windings. The interference thus impressed on the A. C. lines may be radiated from them, and may enter the receiver through its power connection.

Choice of Filterettes

To overcome the interference created by a converter used for radio work it is necessary to install Filterettes in both the D. C. and A. C. leads to the converter. To determine the correct Filterettes to be used in the filterizing of an inverted synchronous converter it is necessary to know certain of the electrical characteristics of the machine. These are:

1. The voltage of the D. C. line from which the converter is operated.
2. The number of amperes which the converter draws from the D. C. line.
3. The A. C. output voltage delivered by the converter.
4. The maximum number of amperes delivered by the A. C. side of the converter.

When this data has been obtained Filterettes may be chosen for operation

Filterettes No. 110-PO and No. 110-PL	\$12.50 each
Filterette No. 110—110 volts, 5 amperes	15.00 "
Filterette No. 131—110 volts, 10 amperes	20.00 "
Filterette No. 221—220 volts, 5 amperes	20.00 "

at the voltages and currents of both the input and output circuits of the con-

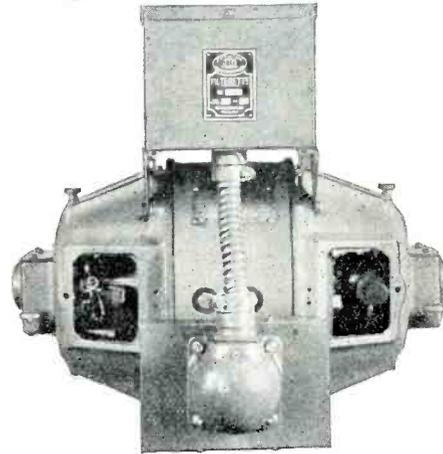


Figure 2

A typical illustration of Filterettes on a group of converters and motor generators used to supply alternating current for the radio department and demonstrating room of a department store.

verter. Note: If the converter is to be used in a store or other location where it may be overloaded, the Filterettes should be fused at their exact rating or less in order that both the Filterettes and the converter may be protected from damage due to overload. The use of small fuses will also tend to protect the equipment in case insufficient lubrication causes the converter to draw excessive current.

As has been previously stated, all Filterettes must be installed in accordance with the requirements of the National Electric Code. This is essential from the standpoint of both safety and satisfactory interference suppression. If interference is still present after Filterettes have been installed in exact accordance with the information contained in this article, it is probable that there is some defect in the wiring or in the converter. In such a case the defect should be found and remedied. Filterettes are designed to suppress only the interference created by the normal operation of electrical apparatus in good electrical and mechanical condition. They should not be used to compensate for defective or overloaded apparatus.

The Tobe Deutschmann Corporation will gladly recommend the correct Filterettes for application to converter equipment. When requesting information, please state the electrical characteristics or name-plate data of the converter, as specified in the paragraph entitled "Choice of Filterettes."

TOBE DEUTSCHMANN CORPORATION

Filterette Division / CANTON, MASSACHUSETTS

The Acknowledged Authority on Radio Interference—Makers of FILTERETTES, the Accepted Remedy

SAN FRANCISCO, CALIF.
584 Mission St.

PORTLAND, ORE.
383 Oak St.

NEW YORK CITY
136 Liberty St.

Dr. Lee deForest Protests

• His Letter to "George" . . . An Outstanding Radio Manufacturer . . . Is Reproduced Here in Part » » » »

Dear George:

Glad to again see your familiar face in a recent issue of a radio trade magazine. Not so glad to read your remarks knocking the Midget! Don't know what makes of Midget you have been listening to.

Remember the legend about old King Chanute, and the incoming tide? Don't be a replica of Chanute, George. He was all wet. You can't stop this tide, by argument or anything else.

But you, and all the other astute executives in that Composium, "How Best to Restore Stability and Prosperity"—have missed the main cause of Radio's sickness and sinking spell, by 100 decibels.

QUESTION: Why anyone wants to buy any radios—good or bad, high priced or cheap?

ANSWER: To hear something entertaining and pleasant to listen to.

QUESTION: Why should any one want to buy a radio, or new tubes for an old set, when nine-tenths of what one can hear is the continual drivel of second-rate jazz, sickening crooning by "sax" players (original or "transcript-ed") interlaced with blatant sales-talk, meaningless but maddening, "station announcements"—impudent commands to buy or try, actually superimposed over a background of what alone might have been good music?

Who cares whether his set "makes a symphony orchestra sound like an eight or ten-piece orchestra" if that orchestra's offerings are all over-marked with a rough-neck salesman's ballyhoo?

You wise leaders of the Radio Industry should first learn what is fundamentally wrong with your sick child. And administer first aid—now, while it has yet some life in it. Don't wait until Old Doc Radio Commission or Undertaker Congress arrive. It will then be too late. Don't gravely discuss "improvements in advertising," "direct factory to dealer problems," "protected districts," "improved servicing methods," "a central bureau for accurate business figures of production," "rotation of crops" and other products.

Hell—George—get out in the sticks, away from your fine symphony pick-ups, and listen for 24 hours to what 80 per cent of us American listeners have to endure! Graphically depicted, for example, by this letter I've just received—a sample of the complaints I'm getting from all over the country—and not one whit exaggerated.

Then you'll learn what actually is the matter with the Radio Industry. 'Taint "Hard Times," George. It's Broadcasters' Greed—which is worse, much worse—and like T. B. grows continually worse. Until Patient Radio Public dies.

Hard Times always clear up, "B. G." never will.

THE RADIO PUBLIC SIMPLY ISN'T LISTENING IN. That's all the trouble. Simple, isn't it?

Don't wait until Old Doc Radio Commission, or Undertaker Congress come to your aid. The Radio Industry itself must help itself—or expect no more prosperity, never; not in the old measure.

To regain that, Broadcasting as it was during the height of our prosperity must be first restored. Purged of the High Pressure Salesman, and given the best of program values.

Radio Industry can collectively achieve this—and quickly. Regardless of Commission or Congress.

It will cost money—perhaps \$25,000 per day—a tithe of what R. I. is now losing. For say five hours of fine music daily.

The entire American press will joyfully spread the good news, and acclaim the new era in Radio.

The entire American public will tune-in, thank God, and begin to buy again—

And not all Midgets!

More truly than you realize,

(Signed) LEE De FOREST.



LYRIC RADIO AND WOODWARD-WIGHT COMPANY STAGE LYRIC CONTEST

A MOST successful radio broadcast-
ing contest has just been completed
over station WDSU, New Orleans,
Louisiana, sponsored by the All-American
Mohawk Corporation, manufacturers
of Lyric Radio and the distributor
for Lyric Radio in that territory—the
Woodward, Wight & Company, Ltd.,
New Orleans, La.

In the foreground of the illustration
may be seen the 38,000 letters received
by the Woodward, Wight & Company,
Ltd., during this Lyric Radio contest.
Each school in New Orleans entered the
Lyric contest and staged their programs
from station WDSU. The school receiving
the greatest number of votes was
awarded first prize, a Lyric console
radio, second prize of a consolette Lyric
radio was awarded to the school receiving

the second largest number of votes,
and a mantel model Lyric radio was the
third prize to the school receiving the
third largest number of votes.

The first prize winning students of
St. Joseph's Academy who took part in
the Lyric broadcast program are pictured
here in station WDSU on the night of
the awards, also, Mr. Edgar Murray,
general sales manager of Woodward,
Wight & Co., Ltd., Father Sullivan,
president of Loyola University, Mayor
Wamsley of New Orleans, and Mr.
Henry Schaumburg, president of the
Board of Education of New Orleans.
Mr. George Ellis, sales and advertising
manager of Woodward, Wight & Co.,
Ltd., and announcer of the Lyric Radio
Broadcast Contest is seated in the fore-
ground.

New York and Chicago Do 25 Per Cent of Nation's Billion and a Quarter Radio and Electrical Business

The outstanding economic importance of
the New York and Chicago markets for
radio and electric appliances is emphasized
by the results of a survey by the manage-
ment of the Eighth Annual Radio-Electrical
World's Fair and the Tenth Annual Chicago
Radio-Electrical Show.

The survey reveals that the total radio
sales in the metropolitan areas of New York

and Chicago in 1929 was \$141,000,000 or
more than 27 per cent of the total \$510,000,-
000 for the entire nation. The total sales of
electrical appliances in the two largest Amer-
ican cities, the same year, was \$178,000,000,
or more than 23 per cent of the national
total of \$750,000,000. Thus New York and
Chicago did an average of 25 per cent of
the nation's \$1,260,000,000 radio and electric
business in 1929.

Silver-Marshall Merchandising Plan Explained in New Book

"A Tested Proven-Successful Mer-
chandising Policy" is the title of a com-
plete sales book now ready for distribu-
tion to dealers by Silver-Marshall, Inc.,

6401 West 65th Street, Chicago, Ill.
The new direct-to-dealer sales policy is
fully explained in this book. Included in
it is the new S-M parts catalog, describ-
ing all of the many new items in the
line. A copy of this merchandising book
can be had for the asking.

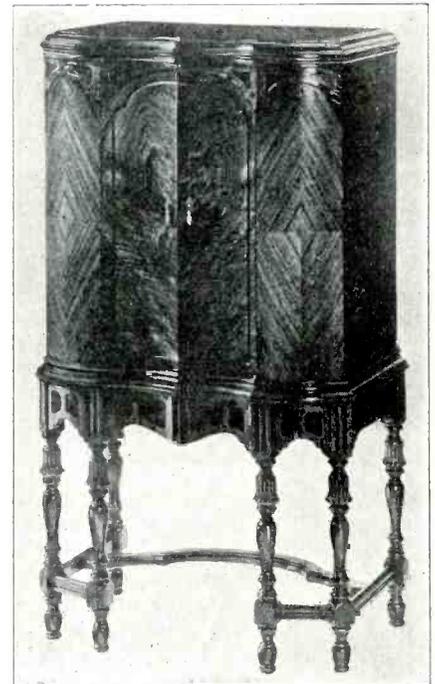
RADIO ROR AUGUST, 1931

Reduction of Admission Prices of New York and Chicago Radio-Electrical Shows

SUBSTANTIAL reductions in admission
prices at the Eighth Annual Radio World's
Fair and the Tenth Annual Chicago Radio-
Electrical Show are announced by G. Clayton
Irwin, Jr., general manager of the two pub-
lic shows. The price reductions were made
in accordance with the general business
trend.

The admission to the New York show at
Madison Square Garden, September 2-26,
inclusive, will be 50 cents, afternoons, and
75 cents, evenings; for the Chicago show at
the Coliseum, October 19-25, inclusive, 50
cents afternoons and evenings. This is a
material savings, last year's admission prices
being 75 cents, afternoons, and one dollar,
evenings, in New York; and 50 cents, after-
noons and 75 cents, evenings, in Chicago.

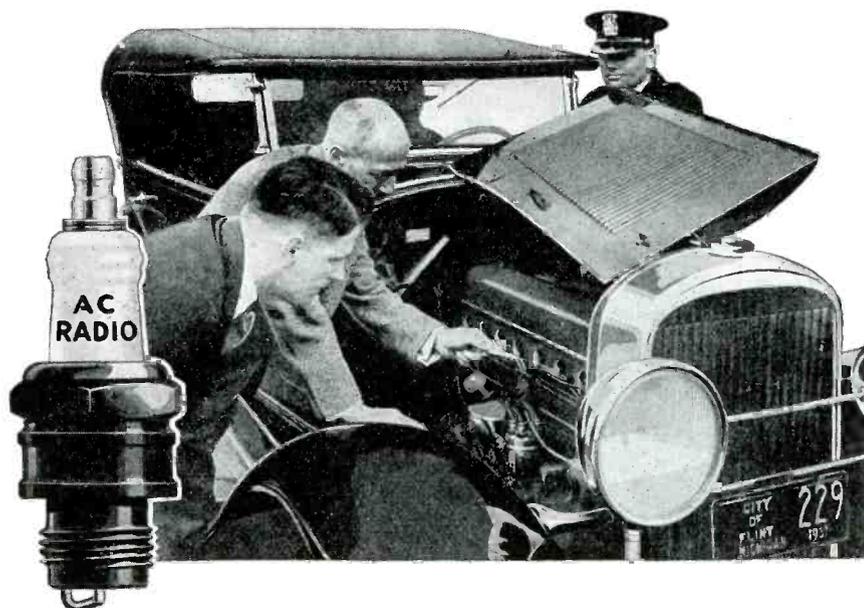
"Plans are perfected," Mr. Irwin says,
"for the introduction of many features of
outstanding, compelling, public interest at the
New York and Chicago Shows."



Brunswick Long-Short Wave Receiver

THE instrument pictured is the new model
25 long and short wave receiver just
introduced by Brunswick. It represents Brun-
swick's supreme achievement in cabinet and
chassis design. It is capable of receiving
broadcasts from foreign, low-wave-length
stations situated thousands of miles away—
Europe, Asia, Australia, Africa, Cuba, Mex-
ico—in fact the entire civilized world. This
of course in addition to reception of long-
wave domestic stations. The high-boy cabi-
net of butt walnut is really a gem of artistic
woodworking and contains all the modern
radio developments: 11 tube super-hetero-
dyne circuit equipped with latest screen-
grid, variable-mu, and pentode tubes, to-
gether with the Brunswick uni-selector, color
tone control, turret-type condenser, power
detector, automatic volume control, and de-
luxe 12 inch dynamic speaker. Price \$225.00,
complete with Brunswick tubes; 45½ inches
high, 25 inches wide and 15 inches deep.

NEW SPARK PLUG FOR AUTO RADIOS



New spark plugs for radio-equipped cars and motorboats eliminate ignition sounds. Hector Rabezzana, chief spark plug engineer of AC Spark Plug Co., and Acting Police Chief Frederickson of Flint, in foreground, examining an installation.

A SPARK PLUG that improves radio reception in automobiles and motorboats and increases the efficiency of the police radio system, has been developed by Hector Rabezzana, chief spark plug engineer of AC Spark Plug Company. With the new plug external devices are not needed to suppress interference.

For some time the greatest problem in the use of radio in automobiles has been to eliminate interference caused by the ignition system of the engine. The regular type plugs when sparking within the engine act as small

transmitting sets, and each time a spark is discharged a clicking noise sounds in the receiver. When the motor is running at normal speed this clicking sound becomes continuous and makes reception difficult. Development of the new radio spark plug is an efficient remedy for this interference and should contribute to wider use of radios in automobiles generally.

The new spark plug, which is made in various types, is already being used on radio equipped passenger cars, motorboats and by the police departments in several cities for radio-equipped scout cars and cruisers.

Radio Advertising

(Continued from page 17)

convincing copy, the sort that sells, cannot be written by someone who does not thoroughly understand the intricacies of the thing to be sold. And this also applies to many salespersons in radio stores. Again I say that this may sound elementary to many persons in the advertising field, but the fact remains that any number of those responsible for radio newspaper ads have yet to absorb these elementary principles.

As far as radio advertising—of course, I'm still referring to the copy aimed at

consumers—the thing to do is to cut out generalities and go in for specific copy. Better to err on the side of being a little too technical than to just shout "better," "greater selectivity" or "finer tone" and expect readers to be convinced. It simply isn't done these days.

Writing a good ad is the easiest thing in the world—or rather, it either is or isn't. That is, if you know your subject and something about the psychology of the masses. Just what I mean is best exemplified by Victor Hugo's answer when asked if writing epic poetry was difficult.

He replied, "No, easy or impossible."

A "TAHOE" VACATION

Up among the pines and peaks—on the shores of this matchless lake. A week-end trip or an entire vacation is best spent at GLOBIN'S "Tahoe's chosen spot. For information see Radio, Peck-Judah or write or wire Globin's, Al Tahoe, Calif.

GLOBIN'S AL TAHOE
FRANK GLOBIN PROP.

RADIOADS

A Classified Advertising Section Read by Better Buyers

RATES: 8 CENTS PER WORD
\$6.00 PER DISPLAY INCH

Radioads for the September Issue Should Reach Us by August 25th

POWER PACK REPAIRING

WHOLESALE RADIO SERVICE, Power Pack rebuilding, Shop equipment built and repaired, Coils matched, All kinds of Solenoid winding. B & B Radio Lab., 509 Terry Ave., North, Seattle, Wash.

POWER PACK SERVICE and transformer winding. Quick service and fair prices for all types of power transformers and chokes. Condenser blocks replaced. Guaranteed work. California Radio Laboratories, 2523 South Hill St., Los Angeles, Calif.

COMPLETE POWER-PACK SERVICE—Transformers rewound, Condenser blocks repaired. Resistors repaired or duplicated. Specially equipped shop. Work guaranteed. Clark Brothers Radio Co., Albia, Iowa.

WHOLESALE DISCOUNTS. Approved parts. \$50,000.00 stock. Over four pounds, catalog, circuits, data, 50c. prepaid (outside U. S., \$1.00). Weekly (new items, test reports), bulletins, 20 weeks, \$1.00. Experimenters, 56-page house organ, 25c., prepaid. Kladag Radio Laboratories (established 1920, over 4,000 radiowise customers), Kent, Ohio.

SALESMEN WANTED

MEN OF GOOD ADDRESS capable of contacting people of wealth and social position, experienced in selling high priced specialty products such as reproducing pianos and expensive automobiles. We are in touch with real opportunities in special retail work with dealers in such centers as New York, Chicago, Boston, Philadelphia, Washington, St. Louis, Cleveland, Detroit, New Orleans, Omaha, Los Angeles, San Francisco, Seattle, Buffalo, St. Paul, Minneapolis and other centers. Write giving full information and details of experience. The Capehart Corporation, Fort Wayne, Ind.

MICROPHONES

New design double-button stretched dural diaphragm type. Frequency response 30-6800 c.p.s. Excellent for sound systems. Net \$9.75.

West Coast Representative
682 Mission St., San Francisco, Calif.

THE ELECTRO-VOICE MFG. CO.
South Bend, Indiana

Converter Finds Ready Market

A report from the Janette Manufacturing Company, 557 West Monroe Street, Chicago states that the Janette Rotary Converter has opened up a vast market not only in the rural district but in the city where direct current is used.

A Correction

Supreme Instruments Corporation advertisement in "RADIO" for June designated the Diagnometer by Model 300-B. This should have read Model 400-B.

Overheard at the Radio Show

Manufacturer to Jobber: "We lose money on every set we make."

Jobber: "How, then, do you manage to show a profit?"

Manufacturer: "We have tremendous volume."

Keep Abreast of the Times

A FRANK DISCUSSION OF THE COMING OF A NEW MERCHANDISING ERA IN RADIO

THOSE who knew most about radio when it was in its infancy were those who were first to reap its rewards financially. Years ago the business of selling radio parts and sets was a business . . . not a racket. When a man came into a radio store to ask for a certain piece of apparatus the man behind the counter was most always called upon to answer a lot of miscellaneous questions about radio. Customers would flock to the store where the most reliable information was given. New customers were brought to that store by the recommendations of friends whose confidence in the store clerk was as vital in the purchase of radio as was the actual value of the equipment.

In those days it was necessary for the man behind the counter to be well versed on every radio subject. In fact, he had to know just a little more than the man who was looking for something to buy. From where did this man get his information? Why . . . he got it from reading radio magazines and books on the subject. The radio magazines made the radio business. Without them it would not have been possible for the man behind the counter to know much about what he was selling, other than what the manufacturer himself told him when he sold him his merchandise.

In the olden days of radio there was no such thing as a service man because the person who bought the material was his own service man. He put his stuff together and made it work. He proudly boasted of the results of his efforts and it was not at all unusual for the best sets displayed in a dealer's window to have been borrowed from the customer and used, by special permission, as a means to sell more merchandise.

THE retail salesman came later in the radio game. He knew nothing about radio. It had then passed out of the experimental stage and those who had stood behind little store counters had opened up radio manufacturing plants of their own. Others went into the jobbing business, while still others found highly remunerative berths behind the desk in a radio factory. On this desk was placed the placard—"CHIEF ENGINEER."

Those dealers who chose to remain with the retail business did so on a rapidly expanding program. From small half-stores they grew into institutions. Recall Haynes-Griffin of New York. The powerful retail chain outlets in

Chicago which ONCE operated on a huge profit. The exclusive string of individual stores at the Pacific Coast whose owners made comfortable fortunes by selling only the best of equipment to a highly select clientele.

A dealer in those days knew his business. Now anybody can go into the radio business if he knows the elements of business and a lot about high pressure selling. The romance of radio is gone. And with it has gone those thousands of radio stores where a crowd could congregate and BUY all of the newest things that were announced by the manufacturers. You who were in the business in those days well remember the "back orders" you carried on your books. Customers heard about something new and even before it was on the market they placed their orders with you to buy that merchandise. Without seeing it, they BOUGHT it. You didn't have to sell it to them at all. Then the customer had FAITH in a manufacturer's announcement. When he said he had such and such a new piece of equipment you, knowing his reputation, bought that equipment without even seeing a picture of it.

THE reason why we dig up what should be a buried past is merely because another day is coming in radio. The day of television. No need to get overly excited now, Mr. Dealer, about television, but any sane, level-headed man, even those who know nothing at all about radio and know everything about ringing doorbells and making a salesman work by the sweat of his brow, will do well to post himself so fully on this television thing that he will be an EXPERT on it when television comes. For only those who know their "television onions" will reap the handsome rewards which television will bring for those who know what they are talking about.

Even today people are asking a lot of questions about television. Instead of answering them haphazardly, why not answer these questions intelligently and make your answers so distinct and clear-cut that your present customer will know that you know what you are talking about and make him feel that you will be the retailer to whom they will go when television sets are ready for the market.

Some will say that it is too early to begin knowing something about tele-

vision. Wrong. Years ago only a handful of men knew anything about radio. Every one of them made money. They were looked upon as friends of a customer. No high pressure salesmanship was used to sell the dealer's wares.

Our advice to every man in the radio business is to begin his study on television. Learn every little thing about it. Be able to speak intelligently on the subject. Prepare yourself for the boom which television will bring with it . . . even though it may still be hidden around the elusive corner or buried somewhere in some big laboratory.

A lot could be said about television at this time, but for the secrecy which is being maintained by those in the know. They don't want a repetition of haywire circuits and contraptions. They want to give the public television as good, when it comes, as radio was a half dozen years ago.

Television will be on every man's lips before very long. Those who know most about it will profit most when it comes. Do not take television lightly. It will change the entire mode of American living standards when it comes. It will give the public that thrill and that mystery which surrounded radio when first it came.

Keep your ears to the ground. Fill your brain with all of the television information you can accumulate. Study television. The art is excitingly fascinating. . . almost romantic. It will "pep" you up again.

If you don't get on the "in" you will be just another man behind the counter, wrapping up the stuff the customer asks for. If you know what you are talking about, your customers will begin to know you as the man whose information can be relied upon. And to you will go the business . . . from the customer . . . from other customers by word of mouth advertising . . . and your clientele will grow . . . just like it did years ago when radio was young.

Wake up, gentlemen. Your future depends on television. While you are selling radio sets and keeping MUM on television (which you should do) begin to study on this new art . . . learn what makes it work and what will be sold. Be the man in the vicinity whose word will be LAW with the customer. And then you won't have to worry at all about your customer walking across the street to the other store.

Built-In Switch and Insulated Shaft



are added features to Clarostat Controls in both the Genuine Wire Wound units and the Graphite Element units.

Clarostat is always ready with the most advanced and thoroughly proven designs.

Look to Clarostat for your control devices.

CLAROSTAT MFG. CO., Inc.
285 North 6th St., Brooklyn, N.Y.

CLAROSTAT
TRADE MARK REG. U.S. PAT. OFF.

LOS ANGELES



ADJACENT TO BEAUTIFUL WESTLAKE PARK

You hear a lot of talk about "THE BARBARA"... It's the voice of good judgment! No seasonal rates, same always — Displayed in every room. One person \$2 to \$3; two, \$3 to \$5, individual baths. Weekly rates... Spotlessly clean, comfortably furnished, always new.

French 'phones, Radios voice our progressiveness. Coffee Shoppe by famous "Pig'n Whistle." Garage within stone's throw. Situated in a picturesque section, ten minutes from centre of activities. Your stay at "THE BARBARA" will be with pleasant memories.

HOTEL BARBARA
WEST 6TH ST. AT WESTLAKE

Wm E. JOHNSTON — DIRECTOR



CHICAGO

The Marvel City

is the ideal spot to hold conventions . . . because of its many places of historical interest . . . its wonderful Lake Front advantages . . . and its ability to handle crowds without congestion.

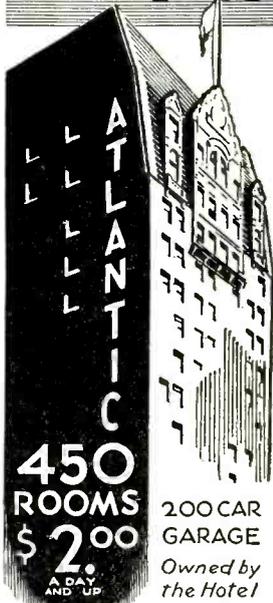
The place to make your home while in Chicago is THE NEW BISMARCK. Just a few blocks from the Merchandise Mart and the Wholesale District . . . on La Salle, the great financial street . . . in the theatre and amusement belt . . . and within easy reach of all points of civic interest.

It's the one Chicago hotel where your comfort and pleasure are the first consideration of the management. Luxurious lounges and rest rooms . . . Quiet, outside rooms, with comfortable beds . . . the best of food and service . . . and every modern convenience. All dining rooms air cooled.

Rooms \$2.50 up.
With Bath \$3.50 up.

Send for booklet with map of Downtown Chicago

HOTEL ATLANTIC



FAMOUS
FOR
GERMAN
COOKING

*Send for Copy of
Chef's Recipes
and Descriptive
Folder*

MOST CENTRALLY LOCATED
ON CLARK STREET - NEAR
JACKSON BOULEVARD

ONE BLOCK FROM THE
LA SALLE ST. STATION,
POST OFFICE AND
BOARD OF TRADE

ATKINSON SERVICE

CHICAGO

NEW BISMARCK HOTEL

RANDOLPH at LaSALLE

CHICAGO

Perfect Filters

Are Essential For TELEVISION

FLECHTHEIM SUPERIOR CONDENSERS

—The choice of OVER 50% of the Broadcasting Stations in the U.S.A.—ARE THE FINEST for your television receiver and transmitter.

COMPLETE LINE OF CONDENSERS from 250 to 7000 volts

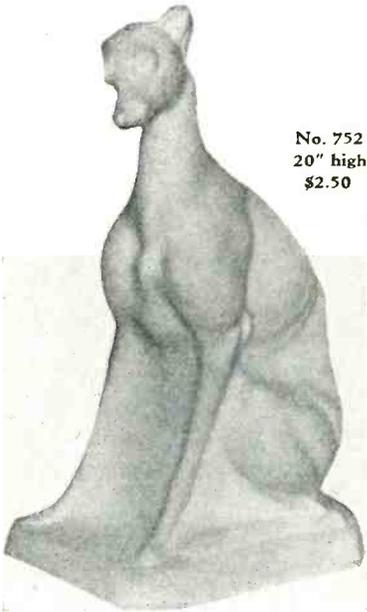
Write for Catalog No. 23

AM. Flechtheim & Co., Inc
134 Liberty St., New York City, N. Y.



You can grab that dollar more easily if you go into Public Address Installation work.

Let Miles show you how. Send for FREE catalog C and Business Building Ideas. Write to Dept. C. Miles Reproducer Co. 26 E. 22nd St., New York



No. 752
20" high
\$2.50

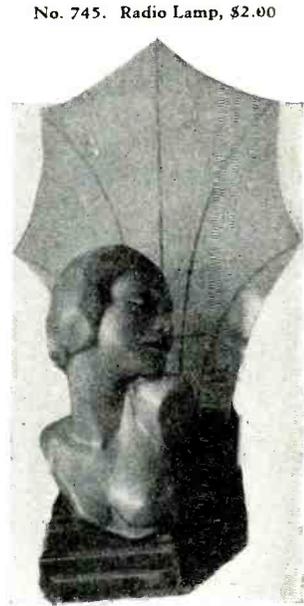
New Radio Lamps AND Radio Ornaments For the Holiday Trade

Thousands Sold to Radio Dealers Last Season

New Low Prices — Greater Profits For You

Here is shown a small part of our enormous line of radio lamps and ornaments, made in five popular finishes. These side-lines are genuine **PROFIT MAKERS** for the holiday trade. Complete catalog for the asking. Every radio dealer can cash-in this year on these Radio Lamps and Ornaments.

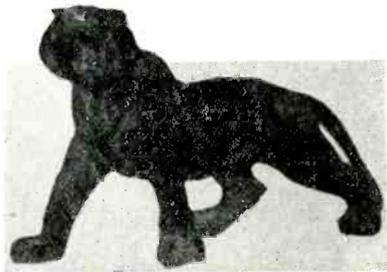
Write to: Radio Division, Florence Art Manufacturing Co.,
1401 Folsom Street, San Francisco, Calif.



No. 745. Radio Lamp, \$2.00

In Five Finishes—Your Choice

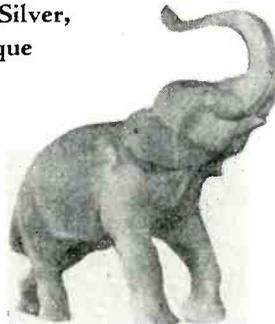
Finished in either Japanese
Bronze, Walnut, Silver,
Pearl or Antique



No. 70. Tiger, 17" long, \$2.00



No. 71. Elephant, 14" high, \$2.00



No. 68. Elephant, 13" high, \$2.50



No. 132
20" high
\$2.00

These ornaments are most appropriate to place on console radio receivers. They give greater display value to your merchandise . . . and you can sell an ornament with every set.



No. 740. Radio Lamp. \$3.50



No. 747. 8 1/2", \$3.50 No. 748. 11 1/2", \$3.50 No. 749. 11", \$1.75

Above are shown three of the newest radio lamps. Prices start at \$1.75, net. Every dealer should carry a stock of these lamps.

WRITE OR WIRE FOR SAMPLE ORDERS

Radio Division of

**FLORENCE ART
Manufacturing
Company**

1401 Folsom Street San Francisco, Calif.



No. 69. Tiger, 24" long, \$2.75



No. 741. Radio Lamp, \$2.50

Tell them you saw it in RADIO

LAST MINUTE NEWS

Radio has added approximately \$75,000,000 in annual revenue to the electric light and power industry of the country, says an investment house advertisement. Most of this is net profit since no additional installation expense was necessary.

□ ● □

The Patent Office Board of Appeals upheld the Lowell and Dunmore patent. This patent applies to operation of radio sets by alternating current instead of the use of batteries.

□ ● □

Retail Distribution Census Report indicates that the average radio dealer having three employees on the payroll does a gross annual business of almost eight times his close of the year inventory.

□ ● □

Defending suits brought by eleven independent radio tube manufacturers, totaling \$23,350,000 for damages alleging violation of the Clayton anti-trust law, Radio Corporation of America won a point in demanding that plaintiffs furnish particulars as to the number of orders for tubes cancelled or returned by certain dealers, jobbers, and distributors.

□ ● □

Notice of appeal was filed in the District of Columbia on the Federal Radio Commission decision to grant the Radio Corporation of America and its subsidiaries renewals of licenses on broadcasting. Elisha Hanson, on behalf of Station WTMJ of Milwaukee Journal Company, is making the appeal.

□ ● □

Exports of electrical machinery and apparatus from New York State amounted to \$45,268,531 in 1930, the Department of Commerce announced. This compares with \$47,492,613 in 1929.

□ ● □

Roseville, Calif., City Council enacted a law providing penalty of \$300 fine or thirty days imprisonment for anyone possessing an electrical appliance which causes radio interference.

□ ● □

British railway trains are following the lead of the Canadian National Railways in installing radio entertainment on train service. A plug-in and headset service at various locations in the train instead of loudspeaker is provided.

□ ● □

Construction permits have been issued to the National Broadcasting Company for erection of television and sound station on the Empire State Building, New York City. The antenna will be 1,250 feet above street level.

Stockholm, Sweden, reports an inventor claims a device that entirely eliminates fading in transmission of radio signals.

□ ● □

The Continental Television Corporation, with a Delaware charter, has been formed. Joseph Leopold, formerly president of Consolidated Instrument Company, makers of aeroplane instruments, is president.

□ ● □

Columbia Broadcasting System has gone on the air with Station W2XAB, their initial visual and audible broadcasting.

□ ● □

Construction permit for a 2,000 watt television transmitter has been issued to RCA-Victor Company, of Camden, N. J.

□ ● □

Douglas Rigney, chairman of the executive board of Shortwave and Television Corporation, of Boston, announced that sponsored programs will provide some of the revenue required to operate television broadcasting.

□ ● □

West Side Y. M. C. A., in New York City, announced a radio-television class to open in the fall. Specialized training of television technicians will be offered.

□ ● □

Musical Industries, Inc., an English concern, is announced established, merging Columbia Graphophone, Ltd. and Gramophone Company, Ltd. in one organization under the new title.

□ ● □

General Electric Company report sales for first six months 1930 \$141,180,091, compared to \$197,229,347 same period 1929. Net profit is reported in 1930 of \$22,811,221 compared to \$30,560,745 in 1929 for the first six months.

□ ● □

General Cable Company report for three months ended June 30 net loss of \$575,643 compared with \$408,105 for same period in 1930. First six months of 1931 show net loss of \$1,273,608 compared to \$895,358 for same period 1930.

□ ● □

Net loss for the year ending May 31, 1931, of Grigsby-Grunow and its subsidiaries was \$2,169,761. This compared with net profit of \$1,745,648 in the preceding year, which did not include results of the Household subsidiary. The combined companies reported a net profit of \$112,374 from March 11 to the end of May, 1931.

In Addition to

●

The CROSLY 59 Series
(5-Tube T. R. F.)

The SHOW BOY, \$39.75

The SONNETEER, \$54.75

The SONGSTER, \$59.75

The ORACLE, \$99.50
(Priced Complete with Tubes)

●

The CROSLY 123 Series
(8-Tube Superheterodyne)

The SUPER BUDDY BOY, \$65.00

The MUSICALE, \$87.00

(Priced Complete with Tubes)

●

The CROSLY 121 Series
(10-Tube Superheterodyne)

The MINSTREL, \$129.50

The TROUBADOUR, \$169.50

(Priced Complete with Tubes)

(Montana, Wyoming, Colorado, New Mexico and West, prices slightly higher.)

CROSLY *Distributors*

will show on or about August 1st

The Startlingly NEW

CROSLY
124 Series

of Superheterodyne Radio Receiving Sets

●

THE CROSLY RADIO CORPORATION

Powel Crosley, Jr., *President* CINCINNATI Home of "the Nation's Station" — WLW

Also manufacturers of the Crosley ROAMIO Automobile and Motor Boat Radio Receiving Set and the
Crosley Battery SHOW BOY Radio Receiving Set for the home

YOU'RE THERE WITH A CROSLY

CROSLY RADIO

SELL MORE TUBES to MORE CUSTOMERS

*with this
improved*

TEST BOARD



The Arcturus Test Board, made by a leading electrical instrument manufacturer, was selected by our engineers after careful comparison of many test boards on the market. Specially designed, this Test Board gives the most complete and accurate indication of the efficiency of all popular tubes.

*Records Prove it often
DOUBLES and TRIPLES
Tube Sales; Brings New
Customers into your store;
Creates Live Prospects for
Radio Sets as well as
Tubes; Establishes your
Store as the Local Radio
Headquarters.*

*The
BLUE
Radio
Tube!*

LAST month, in the pages of this magazine, we made an unusual offer. We announced an up-to-date Test Board for radio tubes, and outlined a new plan that made it easy for any dealer to own one of these proved business builders.

Hundreds of progressive radio dealers took advantage of this plan. Many have had an opportunity to check the value of the Test Board, and the simplified sales plan we furnish with it. They report remarkable results.

They have learned that a list of old customers can be turned into a gold mine of new tube profits. They have secured dozens of new customers at small expense and turned many of these into radio set buyers. They have established their stores as the radio center of their community—the place to get expert radio service at no extra cost.

Get This Test Board Now

Testing equipment such as this is often sold at \$150.00 to \$200.00 or more. Yet Arcturus now helps any progressive radio dealer get a Test Board, and many Arcturus jobbers have a plan enabling dealers to earn one by tube purchases.

Naturally, we can furnish these Test Boards to a limited number of dealers only. If you want one, ACT TODAY. Tear out this coupon now, and send it to us with your business letterhead. It will bring you all the facts about the most profitable selling help you have ever had in your store.

Arcturus Radio
Tube Co.
Newark, N.J.

ARCTURUS

"The TUBE with the LIFELIKE Tone"

CLIP and MAIL this COUPON NOW!

ARCTURUS RADIO TUBE CO., 720 Frelinghuysen Avenue, Newark, N. J.
I am interested in your plan for selling more tubes with your Tube Test Board. Tell me how I can get one of these Test Boards, and use it to best advantage.

Name _____
Address _____
City _____
State _____

WESTERN DIVISION:

Arcturus Radio Tube Co., 1855 Industrial Street, Los Angeles, Calif.

R-3-31