

RADIO DOINGS

THE BROADCAST PROGRAM OF THE LEADING
BROADCAST STATIONS ... LATEST RADIO NEWS



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COVERING PERIOD NOVEMBER 16-22, 1924

SECOND NATIONAL RADIO EXPOSITION, DEC. 2-7



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Radio Doings

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LEE FELTSKOG

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Five Cents a Copy

Two Dollars a Year

Vol. V

Los Angeles, November 15, 1924

No. 20

The Second National Radio Exposition

FOR the second time Los Angeles has been selected by the American Radio Exposition Company of New York as the logical place to hold the Pacific radio show. This company holds only two shows each year—one in New York and the other on the Pacific Coast. Los Angeles should feel proud that she has been selected for the second year in succession as the best point. This decision has not been made without a thorough canvass of the radio business all over the west.

The last exposition, which was held at the Biltmore Hotel, proved so successful that the big problem was to find a place big enough to handle the exhibits and the crowd. Past experience showed that the ballroom at the Biltmore was not large enough, therefore the Exposition Building in the grounds of the Ambassador Hotel was selected as the best available place. The dates decided on are from Tuesday, Dec. 2, to Sunday, Dec. 7, inclusive. The show will be open to the public daily from 2 to 11 p. m., and to the trade from 1 to 2 each day.

All space has been sold out and many of the largest manufacturers and dealers from all over the country are exhibiting.

Owing to the splendid co-operation of all interested in the radio business and the press, the American Radio Exposition Company decided that the show this year should be on a profit-sharing basis and agreed that they would manage the exposition for the Radio Trades Association of Southern California, under whose auspices it is being held.

It is now up to the radio public to demonstrate to the exposition company that they made no mistake in selecting Los Angeles.

All the Year for Two Dollars

Do not miss a copy of RADIO DOINGS. Have it mailed every week to your home. Simply sign the blank below. Mail it to us or pay your dealer and let him forward it to us.

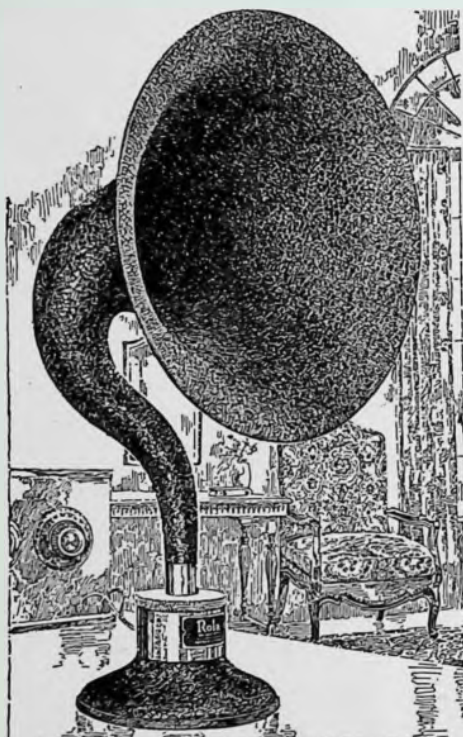
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New Broadcast Band Being Subdivided

Delegates to the Radio Conference left with the idea that everything was settled and that new wave lengths for broadcasting would be issued forthwith, but Secretary Hoover's radio aides have had a terrible time working out the practical details of an equitable distribution of the 53 wave lengths among the 62 Class B stations now in existence.

After trying out several plans of allocating wave lengths by zones and cities where the larger and more powerful broadcasters are located, a tentative system based on distance between the broadcast stations has been sent to all radio supervisors with instructions to confer with local operators and secure their approval. Out of nine national districts, only one supervisor has reported a general agreement to the changes in wave lengths suggested. Supervisor R. Y. Cadmus of the Third District, having headquarters at Baltimore, reports that all major station owners agree to the wave lengths assigned. Under this district plan, Washington will get a wave length of 491.5 meters, time on which will have to be divided by Stations WRC and WCAP. Philadelphia, which has four stations, will have two wave lengths, 394.5 and 535.4 meters, while Atlantic City will have a single wave length of 283.3 meters.

The general plan of subdividing the wave band between 230 and 545 meters among the Class B stations provides for a separation of from ten to 50 kilocycles. Stations in the same city will be approximately 50 kilocycles or about 34 meters apart, which should prevent serious interference when both are on the air. A recent test in Washington, however, when WRC broadcast on 469 and WCAP on 435 meters, brought a number of complaints of bad interference, chiefly from crystal set owners. In reports tabulated by the Department of Commerce, 25 per cent of the fans claimed it was impossible to separate the two programs. In many other cities, such as New York, Philadelphia and Chicago, it is understood fans have little difficulty in selecting the station desired during simultaneous broadcasting.

Stations distant from each other 50 to 200 miles will use wave lengths separated by 30 kilocycles; those from 200 to 500 miles apart will have a 20-kilocycle separation, and those over 500 miles apart will operate on wave lengths differing by ten kilocycles.

Before the allocation of the Class B wave lengths is put into effect, it will be necessary to reassign wave lengths to the present Class A stations in the new band between 200 and 278 meters, as provided in the general conference plan, and also to get the 39 active Class C stations to transfer to Class A or B, or quit so as to release the 360-meter wave length. No Class C station licenses will be renewed after November 15th. The new allocations will probably not be finally checked and assigned until about January 1st, but all Supervisors are completing their local surveys as fast as possible. In some cities where there are but two channels for three or more broadcasting stations, difficulties are being met, as each station wants a separate wave length. The fact that 26 new Class B



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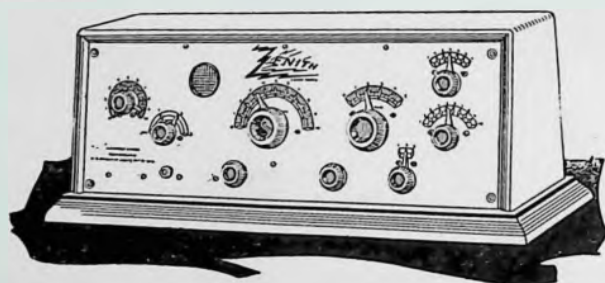


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Performance, backed by that same dependability, makes the Zenith receiver the ideal set.



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Douglas 2940

stations are anticipated, twelve planning to transfer from their present status and 14 being new stations under construction, hinders progress. All told, this makes it necessary for the Commerce Department to divide 53 wave lengths among 88 stations, and although ten of the wave lengths used on the east coast may be repeated on the west coast, a satisfactory assignment is found difficult.

While Secretary Hoover has made no statement as to the department's acceptance of the conference resolutions, practical applications indicate that some of the plans cannot be carried out. For example, the renaming of broadcasting stations by numerical designations, which of course makes little difference to the fans, anyhow, is impossible. It looks as if the higher powered stations, known as Class B, would continue under that name, while remaining stations will be classed as A stations. The suggested designations as Classes Nos. 1, 2 and 3, will not be practical since existing legislation provides that Class 1 stations are public service stations, Class 4 technical and training, and Classes 5, 6 and 7 amateur stations.

Furthermore, the department is said not to favor grouping all the lower-powered present A stations, numbering nearly half the present stations, into Class 3, and trying to satisfy them all with only five operating channels. The band for these stations assigned by the conference was between 202 and 207 meters, all very low wave lengths, and not capable of being picked up on many types of sets. All Class A stations, therefore, it is understood, will be assigned wave lengths between 200 and 280 meters, the more powerful having the higher wave lengths between 233 and 278 meters. Supervisors are also testing the broadcasting stations and making their transmitters for future adjustments on the new waves, thus preparing for the final transfer, when all details are worked out.

Navy Opens German Radio Patents to U. S. Manufacturers

The announcement by the Navy Department that a number of German radio patents were to be offered to American radio manufacturers on a new cross-licensing plan, has resulted in applications from many houses interested in radio apparatus. Under the law existing in 1920, the Secretary of the Navy licensed The International Radio Telegraph Co., to use the German patents, seized by the Alien Property Custodian, including the famous reflex circuit of Schloemilch and Von Bront, with the understanding that the Westinghouse Company could make and sell such apparatus. Since that date, however, other firms have applied for licenses under the same patents and the Attorney General recently ruled that the Naval Secretary might issue general non-exclusive, non-transferrable but revocable licenses. This may put several new receiving sets on the market, incorporating the reflex feature, but to date no licenses have been issued.

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Model 20, \$110.00

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Radio Taught by a Machine

A mechanical device is to take the place of human instructors in Morse and Continental code at the Army Signal Corps School at Camp Alfred Vail, N. J., following the successful experiments with the new adaptation of phonographic or dictaphone instruction.

As a result of a report of a board of officers, appointed to make a comparative study of the merits of manual and mechanical instruction in radio and telegraph code work, the signal school has adopted the Ediphone system. These machines, such as are used in many business offices today, will be employed this year for recording and transmitting code practice in both the Morse and radio departments, and will actually replace the operator instructors, according to Captain John P. Ferriter of the Signal Corps.

Briefly the system requires a Signal Corps Special Ediphone, a shaving machine, 19 hard receiving records, and 12 wax records, all of which costs about \$263.

The records for receiving practice are made of a hard material which makes them practically indestructible. By means of a special reproducer on the Ediphone, the signals on the record are caused to operate a relay. The local contacts of this relay may be caused to interrupt a tone passing through the telephone head sets of the students in the radio classes, or it may operate sounders in the Morse classes. For sending practice, blank wax records are provided. The student records his sending on a wax cylinder. This record is then re-run and he is required to copy it.

Several changes in the commercial Ediphone were necessary to adapt it to this use, the principal ones being a special reproducer and recorder, developed at the signal school.

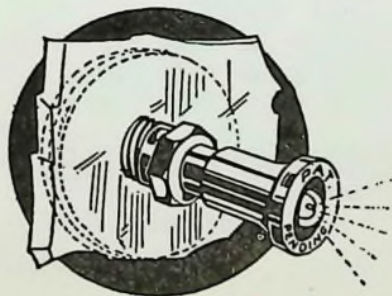
The Ediphone method has many advantages over the manual method of teaching, since it is possible to standardize instruction. By using the records according to directions and giving daily tests, the student is assured of exactly

Insure Full Life of Tubes

KANT-BLOS are the apex of Radio tube insurance without interfering in any way with the reception of your set.

KANT-BLOS are not fuses or plain high resistances.

No matter what kind or how many "shorts" develop in a radio set, or where, the KANT-BLO will save the tubes, and a signal will light to let you know that there is a "short."



The KANT-BLO is not an extra accessory on your set. It is designed as a B battery binding post or as an A battery filament switch.

KANT-BLO Signals are at all the best radio stores. If your dealer is out of stock, send us \$2 for a KANT-BLO, Binding Post Style, or \$3 for the Switch Style.

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SWITCH SIGNAL BINDING POST

"Lights on any Short Circuit"

the same instruction as is given in the signal school. This obviously is an extremely desirable feature as it permits of the establishment of standardized code schools throughout the Army, without any particular need for a skilled instructor. The course should appeal particularly to the infantry, cavalry and artillery, as it is a complete solution of their problem of developing radio operators in their own organizations.

Special code practice equipment for radio classes has been designed in the signal school, which makes the installation of the necessary apparatus very simple. This consists of a modified monocord switchboard with a buzzerphone howler and a four-volt battery to supply the tone.

American Radio Exports Increasing

Based on the August and September radio exports, which averaged over \$550,000 a month, American radio exports during 1925 may aggregate over six and a half million dollars, provided the average holds in the coming twelve months. This estimate for 1925 exceeds forecasts of two months ago by about two million dollars.

During September radio exports from the United States totaled \$567,434, compared with \$541,238 in August and \$297,586 in July. Up to August the average value of monthly wireless exports was around \$275,000, but in August large amounts of apparatus were exported to Australia, Canada and Japan. The increases of August exports over those of July not only held in September, but increased by \$26,196; details as to exports to foreign countries are, however, not yet available for September.

Radio Extension Course in Kansas

The Kansas State Agricultural College is broadcasting a radio extension course in agriculture, engineering, home economics and general science. This plan was the first concerted effort of any educational institution to disseminate a systematic course of instruction by radio, the unique catalogue of this air college claims. All departments of the college have co-operated in the aerial programs outlined and the new 500-watt broadcasting station now under construction at Manhattan, Kans., will go on the air about the first of the year. Prior to that date, however, KFKB at Milwaukee is handling the program on 286 meters. Call letters KSAC have been applied for by this prospective Class B station. The eight months' course was begun on September 15, and will terminate about April 24th, 1926. Those who desire to enroll should correspond with the Extension Division of the Kansas State Agricultural College at Manhattan. Examination papers will be mailed at the close of each course and must be returned within thirty days. Students who pass will be awarded certificates. The cost is nothing, except to scholars outside the state, who must pay a fee of fifty cents a course.

CROSLEY SETS

\$17.60 One Tube Set
20.35 One Tube Portable
27.50 Two Tube Portable

\$33.00 Three Tube Set
71.50 Three Tube Reflex
82.50 Three Tube Reflex

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Radio never knew a battery like THIS!

NO water . . . No acid fumes or odor . . . No corroding . . . No leakage . . . No "static" noise from gassing or local action . . . Remarkable recuperative ability . . . Delivers normal voltage as long as three and four months between recharging. . . .

—These are some of the revolutionary features of the new SUPER-PLUS battery. And every feature proven by severest service tests. Think how much more satisfactory, safe and economical for your radio! As convenient as a dry cell, and not much larger. Rechargeable like a liquid battery, yet capable of almost twice the service. In a year you can save more than the purchase price on recharging bills alone.

This battery is enclosed in a neat mahogany-finish case. Made in all sizes required for modern Radio reception. Two-year guarantee. Prices no higher than for the ordinary high grade rechargeable battery.

(U. S. Patents allowed and pending)

Trade **STORAGE
SUPER-PLUS
BATTERY** Mark

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Glendale, California

Why Buy Radio Batteries More Than Once?

**WILLARD Rechargeable RADIO "A" and "B" Batteries
last for years.**



Radio "B" Battery

Note the construction: Individual glass cells that
eliminate external and internal leakage
Fully covered by U. S. Patent 1506874

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San Pedro—Auto Elec-
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Santa Barbara—Lamb
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Los Angeles—Western Auto Electric Co., any Radio Jobber or Dealer or any
Willard Service Station.

San Francisco—Julius Brunton & Sons Co.

STORAGE
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TRADE MARK REGISTERED

Chicago Radio Fraternity Striving to Outdo New York

The age-old rivalry between New York and Chicago has been revived with a vengeance by the radio fraternity of this city, who appear to be strongly backed up by the wireless industry of the entire middle west.

Chicagoans are decidedly peeved over the fact that New York was selected as the site of the first Radio World's Fair and they now seem intent upon upholding the reputation of the Windy City as "the logical location for all American expositions of an international character," by making the coming Third Annual Chicago Radio Show bigger and better than the recent Gotham Fair. From present indications their efforts are going to be crowned with success. More manufacturers' exhibits have already been booked here, the total number being 225, compared to 200 in New York. The novelties and special attractions here promise to be slightly more interesting and important, and several intensive ticket selling campaigns now being conducted by radio clubs and business organizations throughout the northern Illinois district threaten to bring the attendance up to the 200,000 mark, which will exceed the Madison Square Garden score by 25,000.

The exposition will completely fill the enormous Coliseum and all of its new and old additions. The floor space will be nearly 100,000 square feet and, with the possible exception of the New York fair, the coming show, which runs from November 18th to 23rd, will be the largest and most comprehensive trade exhibition of any sort ever assembled in the United States.

The big spectacle will be open to the general public from 1 p. m. to midnight daily, including Sunday. The admission will be 50 cents for adults and 25 cents for children. There will be no war tax this year.

The foreign section here will be more extensive than it was in Manhattan. There will be a score of de luxe exhibits by the most famous radio concerns of Europe and the Orient, including many startling novelties. The alien devices will be shown in the south annex and will fill the whole of the second floor.

A list of exhibitors, corrected to date, will be found enclosed.

Those who complain of broadcast interference in these United States should be thankful that there are numerous stations and that listening in is free.

Radio fans in India will have to pay for their broadcast programs, as is done in England, but will be permitted to purchase such sets as they please, if the recommendations of the Radio Club of Bengal are accepted. The formation of a public broadcasting company similar to the British Broadcasting Company, to handle radio broadcasting, under the supervision of a provincial council to watch local interest, has been suggested. No monopoly as far as the handling of receiving sets is concerned, will be permitted, the public being left free to build or buy any set. Imports of wireless apparatus is unrestricted, but a duty of 7½ per cent on complete sets and 5 per cent on accessories will probably be charged. All persons desiring to receive broadcast programs will have to take out licenses at a cost of ten rupees per annum, the major portion of which, with 80 per cent of the duty returns, will go to the broadcasters as a subsidy.



Just What You Need

If you own a Valley Battery Charger, you need never miss a radio program. The Valley Charger will completely recharge any radio battery overnight.

Quiet in operation.

Full 6-ampere charging rate.

No liquids. No bulbs.

Plugs into the ordinary light socket like a fan or other household necessity, and just as easy to operate. Takes about a dime's worth of current for a full charge.

Grained and engraved Bakelite panel harmonizes with the rest of your set. Clear glass top shows the simple patented working parts at all times. **At Radio Dealers**

VALLEY ELECTRIC CO., Rialto Bldg., San Francisco, Cal.

Valley Battery Charger

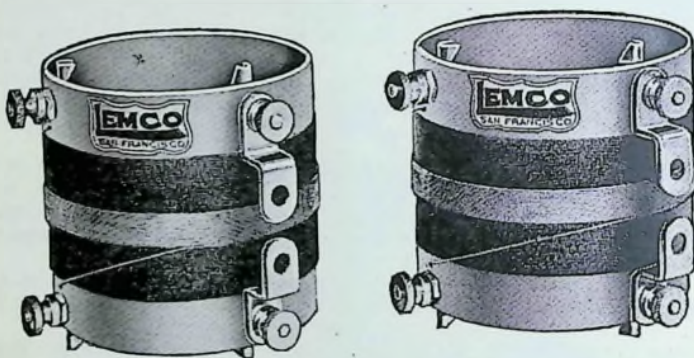
BUILD YOUR OWN REFLEX

from

LEMCO

EQUIPMENT

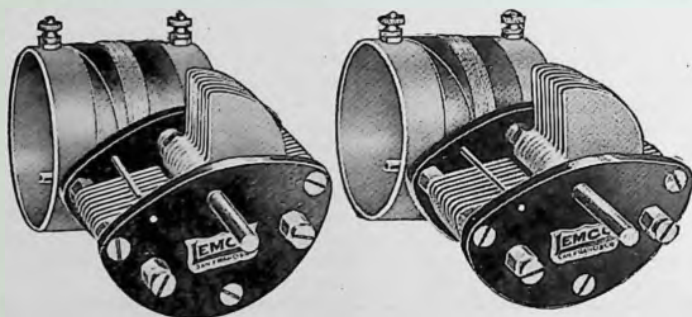
No. 250. Reflex Coils



Price \$2.00

Silk wound on genuine natural finish bakelite
Adjustable mounting brackets will take any condenser

No. 275. Reflex Units



Price \$8.00

Mounted on Lemco 17-plate condensers

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400 San Fernando Bldg., Los Angeles

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Lee Electric & Manufacturing Co.

220 Eighth Street, San Francisco

Navy Doing Its Bit to Cut Interference

Officers of the navy afloat and ashore are doing all they can to eliminate interference in the interest of efficiency and in aiding the broadcast listeners. During the past year over five per cent of the old ship spark sets have been replaced with tubes, practically all new ships are equipped with tube transmitters, and naval operators have been ordered to tune loose-coupled receiving sets correctly. Another effort on the part of the naval radio personnel has been to eliminate mush and harmonics from high powered shore stations.

Commands of all naval districts have been ordered to conduct reception tests in their districts to determine whether or not naval arcs and sparks are causing interference attributed to the navy. In Honolulu, it was recently demonstrated that interference charged to naval stations continued when they were off the air, and eventually it was traced to a violet ray machine.

Why the navy is so generally charged with causing practically all the interference is not understood by naval officers, who point out that the navy actually operates only about one-half of one per cent of the shore radio stations in this country, actually only 88 in continental United States out of a total of 17,142 government-owned land stations. At sea in the neighborhood of our shores the navy operates radio only on 317 ships out of a total of over 3400 ship stations belonging to the United States. This figures out to 13 per cent of the U. S. ships and only 4 per cent of the world's radio-equipped vessels.

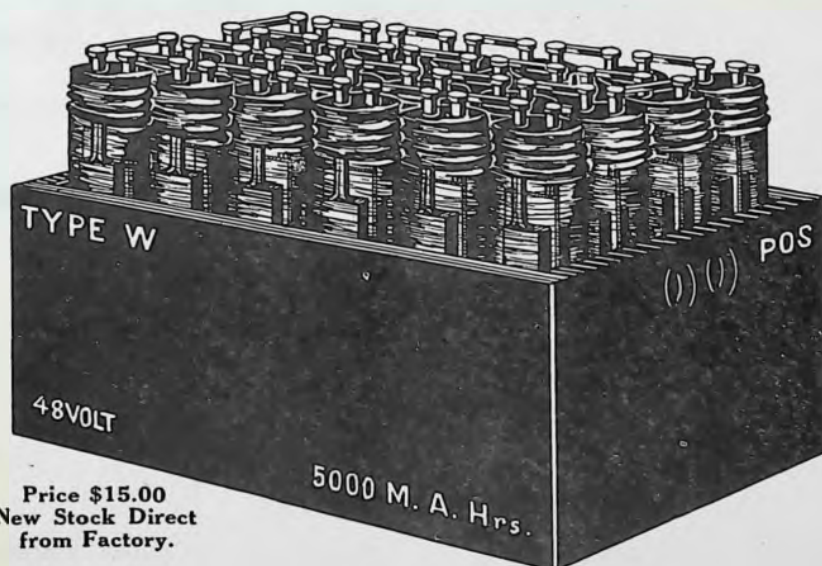
WORK ON ANNAPOLIS

There seems to be a general lack of understanding of the interference situation with regard to status of NSS, the Annapolis station, which causes interference to broadcast listeners. In this connection a naval report states:

"The Annapolis station is the sole means of direct communication between the Navy Department and San Francisco, San Diego, Balboa, London, Paris, Rome, and vessels in European waters, and handles not only navy business but business for other departments of the Government as well.

"Prior to the advent of radio broadcasting, the station was entirely satisfac-

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New Stock Direct
from Factory.

NEW YORK PACIFIC BATTERY COMPANY

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1925 FADA MODELS

FADA among NEUTRODYNE receivers is as Packard in motor cars. This ideal receiver is now made in five beautiful models — three, four and five tube sets for either storage or dry battery operation.

FADA "NEUTRO JUNIOR," 3 Tubes.....	\$ 75.00
FADA "ONE SIXTY," 4 Tubes.....	120.00
FADA "NEUTROCEIVER," 5 Tubes—B and C Battery Compartment.....	160.00
FADA "NEUTROLA," 5 Tubes — B and C Battery Compartment, Loudspeaker enclosed.....	220.00
FADA "NEUTROCEIVER GRAND," 5 Tubes—A, B and C Battery Cabinet.....	235.00
FADA "NEUTROLA GRAND," 5 Tubes—A, B and C Battery Cabinet, Loudspeaker enclosed.....	295.00

Above Prices Less Accessories

Parts for 5 Tube Sets Complete, All Back Panel Mount, \$72.00

The Recognized Feature of the Pacific Radio Exposition

DISTRIBUTORS

Radio Supply Co.

920 South Broadway

Phone VA. 6063

Los Angeles

tory, no reason existed for eliminating interference cause by mush and harmonics, nor had any method been devised for so improving arcs. Simultaneously with the advent of radio broadcasting, investigation of elimination of mush and harmonics from arc stations was started. Satisfactory systems have been devised for medium and small arcs, but to date no entirely satisfactory system has been devised for the largest arcs.

"Annapolis is a 500 KW arc station. Since the advent of broadcasting, about \$100,000 has been spent in an effort to perfect mush and harmonic eliminating circuits. This effort has not been successful to date, but is being continued and still gives promise of success.

"There is, furthermore, now under construction a 20 KW tube set for installation at Annapolis, which will be free from extraneous emissions and which, it is hoped, will prove to be a satisfactory substitute for the arc.

"Notwithstanding the importance of the Annapolis station and the volume of important Government traffic to be moved, the Naval Communication Office has consistently sympathized with and co-operated with broadcast listeners. Since February of this year the Annapolis station has remained silent, except in very rare emergencies, and then for very short periods, between the hours of 8 p. m. and 10 p. m., and traffic has been reduced to a minimum between 11 a. m. and noon on Sunday mornings.

"The measures taken to reduce interference at Annapolis have brought forth appreciation from many sources."

Lack of appropriations and insufficient development of tube equipment as to military reliability have slowed the navy in equipping all its ships with efficient tube sets, but these handicaps have not stopped the service operators and engineers from improving conditions which they could remedy. Capt. Ridley McLean, Director of Naval Communications, recently commended Commander F. B. Freyer of the supply ship Procyron for rebuilding a low-powered radiophone set into a C. W. transmitter, on which practically all her radio communication is now handled. Her old spark set is reserved solely for emergency traffic.

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For Every Purpose — Every Purse

Prices Complete with Batteries

RADIOLA SUPER-HETERODYNE

"The Last Word in Radio"

\$280.00

RADIOLA REGENOFLEX
4-Tube Regenerative Receiver
\$202.00

RADIOLA III-A
4-Tube Regenerative Receiver
\$99.50

RADIOLA III
2-Tube Regenerative Receiver
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Immediate Deliveries

Parking Space Always Available

GOLDEN STATE ELECTRIC CO.

TRinity 4671

826 So. Flower Street



GILFILLAN NEUTRODYNE



STYLE GN-1

In an artistic two-tone American walnut cabinet harmonizing with any interior. Price without accessories

\$ 1 7 5

Style GN-2 in smaller cabinet, without accessories

\$ 1 4 0

The Lovely Tone Delights All!

The clear true tone of the Gilfillan Neutrodyne brings out the finer shadings of musical reproduction. With the aid of the finding chart anyone can tune in quickly without howls or squeals. Distant and difficult stations are easily brought in even while locals are playing.

The use of an "A" storage battery is recommended instead of exclusive dry battery equipment to get greatly improved results.

We invite a comparison of the workmanship and performance of these sets with any others. Their excellence is due to the years of experience in the manufacture of radio equipment.

Be sure and hear them at your dealer's before you decide to buy.

GILFILLAN BROS. INC.

1815 West 16th St., Los Angeles, Calif.

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OAKLAND, CAL.
LOS ANGELES, CAL.



Although the low-powered phone sets have been in service on a large number of naval craft for over six years, it is only recently, Capt. McLean points out, that their use has approached the possibilities. As the Procyron succeeded in communicating approximately 600 miles with excellent results, using its remodeled transmitter, he hopes vessels similarly equipped will follow the example of the radio officer using C.W. as opposed to the spark, since the navy is under obligation to cease using the speak as soon as practicable.

Radio Aids the Wrecking Crew

The experimental radio transmitting station 3 XAV of the Potomac Electric Power Company, in Washington, has been put to a unique use in aiding the wrecking trucks of the Washington Railway Electric Co. Several of the "trouble-shooting" automobiles have been equipped with radio receivers, and when they are working outside the city, radio messages are transmitted to them from headquarters. The trucks are used for repairing both electric power and light lines as well as keeping the street cars in operation. Frequently, after a big storm, it is necessary to move them from place to place on short notice. Until recently it was difficult to reach them, but with the new radio receivers it is possible for the chief electrician to communicate with his working crews, no matter where they are, since the chauffeurs listen in when the trucks are out of a job. Through the station of the Potomac Electric Power Co., messages are sent by radiophone on short wave lengths between 80 and 150 meters, and the trucks are re-directed or ordered mobilized wherever the chief desires. In this way no emergencies arise which cannot be coped with almost immediately. Station 3 XAV is equipped with a 100-watt tube set, used for C. W. or phone work. Eventually it is planned to fit radio receivers to all 50 motor "hurry-up" wagons in the interest of efficient public service.

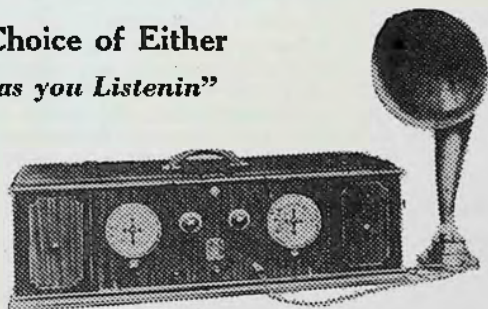
Experiments with the "P. E. P. Co." set have enabled the operators to communicate with amateurs in Louisiana, Ohio, Maine, and many other eastern stations.

RADIOLAS

Your Choice of Either

"Pay as you Listenin"

The RADIOLA
SUPER-
HETERODYNE



Radiola III.....\$35.00

Radiola X.....\$245.00

Radiola IIIA.....\$65.00

Radiola Super-Hetero-
dyne 269.00

Demonstrated in your home—no obligation

Southern California Radio Co.

BEacon 7439

2135 West Pico St.

Authorized Dealers

Los Angeles

Six New Stations Licensed

One new Class B broadcaster and five new Class A stations were licensed by the Department of Commerce last week:

Call	A Stations	Frequency Keys	Wave Length Meters	Power Watts
KFRM	—James F. Boland, Fort Sill, Okla.....	1140	263	50
KFRN	—M. Laurence Short, Hanford, Calif.....	1340	224	5
KFRE	—Curtis Printing Co., Ft. Worth Tex.....	1220	246	50
WFBQ	—Wynne Radio Co., Raleigh, N. C.....	1100	252	50
WSAB	—Southeast Mo. State Teachers College Cape Girardeau, Mo.....	1090	275	100
CLASS B STATION				
WGBS	—Gimbel Brothers, Inc., New York, N. Y.	950	316	1000
TRANSFERRED CLASS C TO CLASS A				
WCAO	—Sanders & Stayman Co., Baltimore, Md.	1090	275	50
WNAW	—Henry Kunsman, Fort Monroe, Va.....	1250	240	5
WRM	—University of Illinois, Urbana, Ill.....	1100	273	500

Twelve Quit Air

Twelve Class A Broadcasting Stations were deleted during the month of October, 1924, by the Department of Commerce:

Call	Station
KFHD	—Utz Electric Co., St. Joseph, Mo.
KFOQ	—Ora William Chancellor, Galveston, Texas.
KFQS	—Dickinson-Henry Radio Laboratories.
KUY	—Coast Radio Co., El Monte, Calif.
WABE	—Y. M. C. A., Washington, D. C.
WDBU	—Somerset Radio Co., Skowhegan, Maine.
WEAR	—The Evening News Publishing Co., Baltimore, Md.
WFAB	—Woese, Carl C., Syracuse, N. Y.
WHAK	—Roberts Hardware Co., Clarksburg, W. Va.
VLAH	—Woodworth, Samuel, Syracuse, N. Y.
WPAM	—Auerbach & Guettel, Topeka, Kansas.
WTAJ	—Radio Shop, The, Portland, Maine.

In Argentina, when a broadcasting station interferes with governmental communication its owner and operator are suspended. Recently most of the broadcasters were shut down by the Minister of Marine for interfering. But following conferences and an investigation the press declared that the president had exceeded his authority and general broadcasting was resumed. Action on the part of the government is awaited with considerable interest.

After the first of January, 1925, amateurs will have to pass a government examination before they are licensed to operate.

RADIO EXCHANGE

Bring in your parts and change for parts you now need.

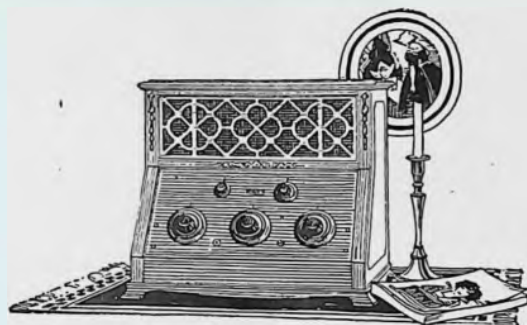
Realizing the need of the Radio public when constructing a new circuit, we offer to you this service—a centrally located Radio firm with a complete stock, offered to you at wholesale prices, practical advice and a work bench ready for you at all times, with our parts exchange department always ready to assist you. Doesn't that put the pep in Radio?

D. C. PHIPPS

726 So. Spring

TRinity 6434

Los Angeles



The Nation's Entertainment at Your Fingertips

A slight turn of the dials of a WorkRite Super-Neutrodyne receiver, and station after station comes in, clearly, distinctly and without "cross-talk" or interference. Stations once logged can be brought in at any time by turning to the same settings. WorkRite design and the final materials and workmanship make such results possible.

WorkRite Radio Sets are beautiful examples of cabinet work. Done in genuine brown mahogany, they harmonize with the finest furnishings—as any fine instrument should.

The "Radio King" Set, shown above, like all WorkRite models, is a 5-tube (2 radio amplifier, 1 detector, and 2 audio amplifier tubes) super-neutrodyne set. The "Air Master" is almost identical, but without the built-in loud speaker, while the "Aristocrat" is a beautiful console model with a special battery compartment, in addition to the built-in loud speaker. The prices, without accessories, are \$220, \$160 and \$350, respectively. Write for rotogravure booklet giving complete descriptions.

THE WORKRITE MANUFACTURING CO.

239 South Los Angeles St., Los Angeles

Cleveland 1800 East 30th St.

Chicago, 536 Lake Shore Drive

WORKRITE

SUPER NEUTRODYNE RADIO SETS



Code Interference

By K. G. ORMISTON

We receive letters from broadcast listeners nearly every week complaining of interference from "these pesky code stations." Sometimes the amateurs are blamed, sometimes the commercial stations are held responsible, and more often all "code senders" in general are condemned for spoiling a distant program.

The broadcast listener should realize that when he is tuning for distant stations he cannot expect the same quality of reception and lack of interference that he is accustomed to when listening to local stations. He naturally increases the sensitiveness and amplification of the set to the last degree, and it is then to be expected that the distant station will carry with it distortion, the "birdies" of neighboring receivers, and in some localities the signals of a nearby wireless station, transmitting in code.

We say "wireless station" because the public has come to think of broadcast stations as "radio" and code stations are "wireless," though the term "radio" properly applies to both. In one case, the outgoing energy or wave is modulated with the frequencies of voice and music, and in the other case it is broken up into the dots and dashes of the international Morse code. But, in accord with the popular idea, we will speak of the code stations as "wireless."

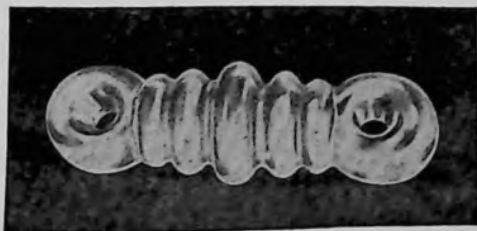
The wireless stations which interfere may be amateur, commercial or U. S. Navy owned. The commercial and Navy stations are assigned wave-lengths sufficiently far from the broadcast band to prevent interference, excepting in cases where the fan is located very close to such a station. The business which they transact over the air is for the most part of great importance. They never have the concerts of the broadcasters, but are busy in their own field, handling the heavy radio traffic with the ships at sea. Here, after all, is the greatest service of radio or wireless—protecting the thousands of ships which sail the seven seas, with the lives and cargoes which they carry.

So, if it is a commercial or naval station which sometimes annoys you, do not complain, but endeavor to so arrange your receiver that this difficulty may be minimized.

Now the amateurs are on wave-lengths below 200 meters, but for the most part use very modern vacuum tube transmitters which tune very sharply and cause no interference. There are in every locality, however, a few of the old "rock-crushers" left, with spark transmitters, which tune broadly and are capable of wrecking what might have been a pleasant evening's entertainment for many people. These amateurs are pests indeed, as the excuse that here is budding genius developing the radio of tomorrow will not apply, since they are playing with obsolete junk. The young (and old) fellows who should be encouraged in their amateur activities are those with the modern tube transmitters who are actually responsible for much of the present efficiency of broadcasting. And these are the ones who cause the least, if any, interference.

If you are troubled with code interference, call in someone who is a code operator, and he will quickly tell you whether it is Navy, commercial or amateur. And, if amateur, he will tell you whether or not it is the type of amateur who should be reported to the supervisor of radio. Incidentally, he may tell you that the reason for the interference lies in your own apparatus.

P Y R E X



Aylsworth & Robinson

Jobbers of Radio

117 West Sixteenth St.
Los Angeles, Calif.

ATlantic 1016



Eight Transformers

Matched to the same resonant frequency. Each one given an operation test and absolutely guaranteed—

\$35⁰⁰

Increase Your Range - Use Fewer Tubes Reduce Panel Size - Log All Stations

IMPROVE your present Super-Heterodyne receiver by substituting Branston Transformers for those you are now using. Make yours a strictly loop set of wide range, great selectivity, exceptional tonal quality. Make seven 199 tubes do the work of ten by reflexing. Reduce your panel size to 7x21 inches, with but two tuning controls. Increase your range and amplify distant stations to the volume of a local station by adding short wave radio frequency to your set. Send 25c in coin or stamps for complete blue-prints and layout covering Super-Heterodyne, Radio Frequency and Honeycomb Coil Circuits; also complete catalog of Branston Quality Radio Products.

Your dealer has Branston Kits
or can get them for you.

CHAS. A. BRANSTON, INC.

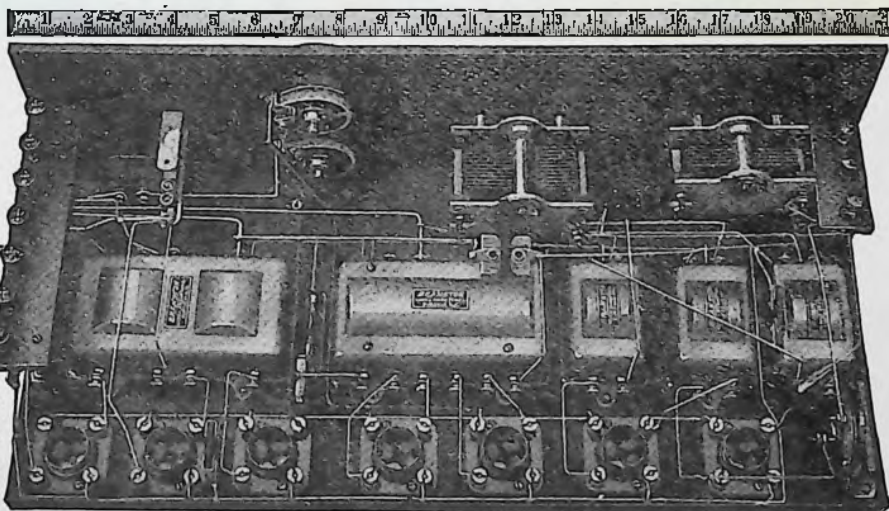
839 Main Street, Buffalo, N. Y.

Manufacturers of Branston Violet Ray High Frequency Generators
In Canada—CHAS. A. BRANSTON, Ltd., Toronto, Ont.

Super Hetero- dyne Set

Made by a
Buffalo,
N. Y., radio
fan, who
used
Branston
Trans-
formers.

This is but
one of sev-
eral circuits
in which
these trans-
formers can
be used.



He Is With Us Again

When the First National Radio Exposition, which was held at the Biltmore Hotel, Los Angeles, closed in February last, an invitation was extended to the Radio Exposition Company of New York to manage the next show that was held in Los Angeles. The reason for this was the very able and efficient manner in which Mr. J. C. Johnson managed things. Now that the Second National Radio Exposition is to be held Dec. 2 to 7, inclusive, at the Exposition Building of the Ambassador Hotel, true to his promise, our good friend J. C. Johnson is with us again.

Radio shows this year all over the country have shown an even greater interest in the art than those of previous years, and the attendance has passed all expectations. Now, with this showing in other cities, there is no doubt about the success of the coming exposition in Los Angeles, but when we add to this the knowledge of a man who has made radio shows his business, we can rest assured that the SECOND NATIONAL RADIO EXPOSITION will be the BEST OF ALL.



THE DUODYNE

**5-Tube Tuned Radio \$145 Complete
Frequency Receiver Installed**

Highest grade parts and skilled workmanship used throughout.

ABSOLUTE SATISFACTION GUARANTEED

Sharp tuning and clarity of tone are two big essentials of the Duodyne.

**Our Two-Tube Reflex Sets, with built-in Speaker and
Mahogany Cabinet, \$65.00 and up**

TIME PAYMENTS ARRANGED

Manufactured and Distributed by

THE GUARANTEE RADIO COMPANY

1358 So. Hill St.

ATlantic 9939

Los Angeles



No antenna —Just the Ducon



The Ducon sells for
\$1.50 in all reliable
stores

No more need to labor and toil over erecting an aerial. No more need to worry about the appearance of a bulky indoor loop in your home. The Ducon saves your time—and solves your problem.

Screw the Ducon into any accessible electric light socket and when you want to hear a program just tune in.

The Ducon brings in the stations clearly. The fact that over 400,000 fans use it is convincing proof.

Try it. You can purchase a Ducon on a five-day trial basis from your radio dealer.

Dubilier

CONDENSER AND RADIO CORPORATION

Higher Merchandising Standards Will Increase Public Confidence

The year 1924 is to a great extent the '49 of radio.

This is the gist of a statement made public here today by Herbert S. Houston, chairman of the Board of Trustees of the National Vigilance Committee of the Associated Advertising Clubs of the World, in announcing the intention of the Committee to weed out unreliable radio advertising and protect the public's confidence in the industry.

Already, Mr. Houston said, the National Vigilance Committee, in conjunction with Better Business Bureaus in forty American cities, has checked spurious radio stock, set and accessory advertising to such an extent that thousands of dollars have been saved the buyer.

Mr. Houston cited an example of a corporation, "capitalized at \$5,000,000," which assumed a name similar to that of a prominent national corporation and under this pretext attempted to sell stock to holders of that corporation's shares. The stock-selling campaign of the company was meeting with success until the Better Business Bureau of New York investigated and issued a report which proved to be a knockout blow.

Public participation in radio, Mr. Houston pointed out, is still comparatively a novelty. For nearly a quarter of a century after Signor Marconi of Italy invented low frequency wireless transmission of sound, in 1896, the device was used almost solely by vessels and by commercial organizations. It was not until the latter part of 1920 that a large electrical company started the experiment of broadcasting at Pittsburgh for the benefit of those possessing amateur receiving apparatus.

The effect was miraculous. Radio ceased to be the private genie of the professional operator and the scientist, and became the center of attention in the household.

The inflexible law of supply and demand prevailed. The supply was slight, but the demand became enormous. Prices soared, attracting thousands to the radio production field, just as thousands were attracted to California in the boom days of '49.

Most of these who came were honest. They saw in radio not only a present but a great future business possibility.

But boom industries also attract fly-by-night individuals who are not particular about the future, but seek only immediate profits.

And so today, as the first spurt of bonanza is passed, and radio, still thriving but on a more sound and established basis, has a chance to look about and inquire into the abilities of its personnel, finds a few whose sales methods and advertising statements tend to bring discredit upon the industry.

The National Vigilance Committee of the Associated Advertising Clubs was among the first to point out these deceptions, Mr. Houston said, and the Committee has already been assured of the co-operation of scores of reputable radio manufacturers and dealers in its efforts.

Increase Your Sales

THE RADIO FINANCE COMPANY will finance all
reputable dealers 100% for sets sold on time payment plan.

Quick and Courteous Service

Get Our Finance Plan

RADIO FINANCE COMPANY

311 Security Building

Los Angeles, California

NORMAN M. JACK

Tel. TRinity 3034

And Now—Radio



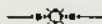
*We Announce Our Appointment As
Musical Distributor*

COLIN B.
KENNEDY



R. E. THOMPSON—Neutrodyne
EISEMANN MAGNETO CO.—
5-Tube Radio Frequency

It is our desire to serve the Radio Departments of Music Stores with the service and discounts to which they have been accustomed. Orders for the holiday season are fast accumulating and it may not be possible to establish many new accounts this year with the famous Kennedy Radio.



Phone, write or call

MUNSON-RAYNER CORPORATION

Western Musical Distributors

643 South Olive Street
Los Angeles

86 Third Street
San Francisco

6-8 A. M.
PACIFIC TIME

RADIO TIME TABLE

7-9 Mountain Time
8-10 Central Time
9-11 Eastern Time

					SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.			
STATION	WATTS	CITY	METERS	CALL	6.00-6.30	6.30-7.00	7.00-7.30	7.30-8.00	6.00-6.30	6.30-7.00	7.00-7.30	7.30-8.00	6.00-6.30	6.30-7.00	7.00-7.30	7.30-8.00	6.00-6.30	6.30-7.00	7.00-7.30	7.30-8.00
Reynolds Radio.....	250	Denver.....	283	KLZ	.	.	.	.	X	.	.	.	X	.	.	.	X	.	.	X
Free Press.....	500	Detroit.....	517	WCX	.	.	X	.	X	.	.	.	X	.	.	.	X	.	.	X
Detroit News.....	500	Detroit.....	517	WWJ	.	.	.	X	.	X	.	.	X	.	.	.	X	.	.	X
Woodmen of W.....	500	Omaha.....	525	WAOW	.	X	X	.	X	X	.	.	X	.	.	.	X	.	.	X

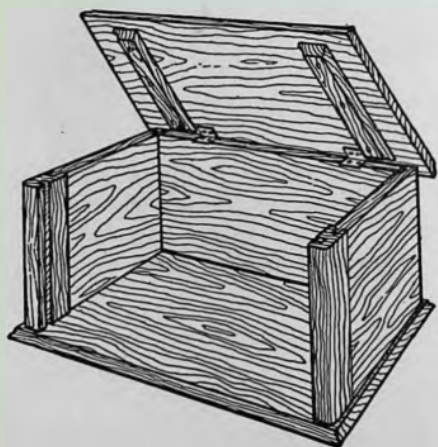
8-10 A. M. PACIFIC TIME

9-11 Mountain Time

10-12 Central Time

11-1 Eastern Time

					SUN.	MON.	TUES.	WED.	THUR.	FRI.	SAT.										
STATION	WATTS	CITY	METERS	CALL	8.00-8.30	8.30-9.00	9.00-9.30	9.30-10.00	8.00-8.30	8.30-9.00	9.00-9.30	9.30-10.00	8.00-8.30	8.30-9.00	9.00-9.30	9.30-10.00	8.00-8.30	8.30-9.00	9.00-9.30	9.30-10.00	
					8.00-8.30	8.30-9.00	9.00-9.30	9.30-10.00	8.00-8.30	8.30-9.00	9.00-9.30	9.30-10.00	8.00-8.30	8.30-9.00	9.00-9.30	9.30-10.00	8.00-8.30	8.30-9.00	9.00-9.30	9.30-10.00	8.00-8.30
Echophone Radio.....	100	Long Beach.....	234	K F O N																	
Reynolds Radio.....	250	Denver.....	360	K L Z																	
Star-Telegram.....	1000	Fort Worth.....	476	W B A P			X	X													
News and Journal.....	500	Dallas.....	476	W F A A			X	X													
Palmer School.....	500	Davenport.....	484	W O C				X	X												
John Wanamaker.....	500	Philadelphia.....	509	W O O					X	X											
Federal Tel.....	600	Buffalo.....	319	W G R						X											
Calumet B. Pdr.....	600	Chicago.....	448	W Q J					X	X											



"A-1" Radio Cabinets

Prices on unfinished cabinets. Finish them yourself to match your furniture.

Hand Rubbed Finish \$2.00 Extra

Panel Size	Deep	Price	Panel Size	Deep	Price
7x12	8	\$3.00	7x21	10	\$4.25
7x12	10	3.25	7x24	8	4.25
7x14	8	3.25	7x24	10	4.50
7x14	10	3.50	7x26	8	4.75
7x18	8	3.75	7x26	10	5.00
7x18	10	4.00	7x28	10	5.50
7x21	8	4.00			

TERMS: Cash with Order
All prices F. O. B. Los Angeles

"A-1" Radio Cabinets are made of selected, kiln dried Philippine mahogany thruout. The lid is hinged and cleated to prevent warping. The ends are grooved to slide panel in. Tops and bases nicely moulded all around. These cabinets are first class in design and workmanship and will make a creditable appearance in any room.

Special quantity discounts to dealers and manufacturers

A-1 WOODWORKING CO.

1338-1342 San Julian St.

Los Angeles, Cal.

10-12 A. M.
PACIFIC TIME

RADIO TIME TABLE

11-1 Mountain Time
12-2 Central Time
1-3 Eastern Time

STATION	WATTS	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
					10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00
L. A. Times.....	600	Los Angeles.....	395	KH J	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Earl C. Anthony.....	600	Los Angeles.....	468	KF I	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bible Institute.....	750	Los Angeles.....	360	K J 9	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Angelus Temple.....	600	Los Angeles.....	278	K F 8 G	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Express.....	600	Los Angeles.....	337	KN X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
So. Electric Co.....	50	San Diego.....	244	KDP T	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hale Brothers.....	600	San Francisco.....	423	KPO	X	X	X	X	X	X	X	X	X	X	X	X	X	X
General Elec.....	1000	Oakland.....	312	KGO	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tribune.....	600	Oakland.....	509	KL X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Warner Bros.....	250	Oakland.....	360	KL S	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Gould.....	5	Stockton.....	360	K J Q	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Guy Greason.....	10	Tacoma.....	360	K F 2 J	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rhodes Co.....	100	Seattle.....	455	KD Z E	X	X	X	X	X	X	X	X	X	X	X	X	X	X
First Pres. Church.....	750	Seattle.....	360	KT W	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Meler & Frank.....	50	Portland.....	360	K F C	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oregonian.....	500	Portland.....	492	K G W	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Reynolds Radio.....	250	Denver.....	283	KL Z	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Winner Radio.....	50	Denver.....	254	K F E L	X	X	X	X	X	X	X	X	X	X	X	X	X	X
News and Journal.....	500	Dallas.....	476	W F A A	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Stat-Telegram.....	1000	Fort Worth.....	476	WB A P	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Palmer School.....	500	Davenport.....	484	W O C	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oregonian.....	500	Portland.....	482	K G W	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Federal Tel. Co.....	600	Buffalo.....	319	W G H	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sears-Roebuck.....	500	Chicago.....	345	W L S	X	X	X	X	X	X	X	X	X	X	X	X	X	X

RADIOLA III A

A four tube regenerative receiver complete with tubes, batteries and loud speaker,

\$99.60



Germain's Radio Department is under the management of Mr. V. M. Bitz, considered to be one of the best versed radio engineers in the state.

OUR POLICY IS SERVICE

GERMAIN'S

SIXTH AND MAIN + LOS ANGELES

12-2 P. M.
PACIFIC TIME

RADIO TIME TABLE

1-3 Mountain Time
2-4 Central Time
3-5 Eastern Time

STATION	WATTS	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
					12.00-12.30	1.00-1.30	12.00-12.30	1.00-1.30	12.00-12.30	1.00-1.30	12.00-12.30	1.00-1.30	12.00-12.30	1.00-1.30	12.00-12.30	1.00-1.30	12.00-12.30	1.00-1.30
L. A. Times.....	500	Los Angeles....	385	K H J	X		X		X		X		X		X		X	
Bible Institute....	750	Los Angeles....	360	K J S	X													
Angelus Temple....	500	Los Angeles....	278	K F S G	X													
Express.....	500	Los Angeles....	337	K N X			X		X		X		X		X		X	
Southern Elec.....	80	San Diego.....	244	K D P T					X		X		X		X		X	
Warner Bros.....	250	San Francisco..	360	K L S	X	X	X		X	X	X		X	X	X		X	X
Hale Bros.....	500	San Francisco..	423	K P O			X		X		X		X		X		X	
General Elec.....	1000	Oakland.....	312	K G O			X		X		X		X		X		X	
Oregonian.....	500	Portland.....	492	K G W					X	X	X		X		X		X	
Guy Gresson.....	10	Tacoma.....	360	K F E J			X		X		X		X		X		X	
Rhodes Co.....	100	Seattle.....	270	K O Z E					X	X	X		X		X		X	
Honolulu Adver....	500	Honolulu.....	350	K G U			X	X					X	X			X	X
Reynolds Radio....	250	Denver.....	283	K L Z			X	X					X	X			X	X
Winner Radio.....	50	Denver.....	254	K F E L			X	X					X	X			X	X
News and Journal..	500	Dallas.....	476	W F A A		X			X		X		X		X		X	
Star-Telegram.....	1000	Fort Worth....	476	W B A P		X			X		X		X		X		X	
Palmer School.....	600	Davenport....	484	W O C		X			X		X		X		X		X	
Star.....	600	Kansas City..	411	W D A F			X		X		X		X		X		X	
News.....	600	Deloit.....	517	W W J			X		X		X		X		X		X	
Radio Corp. of Am.	500	New York.....	455	W J Z			X	X	X	X	X	X	X	X	X	X	X	X
Herald.....	1000	Calgary.....	420	G F A G			X		X		X		X		X		X	
Federal Tel. Co....	500	Buffalo.....	319	W G R	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Woodmen of W.....	500	Omaha.....	526	W O A W	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sears-Roebuck.....	500	Chicago.....	345	W L S			X	X	X	X	X	X	X	X	X	X	X	X
Calumet B. Pdr....	500	Chicago.....	448	W Q J			X	X	X	X	X	X	X	X	X	X	X	X

No. 56

WM. J.

MURDOCK CO.

CHELSEA, MASS.

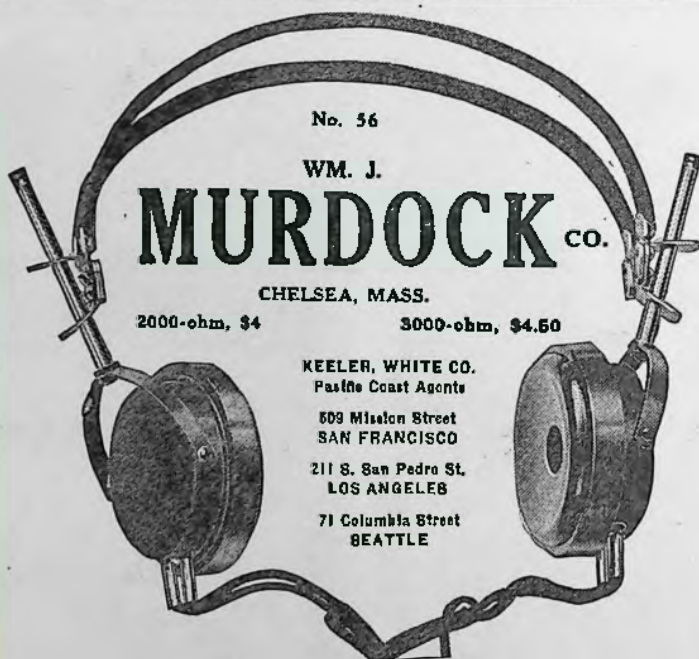
2000-ohm, \$4 3000-ohm, \$4.50

KEELER, WHITE CO.
Pacific Coast Agents

509 Mission Street
SAN FRANCISCO

211 S. San Pedro St.
LOS ANGELES

71 Columbia Street
SEATTLE



TWENTY YEARS OF KNOWING HOW

2-4 P. M.
PACIFIC TIME

RADIO TIME TABLE

3-5 Mountain Time
4-6 Central Time
5-7 Eastern Time

				SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.				
STATION	WATTS	CITY	METERS	CALL	2.00-2.30	2.30-3.00	3.00-3.30	3.30-4.00	2.00-2.30	2.30-3.00	3.00-3.30	3.30-4.00	2.00-2.30	2.30-3.00	3.00-3.30	3.30-4.00	2.00-2.30	2.30-3.00	3.00-3.30	3.30-4.00
L. A. Times	500	Los Angeles	395	K H J						X	X			X	X				X	X
Angelus Temple	500	Los Angeles	278	K F S G		X	X							X	X					
Express	600	Los Angeles	337	K N X					X		X		X	X	X		X	X	X	X
Echephone Radio	100	Long Beach	234	K F O N		X	X	X		X	X			X	X	X		X	X	X
So. Electrical	50	San Diego	244	K D P T						X										
Hale Bros.	600	San Francisco	423	K P O					X	X	X			X	X		X	X	X	X
Tribune	600	Oakland	609	K L X						X	X			X	X					X
General Elec. Co.	1000	Oakland	312	K G O				X						X			X			
R. H. Horn	50	San Luis Obispo	212	K F B E		X	X													
Portable Wireless	100	Stockton	360	K W G	X	X														
First Pres. Church	750	Seattle	360	K T W			X	X												
Rhodes Co.	100	Seattle	270	K D Z E					X	X	X			X	X	X	X	X	X	X
Leese Bros.	20	Everett, Wash.	224	K F B L	X	X														
Oregonian	600	Portland	492	K G W					X				X							X
Boise High School	150	Boise, Ida.	270	K F A U				X		X			X				X			
Telegram	600	Salt Lake City	380	K D Y L				X	X				X	X				X	X	
Reynolds Radio	250	Denver	283	K L Z				X		X			X		X		X			X
Honolulu Adver.	600	Honolulu	380	K G U				X	X				X	X			X	X		
Star-Telegram	1000	Fort Worth	476	W B A P	X	X	X	X												
Palmer School	600	Davenport	484	W O C					X											
Daily News	600	Chicago	448	W M A Q					X		X									
Star	600	Kansas City	411	W D A F	X	X	X			X			X	X		X	X	X	X	X
Free Press	600	Detroit	617	W C X	X	X	X			X	X		X	X		X	X	X	X	X
News	600	Detroit	617	W W J					X	X	X		X	X		X	X	X	X	X
Drake Hotel	1000	Chicago	360	W D A P					X	X			X	X		X	X	X	X	X
Radio Cor. of Am.	500	New York	455	W J Z					X	X			X	X		X	X	X	X	X
Herald	1000	Calgary	420	C F A C					X	X			X	X		X	X	X	X	X
Federal Tel. Co.	600	Buffalo	319	W G R					X	X			X	X		X	X	X	X	X
Westinghouse	1000	Pittsburgh	326	K D K A			X													
Westinghouse	1000	Springfield	337	W B Z																
Seare-Roebuck	600	Chicago	345	W L S					X				X				X			



?CAN YOU?

get these stations on your set?

Users of the

RAY-DEE-FORMER . . . \$5.00

FIXED COUPLER . . . 3.50

in the Munzig REGENERATIVE REFLEX
get the following: CFCN; CKCD; CKCK;
KFOA; KCW; KFKX; WEBH; WLS;
WGN; WJZ; KDKA; WGU; WBAP;
WFAA; KDYL; KFPT; WDAF; XICE;
CYL; WQJ; KFEL; KLZ; KOB; KYW;
and others.

**The Ray-Dee-Artcraft
Mfg. Co.**

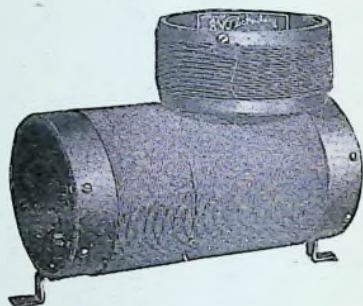
Office and Factory:
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REDLANDS, CALIF.

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The Cockaday 4-Circuit Tuner,
with Resistance - Coupled Ampli-
fier, using the only authorized
Cockaday Coil.

Mfg. by the Precision Coil Co.

Thoroughly tested by Popular
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SOUTHERN CALIFORNIA DISTRIBUTORS



1 Instrument that does the work of 4
—PRECISE SUPER-MULTIFORMER

Mr. McLaughlin's sensational One-Control Super-Heterodyne,
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Fair Oaks 1578
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Pasadena, Cal.

4-6 P. M.
PACIFIC TIME

RADIO TIME TABLE

5-7 Mountain Time
6-8 Central Time
7-9 Eastern Time

				SUN.	MON.	TUES.	WED.	THUR.	FRI.	SAT.						
STATION	WATTS	CITY	METERS	CALL	4.00-4.30	4.30-5.00	5.00-5.30	5.30-6.00	4.00-4.30	4.30-5.00	5.00-5.30	5.30-6.00	4.00-4.30	4.30-5.00	5.00-5.30	5.30-6.00
E. C. Anthony	600	Los Angeles	469	K F I	X	X										
L. A. Herald	600	Los Angeles	469	K F I												
L. A. Examiner	500	Los Angeles	469	K F I												
Angelus Temple	500	Los Angeles	278	K F S G	X											
Express	500	Los Angeles	337	K N X												
Echophone Radio	100	Long Beach	234	K F O N												
General Electric	1000	Oakland	312	K G G	X											
Hale Bros.	500	San Francisco	423	K P O												
Oakland Tribune	500	Oakland	509	K L X												
Maxwell Elec.	50	Berkeley	278	K R E												
Portable Wireless	100	Stockton	360	K W G												
Gould	5	Stockton	360	K J O												
Radio Den	10	Santa Ana	268	K F A W												
Nelson Radio Co.	10	Phoenix	238	K F C B												
Telegram	50	Salt Lake	350	K D Y L												
Star Electric	50	Seattle	283	K F H R												
First Pres. Church	750	Seattle	360	K T W	X	X										
Northwest Radio	100	Seattle	283	K J R												
Meier & Frank	50	Portland	248	K F E C												
Hollock & Watson	50	Portland	360	K G G												
Oregonian	500	Portland	492	K G W												
Star-Telegram	1000	Fort Worth	476	W B A P												
News and Journal	500	Dallas	476	W F A A	X	X										
Southern Egr. Exp.	500	San Antonio	385	W O A I												
Palmer School	500	Davenport	484	W O C												
Post Dispatch	500	St. Louis	546	K S D												
Daily News	500	Chicago	448	W M A Q												
Free Press	500	Detroit	617	W C X												
News	500	Detroit	517	W W J												
Star	500	Kansas City	411	W D A F	X	X										
Crosley Mfg. Co.	500	Cincinnati	423	W L W												
Radio Cor. of Am	500	New York	455	W J Z	X	X	X	X	X	X	X	X	X	X	X	X
John Wanamaker	500	Philadelphia	509	W O O												
Federal Tel. Co.	500	Buffalo	319	W G R												
Westinghouse	1000	Pittsburgh	326	K D K A	X	X										
Westinghouse	1000	Springfield	337	W B Z												
Westinghouse	1000	Chicago	536	K Y W												
Woodmen of W.	500	Omaha	526	W O A W												
Willard Battery	1000	Cleveland	380	W T A M												
Canadian Nat. Ry.		Ottawa	435	C K C H												
Sears-Roebuck	500	Chicago	345	W L S	X	X	X									
Calumet B. Pdr.	500	Chicago	448	W O J												
Tribune	1000	Chicago	370	W G N												
Edg. B. Hotel	1000	Chicago	370	W E B H	X	X	X									

WE KNOW OUR STUFF

If you want your Neutrodyne repaired properly, bring it to us. We repair all types of radio sets

Radio sets built to order—by men who know your wants and can give you expert workmanship and prompt service.

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2-Tube Reflex Set, Complete with Phonograph Attachment, \$58.50; or With Horn, \$58.50. 2-Tube Set, Wired, \$29.50

Radio Batteries charged in eight hours, 75c. Stanrad Bakelite Coils, per set, \$2.00

Call TUCKER 2433

We fix it or no charge. Sets called for and delivered

1048 South Olive St. STANDARD RADIO

Los Angeles



A Genuine Reflex Product

A 2-TUBE CONSOL SET THAT DOES THE
WORK OF 3 TUBES
OPERATE ON YOUR LIGHT SOCKET

Comes to you complete—installed at

\$97.50

DEALERS—Get in on this. The fastest selling line on the Coast. We have a real proposition to offer you.

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**6-8 P. M.
PACIFIC TIME**

RADIO TIME TABLE

7- 9 Mountain Time
8-10 Central Time
9-11 Eastern Time

					SUN.	MON.	TUES.	WED.	THUR.	FRI.	SAT.													
STATION	WATTS	CITY	METERS	CALL	6.00-6.30	6.30-7.00	7.00-7.30	7.30-8.00	6.00-6.30	6.30-7.00	7.00-7.30	7.30-8.00	6.00-6.30	6.30-7.00	7.00-7.30	7.30-8.00	6.00-6.30	6.30-7.00	7.00-7.30	7.30-8.00	6.00-6.30	6.30-7.00	7.00-7.30	7.30-8.00
Bible Institute.....	750	Los Angeles	360	K J S	X	X																		
L. A. Times.....	800	Los Angeles	395	K H J		X	X																	
E. C. Anthony.....	800	Los Angeles	469	K F I		X																		
Metrop'n Th'ra.....	600	Los Angeles	469	K F I			X	X																
Angelus Temple.....	600	Los Angeles	278	K F S G																				
Express.....	600	Los Angeles	337	K N X																				
Eukphone Radio.....	100	Long Beach	234	K F O N																				
Hafe Brothers.....	600	San Francisco	423	K P O																				
Radioart Studio.....	50	San Francisco	280	K F R G		X	X																	
Maxwell Electric.....	50	Berkeley	278	K R E																				
Tribuna.....	600	Oakland	509	K L X			X	X																
General Electric.....	1000	Oakland	312	K G O			X	X																
Radio Den.....	10	Santa Ana	268	K F A W																				
Southern Elect.....	50	San Diego	244	K D T																				
Nelson Radio Sup.....	10	Phoenix	238	K F C B		X																		
McArthur Bros.....	100	Phoenix	360	K F A D			X	X																
Wash. State Col.....	500	Pullman	330	K F A E				X																
Love Elect. Co.....	10	Tacoma	360	K M O			X	X																
Mullens Elect. Co.....	50	Tacoma	282	K G B				X																
N. W. Radio Ser.....	100	Seattle	283	K J H				X																
Excel Motor Cy.....	100	Seattle	360	K H O					X															
First Pres. Church.....	750	Seattle	360	K T W						X														
Star Electric.....	50	Seattle	283	K F H R		X	X	X			X			X	X			X	X		X	X	X	X
Lease Bros.....	20	Everett, Wash.	224	K F B L			X	X			X	X			X	X			X	X		X	X	X
Oregonian.....	800	Portland	492	K G W	X	X	X	X			X	X			X	X			X	X		X	X	X
Hatcock & Watson.....	50	Portland	360	K G G			X	X																
Meler & Frank.....	50	Portland	248	K F E G					X															
Apple Cy. Rad. Clb.....	10	Hood River	360	K Q P						X	X													
Boise High School.....	150	Boise, Ida.	270	K F A U																				
Bunkarh Ill-Sul.Co.....	10	Kellogg, Ida.	360	K F E Y			X																	
Telegram.....	600	Salt Lake	350	K D Y L				X	X					X	X			X	X		X	X		
N.M. Coll. Agricul.....	500	Sta. Col. N.M.	360	K O B			X	X										X	X		X	X		
Reynold's Radio.....	250	Denver	283	K L Z					X						X	X			X	X		X	X	
Fitzsimmons Hospital.....		Denver	642	A A 3																				
Winner Radio.....	50	Denver	254	K F E L					X	X								X	X		X	X		
Col. of Agriculture.....	600	State Col. N. M.	360	K O B				X						X	X			X	X		X	X		
Weedhouse El.....	1000	Hastings, Neb.	291	K F K X														X						
News and Journal.....	600	Dallas	476	W F A A			X	X	X	X				X	X			X	X		X	X		
Star-Telegram.....	1000	Fort Worth	476	W B A P			X	X	X	X				X	X			X	X		X	X		
Palmer School.....	600	Davenport	464	W O C	X	X								X	X			X	X		X	X		
W. O. W.....	500	Omaha	526	W O A W			X	X						X	X			X	X		X	X		
Daily News.....	800	Chicago	448	W M A Q					X	X	X			X	X			X	X		X	X		
Post Dispatch.....	600	St. Louis	546	K S D			X	X	X	X				X	X			X	X		X	X		
Westinghouse.....	1000	Chicago	536	K Y W			X	X	X	X				X	X			X	X		X	X		
Sweeney School.....	500	Kansas City	411	W H B	X	X	X		X	X				X	X			X	X		X	X		
Star.....	500	Kansas City	411	W D A F			X	X						X	X			X	X		X	X		
Tribuna.....	1000	Chicago	370	W G N	X	X	X		X	X				X	X			X	X		X	X		
Grooley Mfg. Co.....	500	Cincinnati	423	W L W	X	X	X	X						X	X			X	X		X	X		
Albertan Pub. Co.....	250	Calgary, Can.	410	C H B C														X						
Detroit Free Press.....	600	Detroit	617	W C X			X	X	X	X				X	X			X	X		X	X		
Radio Cor. of Am.....	500	New York	435	W J Z	X	X	X	X	X	X				X	X			X	X		X	X		
John Wanamaker.....	600	Philadelphia	509	W O O			X	X	X	X				X	X			X	X		X	X		
Federal Tel. Co.....	600	Buffalo	319	W G R							X	X		X	X			X	X		X	X		
El Buen Tone.....	600	Mexico City	625	C Y B					X	X	X							X	X		X	X		
El Universal.....	600	Mexico City	430	C Y I																				
Willard Battery.....	1000	Cleveland	390	W T A M			X	X						X	X			X	X		X	X		
Westinghouse.....	1000	Pittsburgh	325	K D K A			X	X						X	X			X	X		X	X		
Canadian Nat. Ry.....		Ottawa	435	C K C H										X	X			X	X		X	X		
Chamber of Com.....	50	El Paso	268	W D A H																				
Calumet B. Pdr.....	800	Chicago	448	W Q J	X	X	X							X	X			X	X		X	X		
General Elec.....	1500	Schenectady	380	W G Y																				
Mexican Gov't.....	250	Chihuahua	450	X I C E										X	X			X	X		X	X		

DAYTONIA



The Day-Fan Deluxe

*Distinctive in appearance, tonal quality and
simplicity of operation.*

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GRAHAM-REYNOLDS ELECTRIC CO.

WHOLESALE ELECTRICAL DEALERS

300 East Third Street

LOS ANGELES

8-10 P. M.
PACIFIC TIME

RADIO TIME TABLE

9-11 Mountain Time
10-12 Central Time
11-1 Eastern Time

STATION	WATTS	CITY	METERS	CALL	SUN.			MON.			TUES.			WED.			THUR.			FRI.			SAT.		
					8:00-8:30	8:30-9:00	9:00-9:30	8:00-8:30	8:30-9:00	9:00-9:30	8:00-8:30	8:30-9:00	9:00-9:30	8:00-8:30	8:30-9:00	9:00-9:30	8:00-8:30	8:30-9:00	9:00-9:30	8:00-8:30	8:30-9:00	9:00-9:30	8:00-8:30	8:30-9:00	9:00-9:30
L. A. Herald	500	Los Angeles	469	Herald	X	X		X	X		X	X		X	X		X	X		X	X		X	X	
Bible Institute	750	Los Angeles	360	K I S	X	X		X	X		X	X		X	X		X	X		X	X		X	X	
L. A. Times	500	Los Angeles	395	K H J	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X		X	X	X
L. A. Examiner	500	Los Angeles	469	Exam'n'r	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X		X	X	X
E. C. Anthony	500	Los Angeles	469	K F I	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X		X	X	X
Angelus Temple	500	Los Angeles	278	K F S G	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X		X	X	X
Excess	500	Los Angeles	337	K N X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X		X	X	X
Echophone Radio	100	Long Beach	234	K F O N	X	X		X	X		X	X		X	X		X	X		X	X		X	X	
Hale Bros	500	San Francisco	423	K P O	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X		X	X	X
Redheart Studio	50	San Francisco	280	K F R C	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X		X	X	X
Warner Bros.	250	San Francisco	360	K L S			X	X	X				X	X	X				X	X	X				X
Oakland Tribune	500	Oakland	509	K L X			X	X	X				X	X	X				X	X	X				X
Maxwell Electric	50	Berkeley	275	K R E			X	X	X				X	X	X				X	X	X				X
General Elec. Co.	1000	Oakland	312	K G O			X	X	X				X	X	X				X	X	X				X
T. Selfert	100	Bakersfield	360	K D Z B				X	X				X	X				X	X		X	X		X	X
Portable Wireless	100	Stockton	360	K W G				X	X				X	X				X	X		X	X		X	X
Gord	500	Stockton	360	K J O				X	X				X	X				X	X		X	X		X	X
Southern Elec. Co.	50	San Diego	244	K D P T									X	X										X	X
R. H. Horn	50	San Luis Obispo	242	K F B E									X	X										X	X
Drake Radio	5	Santa Rosa	234	K F N V									X	X							X	X		X	X
Cope & Johnson	500	Salt Lake	268	K F P T				X	X	X			X	X	X			X	X	X	X	X		X	X
Univ. of Ariz.	150	Tucson	360	K F D H								X						X							
Nielson Rad. Sup.	10	Phoenix	238	K F C B																	X	X			
Wash. State Col.	500	Pullman	330	K F A E				X	X	X			X	X	X			X	X	X	X	X		X	X
N. W. Radio Ser.	100	Seattle	283	K J R				X	X	X			X	X	X			X	X	X	X	X		X	X
Excelsior Motor	100	Seattle	360	K H Q				X	X	X			X	X	X			X	X	X	X	X		X	X
Rhodes Co.	500	Seattle	455	K F O A				X	X	X			X	X	X			X	X	X	X	X		X	X
First Pres. Church	750	Seattle	360	K T W	X	X	X																		
Star Electric	50	Seattle	283	K F H R									X					X							
Mullens Elec.	50	Tacoma	262	K G B				X	X	X			X	X	X			X	X	X	X	X		X	X
Oregonian	500	Portland	492	K G W				X	X	X			X	X	X			X	X	X	X	X		X	X
Hallock & Watson	50	Portland	360	K G G				X	X	X			X	X	X			X	X	X	X	X		X	X
Melior & Frank	50	Portland	245	K F E C														X	X						
Apple Cy. Rad. Cl.	10	Hood River	360	K O P				X	X					X	X										
Boise High School	150	Boise, Ida.	270	K F A U										X	X					X	X				
Bunkerhill-Sul. Co.	10	Kellogg, Ida.	360	K F E Y				X	X					X	X					X	X				
Reynolds Radio	250	Denver	283	K L Z	X	X		X	X			X	X	X	X			X	X	X	X		X	X	
Winner Radio	50	Denver	254	K F E L														X	X	X	X				
Westinghouse El.	1000	Hastings, Neb.	291	K F K X				X	X	X			X	X	X			X	X	X	X				
Dallas News	500	Dallas, Tex.	476	W F A A	X	X		X	X	X			X	X	X			X	X	X	X				
Star-Telegram	1000	Fort Worth	476	W B A P			X	X	X	X			X	X	X			X	X	X	X				
Palmer School	500	Davenport	484	W O C	X	X		X	X	X			X	X	X			X	X	X	X				
Post Dispatch	500	St. Louis	546	K S D									X	X	X			X	X	X	X				
Star	500	Kansas City	411	W D A F								X						X	X	X	X				X
Woodmen of W.	500	Omaha	526	W O A W								X						X	X	X	X				X
Westinghouse	1000	Chicago	536	K Y W								X	X	X	X			X	X	X	X				X
Crosley Mfg. Co.	500	Cincinnati	423	W L W								X	X	X	X			X	X	X	X				X
Detroit News	500	Detroit	517	W W J								X						X	X	X	X				X
Radio Cor. of Am.	500	New York	455	W J Z				X				X						X	X	X	X				X
Herald	1000	Calgary	420	C F A C	X	X						X	X					X	X	X	X				X
W. W. Grant	800	Calgary	440	C K C X				X	X	X		X	X					X	X	X	X				X
Federal Tel. Co.	500	Buffalo	319	W G R				X	X	X		X	X	X	X			X	X	X	X				X
El Universal	500	Mexico City	510	C Y L								X	X					X	X	X	X				X
El Buen Tono	500	Mexico City	380	C Y B								X	X					X	X	X	X				X
Sweeney School	500	Kansas City	411	W H B				X	X	X		X	X					X	X	X	X				X
Edgewater Beach	1000	Chicago	370	W E B H								X	X	X	X			X	X	X	X				X
Westinghouse	1000	Springfield	337	W B Z				X	X			X	X	X	X			X	X	X	X				X
Westinghouse	1000	Pittsburg	326	K D K A								X	X	X	X			X	X	X	X				X
Sears-Robuck	500	Chicago	345	W L S								X	X	X	X			X	X	X	X				X
Calumet B. Pdr.	500	Chicago	448	W Q J								X	X	X	X			X	X	X	X				X
Mexican Gov't	250	Chihuahua	460	X I C E								X	X	X	X			X	X	X	X				X

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					10.00-10.30	11.00-11.30	10.00-10.30	11.00-11.30	10.00-10.30	11.00-11.30	10.00-10.30	11.00-11.30	10.00-10.30	11.00-11.30	10.00-10.30	11.00-11.30	10.00-10.30	11.00-11.30
L. A. Times	600	Los Angeles	395	K H J	X	X			X	X			X	X			X	X
E. C. Anthony	600	Los Angeles	469	K F I	X	X			X	X			X	X			X	X
Angelus Temple	500	Los Angeles	278	K F S G	X	X			X	X			X	X			X	X
Express	500	Los Angeles	337	K N X			X	X			X	X			X	X		
Echophone Radio	100	Long Beach	234	K F O N					X	X			X	X				
Male Bros.	500	San Francisco	423	K P O			X	X			X	X			X	X		
Radlart Studio	50	San Francisco	280	K F R G	X	X	X	X					X	X			X	X
Herald	1000	Calgary	420	C F A G			X	X					X	X				
Oregonian	600	Portland	492	K G W					X	X			X	X			X	X
N. W. Radio Ser.	100	Seattle	283	K J R			X				X	X			X	X		
W. W. Grant	600	Calgary	440	C F C N				X	X		X	X	X	X				
Westinghouse	1000	Chicago	636	K Y W							X	X			X	X		
Sweeney School	500	Kansas City	411	W H B	X	X					X	X	X	X			X	X
Drake Hotel	1000	Chicago	360	W G N					X	X	X	X	X	X	X	X	X	X
Edgewater Beach	1000	Chicago	370	W E B H					X	X	X	X	X	X	X	X	X	X
General Elec. Co.	1000	Oakland	312	K G O			X	X	X	X	X	X	X	X	X	X	X	X
Honolulu Advtr.	500	Honolulu	360	K G U	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Calumet B. Pdr.	500	Chicago	448	W O J			X	X	X	X	X	X	X	X	X	X	X	X
Winnar Radio	50	Denver	254	K F E L									X	X				
Tribune	1000	Chicago	370	W G N							X	X	X	X			X	X
Sears-Robuck	500	Chicago	345	W L S					X	X			X	X			X	X
Star	500	Kansas City	411	W D A F			X	X			X	X			X	X	X	X
U.S. Playing Card	500	Cincinnati	308	W S A I					X	X			X	X			X	X
Kaufmann & Baer	500	Pittsburgh	462	W C A E			X	X					X	X			X	X
Outlet Co.	500	Providence	360	W J A R			X	X			X	X			X	X		

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When your radio picks up the weak radio energy of a station, either local or distant, it amplifies it and "gets it ready" for the reproducing unit—and that is as far as it can go. It cannot, without the reproducing unit and the phones or loud speaker, give you musical or voice tones. That is purely the function of your loud speaker, as it is generally called.

Understanding and admitting this, as you readily will, it should be clear to you that the **quality** of musical and voice tones depends entirely on your speaker.

If you get fuzzy music, noise, and general dissatisfaction out of your radio, the remedy is in replacing your speaker with the **Ovenshire Symphony Speaker**, the Stradivarius of radio.

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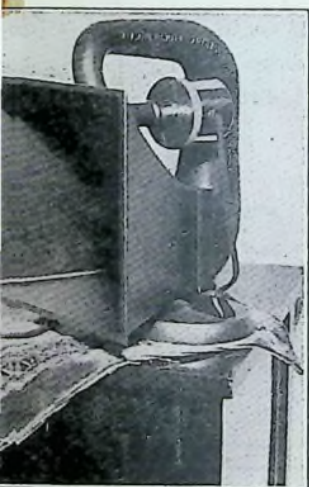
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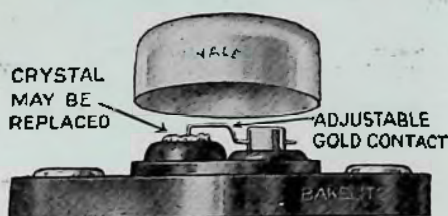
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Daily, except Sunday and Monday, from 10 to 11 p. m., we will broadcast Art Hickman's Orchestra from the Biltmore Hotel. Sunday from 6:30 to 7:30 p. m. and daily except Monday, from 6 to 6:30, we will broadcast Art Hickman's Concert Orchestra from the Biltmore Hotel.
2:30 to 3:30 p. m. daily except Sunday and Monday, Matinee Musicale.

WEEK COMMENCING NOVEMBER 16TH

SUNDAY, NOVEMBER 16—

- 10:00 a. m. Sermon from KHJ studio by Dr. Herbert Booth Smith, pastor of the Immanuel Presbyterian Church.
- 10:30 to 12:30 p. m. Organ recital and entire religious service from the First Methodist Episcopal Church, Arthur Blakeley, organist, and Rev. Elmer E. Helms, pastor.
- 6:30 to 7:00 p. m. Art Hickman's Concert Orchestra from the Biltmore Hotel, Edward Fitzpatrick, director.
- 7:00 to 7:30 p. m. Organ recital from the First Methodist Episcopal Church, Arthur Blakeley, organist.
- 8:00 to 10:00 p. m. Program presented through the courtesy of Mullen & Bluett, arranged by G. Allison Phelps, "Radio Philosopher."

MONDAY, NOVEMBER 17—

- 12:30 to 1:30 p. m. Program of news items and music.
- 8:00 to 10:00 p. m. Program presented through the courtesy of the Greater Pico Street Association, Herman J. Hanser, president.

TUESDAY, NOVEMBER 18—

- 12:30 to 1:30 p. m. Program presenting Tommy Tibbets and his Rendezvous Ballroom Orchestra from Crystal Beach.
- 2:30 to 3:30 p. m. Matinee musicale.
- 6:30 to 7:30 p. m. Children's program presenting Prof. Walter Sylvester Hertzog telling stories of American history. The weekly visit of the Sandma and Queen Titania. Louis F. Klein, harmonica and autoharp.
- 8:00 to 10:00 p. m. Program presented through the courtesy of the Newbery Electric Company, arranged by J. Howard Johnson.
- 10:00 to 11:00 p. m. Art Hickman's Dance Orchestra from the Biltmore Hotel.

WEDNESDAY, NOVEMBER 19—

- 12:30 to 1:30 p. m. Program presenting Abe Perluss and his Rose Room Orchestra playing through the courtesy of the Rose Room, William Leder, manager. Fred C. McNabb of Aggeler & Musser Seed Company.
- 2:30 to 3:30 p. m. Matinee musicale.
- 6:30 to 7:30 p. m. Program presenting Prof. Walter Sylvester Hertzog telling stories of American history. Dick Winslow, screen juvenile and reporter. Baby Muriel MacCormack, screen juvenile. Billy Jane Webb, 12-year-old singer and yodeler. Bedtime story by Uncle John.
- 8:00 to 10:00 p. m. Dr. Mars Baumgardt, lecturer. Program presented through the courtesy of the Pacific Mutual Life Insurance Company, arranged by E. S. Nelson.
- 10:00 to 11:00 p. m. Art Hickman's Dance Orchestra from the Biltmore Hotel.

THURSDAY, NOVEMBER 20—

- 12:30 to 1:00 p. m. Program presenting the Piggly Wiggly Girls.
- 2:30 to 3:30 p. m. Matinee musicale.
- 6:30 to 7:30 p. m. Children's program presenting Prof. Walter Sylvester Hertzog telling stories of American History. Pupils of Carter Weaver, dramatic instructor; David E. Jones, Jr., and Elsa B. Cohn. Bed-time story by Uncle John.
- 7:30 p. m. "Art" talk by Harold Swartz of the Otis Art Institute.
- 8:00 to 10:00 p. m. Program presented through the courtesy of John Wright, "The Right Tailor."
- 10:00 to 11:00 p. m. Art Hickman's Dance Orchestra from the Biltmore Hotel.

FRIDAY, NOVEMBER 21—

- 12:30 to 1:30 p. m. Program of news items and music.
- 2:30 to 3:30 p. m. Matinee musicale.
- 6:30 to 7:30 p. m. Children's program presenting Prof. Walter Sylvester Hertzog telling stories of American history. The weekly visit of Richard Headrick, screen juvenile. Vyola Von, screen juvenile. Pupils of the Earle Wallace Studios, Oliver Eckhardt, dramatic instructor. Bed-time story by Uncle John.
- 8:00 to 10:00 p. m. Program presented by the Los Angeles Flute Club, on the occasion of its eighth anniversary, broadcast by line telephony from the First Methodist Episcopal Church.
- 10:00 to 11:00 p. m. Art Hickman's Dance Orchestra from the Biltmore Hotel.

SATURDAY, NOVEMBER 22—

- 12:30 to 1:30 p. m. Program of the Greater Pico Street Association, Herman J. Hanser, president.
- 2:30 to 3:30 p. m. Matinee musicale.
- 6:30 to 7:30 p. m. Children's program presenting Prof. Walter Sylvester Hertzog telling stories of American history. Screen juveniles. Bed-time story by Uncle John.
- 8:00 to 10:00 p. m. Program presented through the courtesy of the Union Oil Company, arranged by F. H. Littlehales.
- 10:00 to 11:00 p. m. Art Hickman's Dance Orchestra from the Biltmore Hotel, Earl Burtnett, director.

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Remote Control Stations:

Los Angeles Evening Herald:	5:00 to 5:30 p. m.	Daily except Sunday
	8:00 to 9:00 p. m.	Monday, Wednesday, Friday
Los Angeles Examiner:	5:30 to 6:00 p. m.	Daily except Sunday
	9:00 to 10:00 p. m.	Daily
Hotel Ambassadors:	8:00 to 9:00 p. m.	Sunday, Tuesday, Thursday
	10:00 to 11:00 p. m.	Monday
	11:00 to 12:00 p. m.	Wednesday, Friday, Saturday
	7:00 to 8:00 p. m.	Sunday.

Metropolitan Theatre:**SUNDAY, NOVEMBER 16—**

10:00 to 10:45 a. m.	L. A. Church Federation Service.
4:00 to 5:00 p. m.	Vesper services.
6:45 to 7:00 p. m.	Paul Reese—Musical Appreciation Talks.
7:00 to 8:00 p. m.	Metropolitan Theatre Program.
8:00 to 9:00 p. m.	Ambassador Hotel Concert Orchestra.
9:00 to 10:00 p. m.	Program from Examiner Studio.
10:00 to 11:00 p. m.	Packard Six Orchestra.

MONDAY, NOVEMBER 17—

5:30 to 6:00 p. m.	Examiner News Bulletins.
9:00 to 10:00 p. m.	Program from Examiner Studio.
10:00 to 11:00 p. m.	Ambassador Hotel Cocoanut Grove Orchestra.

TUESDAY, NOVEMBER 18—

5:30 to 6:00 p. m.	Examiner News Bulletins.
6:45 to 8:00 p. m.	Aeolian Organ Recital.
8:00 to 9:00 p. m.	Hotel Ambassador Cocoanut Grove Orchestra.
9:00 to 10:00 p. m.	Program from Examiner Studio.
10:00 to 11:00 p. m.	Packard Ballad Hour.

WEDNESDAY, NOVEMBER 19—

5:30 to 6:00 p. m.	Examiner News Bulletins.
6:45 to 7:30 p. m.	Nick Harris Detective Stories and Orchestra.
7:30 to 8:00 p. m.	Vocal Recital.
9:00 to 10:00 p. m.	Program from Examiner Studio.
10:00 to 11:00 p. m.	Special Dramatic Program.
11:00 to 12:00 p. m.	Ambassador Hotel Cocoanut Grove Orchestra.

THURSDAY, NOVEMBER 20—

5:30 to 6:00 p. m.	Examiner News Bulletins.
6:45 to 7:00 p. m.	Y. M. C. A. Lecture.
7:00 to 8:00 p. m.	Don's Melody Makers (dance orchestra).
8:00 to 9:00 p. m.	Hotel Ambassador Concert Orchestra.
9:00 to 10:00 p. m.	Program from Examiner Studio.
10:00 to 11:00 p. m.	Light Opera program; Eileen Hutton, lyric soprano; Wilfrid Cushing, baritone; and others.

FRIDAY, NOVEMBER 21—

5:30 to 6:00 p. m.	Examiner News Bulletins.
6:45 to 8:00 p. m.	Aeolian Organ Recital.
9:00 to 10:00 p. m.	Program from Examiner Studio.
10:00 to 11:00 p. m.	Swartz Sisters Trio (vocal and instrumental program).
11:00 to 12:00 p. m.	Ambassador Hotel Cocoanut Grove Orchestra.

SATURDAY, NOVEMBER 22—

5:30 to 6:00 p. m.	Examiner News Bulletins.
6:45 to 8:00 p. m.	Dance Orchestra and vocalist.
8:00 to 9:00 p. m.	Althea Oliver, mezzo-soprano, and assisting artists.
9:00 to 10:00 p. m.	Program from Examiner Studio.
10:00 to 11:00 p. m.	Packard Radio Club.
11:00 to 12:00 p. m.	Ambassador Hotel Cocoanut Grove Orchestra.

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We have installed an Oscillating Wave Meter with a range of 200 to 15,700 meters, with special test panel for calibrating and matching Long Wave Super-Heterodyne Transformers. This operation is imperative, if you want distance.

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Seal Beach, California,
September 26-1924.

Mr. C. D. Tanner,
528 W. Washington St.,
Los Angeles, Calif.

Dear Sir:

Please note the following list of stations received on one of your Neutroflex Sets. These stations have all been heard on a loud-speaker, as we do not even own a set of Read "Phones";

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K. F. A. W. Santa Ana, "	K. F. K. X. Hastings, Neb.
K. P. S. G. Los Angeles "	K. D. Y. L. Salt Lake, Utah.
K. G. O. Oakland "	K. F. A. E. Pullman, Wash.
K. J. S. Los Angeles "	K. Z. M. Oakland, Calif.
K. H. J. Los Angeles "	K. O. B. New Mexico
K. P. O. San Francisco "	K. D. K. A. E. Pittsburgh, Pa.
K. P. I. Los Angeles "	W. L. S. Chicago, Ill.
K. G. W. Portland, Oregon.	W. B. A. P. Fort Worth, Texas.
K. L. X. Oakland, Calif.	W. F. A. A. Dallas, Texas.

Yours very truly,

R. L. Jordan.

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SUNDAY, NOVEMBER 16—

- 10:30 to 12:30 p. m. Complete morning service broadcast from the main auditorium. Music by the Revival Choir, Male Quartet and soloists. Sermon by the pastor, Aimee Semple McPherson. Esther Fricke Green at the organ.
- 2:30 to 4:30 p. m. Auditorium service of praise and worship with sermon on deeper Bible teaching by the pastor. Music by the Silver Band and Temple Choir under the direction of G. N. Nichols. Roy Reid Brignall at the organ.
- 7:00 to 9:45 p. m. Evening service, opening with special Musical Hour program, featuring the Temple Silver Band, Choir, Male Quartet and visiting artists. Esther Fricke Green at the organ. Musical Hour followed by the evangelistic sermon of Aimee Semple McPherson, with Altar Call and After Service.
- 10:00 to 11:00 p. m. Organ recital program of Roy Reid Brignall, assisted by Mrs. Wolfe Reyneir, of the Wilshire Presbyterian Church. The organ numbers will include (1) Sonata No. 4, by Guilman; (2) Folk Song, by Mansfield; (3) Rimembranza, by Yon; (4) Romanza in D, by Lemare; (5) Lead Kindly Light, transcription by Lemare; (6) Bells of Aberdovey, by Stewart; (7) War March of the Priests, by Mendelssohn.

TUESDAY, NOVEMBER 18—

- 10:30 to 11:30 a. m. Sunshine Hour program. Mrs. McPherson, assisted by students of the Bible School in a cheery program and prayer for the sick.
- 3:30 to 4:30 p. m. Organ recital program of Esther Fricke Green, assisted by Katherine Hudson, soprano, and Frank Brown, tenor. Organ numbers will include (1) Virgin's Prayer, by Massenet; (2) Largo, by Chopin.
- 6:30 to 7:30 p. m. Gray studio children's program presented by Cousin Jim (Harry James Beardsley), assisted by Eugene Lamb, pianist and other associates.

WEDNESDAY, NOVEMBER 19—

- 10:30 to 11:30 a. m. Sunshine Hour program personally conducted by Aimee Semple McPherson, with prayer for the sick and afflicted of Radioland.
- 2:30 to 4:30 p. m. Auditorium service. Sermon on Divine Healing by the pastor. Testimonies of those who have been healed in answer to believing prayer. Music by the Ladies' Revival Chorus. Esther Fricke Green, organist.
- 6:30 to 7:30 p. m. Gray Studio children's program presented by Mrs. Edward Hughes, featuring Little Helen Edwina and Mary Elizabeth Hughes.

THURSDAY, NOVEMBER 20—

- 10:30 to 11:30 a. m. Radio Bible School, and prayer for the sick by Mrs. McPherson.
- 3:30 to 4:30 p. m. Organ recital program of Roy Reid Brignall, assisted by Margaret Kennedy, soprano soloist of St. Stephens Church of Hollywood. G. N. Nichols, cornetist.
- 7:30 to 9:15 p. m. Auditorium service. Water baptism service and sermon of Aimee Semple McPherson. Music by the Temple Choir and Silver Band. Esther Fricke Green at the organ.
- 9:15 to 10:00 p. m. Gray Studio program presented through the courtesy of the Butts Music Company, featuring Carl Edward Hatch, violinist and baritone, Mora Leonard Hatch, pianist and soprano, Mr. and Mrs. Benton, gospel singers.
- 10:00 to 11:00 p. m. Organ recital program of Esther Fricke Green, assisted by Dr. Joseph Marple, tenor, and Harriet Keese Lanphair, violinist. Organ numbers will include (1) The Lost Chord, by Sullivan; (2) Angels Serenade, by Braga; (3) Sylvine, by Dubois; (4) Minuet in G, by Beethoven; (5) Hymn Federal Street, arranged by W. G. Reynolds.

FRIDAY, NOVEMBER 21—

- 10:30 to 11:30 a. m. Sunshine Hour presented by the pastor-evangelist. Radio Bible School. Prayer for the sick.
- 3:30 to 4:30 p. m. Organ recital program of Roy Reid Brignall, with assisting artists.
- 7:30 to 9:15 p. m. Auditorium service. "Crusaders Rally." Illustrated evangelistic sermon of Aimee Semple McPherson, assisted by the Crusaders. Music by the Temple Silver Band and Choir under the direction of G. N. Nichols.
- 9:15 to 10:00 p. m. Gray studio program featuring the Temple Silver Band. Lecture on radio subjects by N. E. Brown. Marjorie Nell Snider, child reader.
- 10:00 to 11:00 p. m. Organ recital program of Roy Reid Brignall with assisting artists.

SATURDAY, NOVEMBER 22—

- 10:30 to 11:30 a. m. Sunshine Hour program of comfort and cheer presented by Mrs. McPherson.
- 3:30 to 4:30 p. m. Gray studio program, impromptu. Presented by Roy Reid Brignall, organist, pianist and baritone, and Gladwyn N. Nichols, cornetist and tenor.
- 7:30 to 9:30 p. m. Auditorium service. Songs, testimonies and sermon on the subject of Divine Healing. Aimee Semple McPherson to preach. Altar Call.

Evening Herald, Los Angeles

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5:00 to 5:30—Daily except Sunday—Evening Herald Table Talk and News Items

WEEK NOVEMBER 18 TO 22

(Subject to Change)

MONDAY, NOVEMBER 17—

5:00 to 5:30 p.m. Evening Herald's Radiolians popular dance orchestra. Sophie Cooper, mezzo soprano.

WEDNESDAY, NOVEMBER 19—

5:00 to 5:30 p.m. Program courtesy Mrs. Guy Bush.

FRIDAY, NOVEMBER 21—

5:00 to 5:30 p.m. Program sponsored by Dr. Mary Tracy Whiting.

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SUNDAY, NOVEMBER 16—

10:45 to 12:30 noon Regular services of the Church of the Open Door, including sermon by Dr. French E. Oliver. Mr. A. A. Butler, organist; Mr. C. M. Books, baritone soloist.

6:00 to 6:45 p.m. Radio Vesper Service with sermon by Rev. John A. Hubbard. Mrs. Fern Barton, organist; Mrs. Marian McGlashan Muller, soprano soloist.

8:00 p.m. Sermon by Dr. French E. Oliver. Mrs. Irvin S. Fallis, soprano soloist; Mr. Alfred A. Butler, organist.

TUESDAY, NOVEMBER 18—

8:00 to 9:00 p.m. Program arranged through courtesy of Mr. Ellis Rhodes, tenor soloist and choir director, Immanuel Presbyterian Church, Los Angeles, Calif.

THURSDAY, NOVEMBER 20—

8:00 to 9:00 p.m. Organ recital. Vocal and instrumental solos.

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DAILY EXCEPT SUNDAY—

- 8:00 a. m. Inspiration talk and morning prayer.
- 9:00 a. m. News Bulletin.
- 10:00 a. m. "Town Crier's" morning message.
- 10:30 a. m. Kate Brew Vaughn, director of Home Economics.
- 11:00 a. m. "Town Crier," Dr. Richard M. Scott, news items, music.
- 12:00 noon "Town Crier."
- 1:00 p. m. "Town Crier," Open Forum.
- 2:00 p. m. "Town Crier," music, news items.
- 5:00 p. m. Market reports.

SUNDAY, NOVEMBER 16—

- 7:00 p. m. W. Scott Lewis, Nature Talks for boys and girls.
- 8:00 p. m. Feature program. KNX presents Mrs. Guy Bush, pianist and pianologues; Elizabeth G. Happ, soprano; Maurice Lavove, Russian baritone.

MONDAY, NOVEMBER 17—

- 8:00 to 10:00 p. m. Los Angeles Ice and Cold Storage Company, presenting Ira Gay's Orchestra, Tilda Rohr, contralto; Hollywood Athletic Club Male Quartet.
- 10:00 to 12:00 p. m. Municipal Program, Lindsay's Orchestra assisting.

TUESDAY, NOVEMBER 18—

- 6:00 to 7:30 p. m. Dinner Hour program.
- 8:00 to 9:00 p. m. Municipal program, presenting orchestra.
- 9:00 to 10:00 p. m. Paul G. Hoffman's Studebaker Orchestra.
- 10:00 to 11:00 p. m. Dance Program, Ken Smith and Kentucky Colonels.

WEDNESDAY, NOVEMBER 19—

- 6:00 to 7:30 p. m. Dinner Hour program. Mrs. A. F. Borden, soprano; Mrs. Hal Allen, reader; Eleanor Gaskins, accompanist.
- 7:30 p. m. Blanche Holmes, "Handwriting Expert."
- 8:00 to 9:00 p. m. Security Trust and Savings Bank presents Beatrice Fenner, pianist-composer, in her own compositions; Allard de Ridder, violin; Phyllis Johnston, soprano; Ord Bohannon, reader.
- 9:00 to 10:00 p. m. Doctor A. Zimmerman, presenting KNX Vocal Ensemble; George Cole, cello; Ord Bohannon, reader.
- 10:00 to 12:00 p. m. Hollywoodland Orchestra in dance program.

THURSDAY, NOVEMBER 20—

- 6:00 to 7:30 p. m. Jack Drummond's Jazz Orchestra. Dinner hour.
- 7:30 p. m. J. B. Douglass, "Security Business Message."
- 8:00 to 9:00 p. m. Municipal program. Pot Boilers present a 1-act play, arranged by Sigurd Russell.
- 9:00 to 10:00 p. m. Dance program, Paul G. Hoffman's Studebaker Orchestra.
- 10:00 to 11:00 p. m. Municipal program—Orchestra.

FRIDAY, NOVEMBER 21—

- 6:00 to 7:30 p. m. Dinner Hour. Orange Belt Syncopators and Monte Weeks, tenor.
- 8:00 to 10:00 p. m. Feature program.
- 10:00 to 12:00 p. m. Johnny Ogden's Orchestra.

SATURDAY, NOVEMBER 22—

- 10:30 a. m. Radio Talk to Radio Fans by Forbes W. Van Why.
- 11:00 a. m. "Town Crier's" KNX temporary program for Shut-ins.
- 2:00 to 4:00 p. m. Football returns.
- 5:00 p. m. Market reports.
- 6:00 to 7:30 p. m. Dinner Hour program.
- 8:00 to 10:00 p. m. National Automotive School sponsors, presenting Finstein's KNX String Quartet and Hollywood Male Quartet.

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KGO—Pacific Broadcasting Station—312 Meters

GENERAL ELECTRIC COMPANY (312 Meters), OAKLAND, CALIFORNIA
Pacific Time

- 1:30 p. m. Daily except Sunday—Stock reports.
1:45 p. m. Daily except Sunday—Weather reports.
3:00 p. m. Daily except Saturday and Sunday—Studio program.
4:00 to 5:30 p. m. Daily except Sunday—St. Francis Hotel, San Francisco, Orchestra.
6:45 to 7:15 p. m. Daily Except Saturday and Sunday—Stock reports, weather reports, news items.

SUNDAY, NOVEMBER 16—

- 11:00 a. m. Service of the First Church of Christ, Scientist, San Francisco. Organ prelude—Wallace A. Sabin. Hymn No. 187—"Thee, O Spirit, True and Tender." Reading of Scriptural selection. Silent prayer, followed by the audible repetition of the Lord's Prayer with its spiritual interpretation. Hymn No. 7—"Jesus, What Precept Is Like Thine." Solo—"Behold, What Manner of Love" (McDermid), Lyman H. North. Responsive Reading—Genesis 45, verses 4, 5, and 8 to 13. Lesson Sermon—"Mortals and Immortals." Readers: Miss Lucy Tucker and Milton H. Dean. Organ offertory. Hymn No. 196—"Shepherd Show Me How to Go" (Mary Baker Eddy). Reading—"The Scientific Statement of Being" and correlative scripture. Benediction. Organ Postlude.
- 3:30 p. m. Concert by the KGO Little Symphony Orchestra, Carl Rhodehamel conducting; assisted by soloists. Waltz—Fruits of Vienna (Czibulka). Tannhauser Overture (Wagner). Four Indian Love Lyrics (Woodforde-Finden). (1) Temple Bells; (2) Less Than the Dust; (3) Kashmiri Song; (4) Till I Wake. Tenor Solos—(a) Siegmund's Love Song (Wagner); (b) Dream Tryst (Cadman), Ernest H. McCandlish. Piano solo—Wilhelmina Wolthus. Tenor solos—(a) O Come to Me, Mavourneen (Lynes); (b) To Marry (White), Ernest H. McCandlish. Polish Dance (Scharwenka). Japanese Suite (Yoshitomo). Serenade (Widor). March—Italienne (Rousseau).
- 8:00 p. m. Service of the First Church of Christ, Scientist, San Francisco. Program same as for morning service.

MONDAY, NOVEMBER 17—

- 8:00 p. m. Educational program. Chanson Sans Paroles (Tschaikowsky); Spanish Serenade (Evans), Arion Trio. Agricultural Course—"Little Known Fruits and Plants which Help Feed the World," H. M. Butterfield, College of Agriculture, University of California. To Spring (Grieg), Arion Trio. "A Lesson in English," Wilda Wilson Church. Piano solo—Valse and Elfin Dance (Grieg), Joyce Holloway Barthelsson. American Citizenship Course—"Growth of the Constitution by interpretation and custom"—Eugene K. Sturgis. La Media Noche (Mexican Serenade) (Aviles), Arion Trio. "Chats About New Books"—Joseph Henry Jackson, Literary Editor, Sunset Magazine. Missouri Waltz (Logan), Arion Trio.
- 10:00 p. m. to 1:00 a. m. Dance music program by Henry Halstead's Orchestra and soloists, Hotel St. Francis, San Francisco.

TUESDAY, NOVEMBER 18—

- 8:00 p. m. Studio program given by pupils, past and present, of Edwin Dunbar Crandall, Oakland, California. Fern Frost Glynn, accompanist, assisted by the Arion Trio. Instrumental selection—Mikado (Sullivan), Arion Trio. Gloria from Twelfth Mass (Mozart), Mixed Chorus. Bass solo—Friar's Song (E. D. Crandall), Richard Lundgren. Piano solo—Dance a l'Antique (Douillet), Joyce Holloway Barthelsson. Soprano solo—June (Mrs. Beach), Grace Porter Neff. Duet for tenor and baritone—Hunting Song, from "King Arthur" (Bullard), R. A. Brown and Carl F. Volker. Instrumental selections—(a) Serenade (Drigo); (b) La Paloma (Yradier), Arion Trio. Contralto solo—Lungi dal caro bene (Secchi), Edith O. Stetson. Tenor solos—(a) The Gold Acacia Tree (E. D. Crandall); (b) If I Knew (E. D. Crandall), Ernest H. McCandlish. Cello solo—Tarantella (Squire), Margaret Avery. Quartet for Ladies' Voices—Little Papoose (Josephine Sherwood), Grace Porter Neff; Clara Maxwell Taft, Barbara Burton, Gretchen B. Rhea. Tenor solos—(a) Mary of Argyle (Richardson); (b) Dreaming Alone in the Twilight (Moore), Carl Anderson. Instrumental selection—Melodie (Tschaikowsky), Arion Trio. Soprano solos—(a) To the Sun (Pearl Curran); (b) My Lovely Celia (Higgins), Edith Hibberd. Violin solo—Mazurka de Concert (Musin), Josephine Holub. Male chorus—(a) To Thee, O Country (Eichberg); (b) Honey-Town (Widener), R. A. Brown, Guy L. Brown, Allan B. Doty, H. Glynn, J. A. Thomas, Ernest H. McCandlish, Carl F. Volker, Richard Lundgren. Instrumental selection—Hawaiian Melody (Fay), Arion Trio.
- 10:00 p. m. to 1:00 a. m. Dance music program by Henry Halstead's Orchestra and soloists, Hotel St. Francis, San Francisco.

WEDNESDAY, NOVEMBER 19—

Silent Night.

K G O—Pacific Broadcasting Station

GENERAL ELECTRIC COMPANY (312 Meters), OAKLAND, CALIFORNIA

THURSDAY, NOVEMBER 20—

8:00 p. m. Program given through the courtesy of Roos Bros., San Francisco. Instrumental selection—A Frangesa (Costa), Roos Bros. Trio. Tenor solos—(a) La donna e mobile (Verdi); (b) Heart of Gold (Manning), Leon Mills. Instrumental selections—California Hawaiians, Joseph Lario, steel guitar; Jack Andrade, standard guitar; Ed Milton, banjo; Ernest Pahon, ukulele. Address—"Fitting the Heads of the Family," N. L. Bourgeault. Soprano solo—Alla stella confidante (Robaud), Daisy O'Brien (violin obligato by Julia Hannas Cochrane). Instrumental selection—Spanish Serenade (di Chiari), Roos Bros. Trio. Soprano solos—(a) La Serenata (Tosti);

10:00 p. m. to 1:00 a. m. Dance music program by Henry Halstead's Orchestra and soloists, Hotel St. Francis, San Francisco.

FRIDAY, NOVEMBER 21—

Silent Night.

SATURDAY, NOVEMBER 22—

8:00 p. m. Studio program. A review of "The Big Game" between the University of California and Stanford University, played at the California Memorial Stadium, Saturday afternoon, November 22. The speakers on this program are experts and past heroes of the game and will be introduced by Walter Christie, University of California Track Coach. Instrumental selections—(a) Hail to California (Clinton R. Morse); (b) Hail, Stanford, Hail (Smith), Arion Trio. Description of the game, and the line-ups of the teams—Paul M. Downing, Captain of the Stanford Football Team, 1894. Instrumental selection—Come, Join the Band (Stanford March), Arion Trio. Instrumental selection—Fight for California (Fitch), Arion Trio. "What Won the Game"—Greek Howard, U. C. Tackle and End, 1902-3-4. Comparison of 1894 football with 1924 football—"Billy" Harrelson, Stanford Quarterback, 1894. Instrumental selection—Stanford Mandalay (Lee), Arion Trio. "The Best Play, in My Opinion, of Today's Game"—Ollie Snegidar, U. C. Graduate Manager and Halfback, 1906-7. "The Most Interesting Incident of Today's Game"—Percy Hall, U. C. Halfback, 1899. Instrumental Selection—California Bear Medley, Arion Trio.

10:00 p. m. to 1:00 a. m. Dance music program by Henry Halstead's Orchestra and soloists, Hotel St. Francis, San Francisco.

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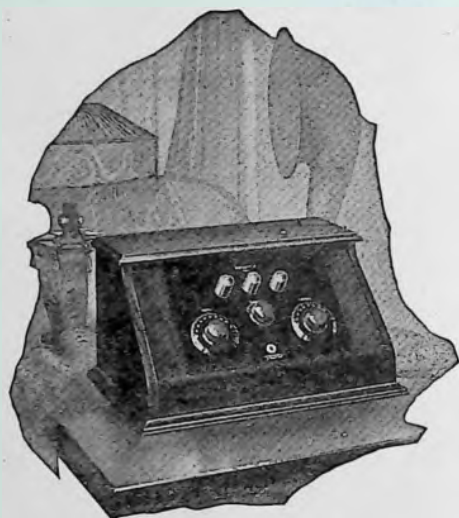
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DAILY EXCEPT SUNDAY—

12:00 noon. Time signals from the Naval Observatory. Reading of the Scripture.
 1:00 to 2:00 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.

SUNDAY, NOVEMBER 16—

11:00 to 12:00 noon Undenominational and non-sectarian church services. The speaker will be Rev. Robertson Surley, Pastor Trinity Methodist Episcopal Church, San Francisco. The soloist will be Clara Geraldine Hayes, contralto. Organ selections by Theodore J. Irwin.
 8:30 to 10:00 p. m. Concert by Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.

MONDAY, NOVEMBER 17—

4:30 to 5:30 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.
 5:30 to 6:30 p. m. Children's hour stories by Big Brother of KPO taken from the Book of Knowledge.
 7:00 to 7:30 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.
 8:00 to 9:00 p. m. Organ recital by Theo. J. Irwin, official organist, at the Wurdlitzer.
 9:00 to 10:00 p. m. Italian Folk Songs by Amerigo Frediani, tenor. Wm. Bernham, baritone player. Vocal duets by May Clarke Burns, soprano, and William Worthington, baritone. Piano solos by Miss Katherin Killian.
 10:00 to 11:00 p. m. E. Max Bradfield's Versatile Band playing in the Palace Rose Room Bowl.

TUESDAY, NOVEMBER 18—

4:30 to 5:30 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.
 5:30 to 6:30 p. m. Children's hour stories by Big Brother of KPO taken from the Book of Knowledge.
 7:00 to 7:30 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.
 8:00 to 10:00 p. m. Program by the Orpheus Club of Oakland.
 10:00 to 11:00 p. m. E. Max Bradfield's Versatile Band playing in the Palace Rose Room Bowl.

WEDNESDAY, NOVEMBER 19—

4:30 to 5:30 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.
 5:30 to 6:30 p. m. Children's hour stories by Big Brother of KPO taken from the Book of Knowledge.
 7:00 to 7:30 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.
 8:00 to 12:00 p. m. E. Max Bradfield's Versatile Band playing in the Palace Rose Room Bowl. Lesson in Conversational French. Edna K. Barker, director. Marie L. Boutin, instructor.

THURSDAY, NOVEMBER 20—

4:30 to 5:30 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.
 5:30 to 6:30 p. m. Children's hour stories by Big Brother of KPO taken from the Book of Knowledge.
 7:00 to 7:30 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.
 8:00 to 9:00 p. m. Organ recital by Theo. J. Irwin, official organist, at the Wurdlitzer.
 9:00 to 10:00 p. m. Program under the management of H. B. Passmore, pianist.
 10:00 to 11:00 p. m. E. Max Bradfield's Versatile Band playing in the Palace Rose Room Bowl.

FRIDAY, NOVEMBER 21—

4:30 to 5:30 p. m. Rudy Seiger's Fairmont Hotel Orchestra broadcast by wire telephony.
 12:45 p. m. Talk broadcast from the Commonwealth Club at the Palace Hotel.

SATURDAY, NOVEMBER 22—

3:30 to 5:30 p. m. Tea dansant. E. Max Bradfield's Versatile Band playing in the Palace Rose Room Bowl.
 8:00 to 12:00 p. m. Art Weidner's Dance Orchestra playing in the Fairmont Hotel.

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DAILY (EXCEPT SUNDAY)—

7:00 to 7:30 p. m. News items, United States Weather Bureau report, market and financial news.

SUNDAY, NOVEMBER 16—

Silent.

MONDAY, NOVEMBER 17—

8:00 to 10:00 p. m. Program broadcast from the campus, University of California, by the Associated Students, under the direction of the A. S. U. C. Publicity Bureau.

TUESDAY, NOVEMBER 18—

6:00 to 7:00 p. m. Aunt Elsie's Sunset Matinee. Silent after 7:30 p. m.

WEDNESDAY, NOVEMBER 19—

8:00 to 10:20 p. m. Studio program. Presented by the Obapesla Quartet, composed of Leon Mills, first tenor; O. L. Padell, second tenor; W. H. Bundy, first bass; N. P. Wilkie, second bass; Alice Gray Padell, accompanist. 1. Quartet selections—(a) Cotton Dolly (Geibel); (b) Kentucky Babe (Geibel), Obapesla Quartet. 2. Vocal solos—(a) The Blind Plowman (O'Hara); (b) Gypsy Love Song (Herbert), N. P. Wilkie, bass. 3. Vocal duets, (a) Swear in This Hour (Verdi); (b) Crucifix (Faure), Leon Mills and W. H. Bundy. 4. Vocal solos—(a) Creole Lover's Song (Buck); (b) A Bowl of Roses (Clark), O. L. Padell, tenor. 5. Piano solos—(a) To Spring (Grieg); (b) Valse Caprice (Scott), Alice Gray Padell. 6. Vocal duet, from "Bohème" (Puccini), Leon Mills and O. L. Padell. 7. Quartet selections—(a) Whispering Hope; (b) Somewhere, Obapesla Quartet. 8. Vocal solos—(a) The Lost Chord (Sullivan); (b) I Passed By Your Window (Brahe), Leon Mills. 9. Cornet solos—(a) A Perfect Day (Bond); (b) I Love You Truly (Bond), John L. Gale; W. H. Bundy, accompanist. 10. Vocal duet—The Battle Eve, O. L. Padell and N. P. Wilkie. At about 8:50 p. m. the controls of KLX will be shifted to the American Theater for the overture by the American Theater orchestra, Owen Sweeten directing. 11. Quartet selections: (a) Winter Song (Bullard); (b) Friendship, Obapesla Quartet. 12. Bass solos—(a) Still as the Night (Bohm); (b) French Folk Song, Walter H. Bundy. 13. Banjo solos—(a) Barcarolle (Offenbach); (b) Melody in F (Rubenstein), Lloyd K. LaFleche. 14. Vocal trio, The Kavanaugh (Bullard), Leon Mills, O. L. Padell, N. P. Wilkie. 15. Vocal duet—Hunting Song (Bullard), O. L. Padell, W. H. Bundy. 16. Cornet solos—(a) One Fleeting Hour (Lee); (b) My Wild Irish Rose (Olcott), John L. Gale; W. H. Bundy, accompanist. 17. Banjo solos—(a) Sobbin' Blues; (b) Please, Lloyd K. LaFleche.

THURSDAY, NOVEMBER 20—

1:30 to 5:00 p. m. Broadcasting of Fourth Annual Deciduous Gruit Growers Conference at California Hall, University of California, under direction of College of Agriculture of the University of California. Prof. Thomas Forsyth Hunt, chairman. 1. Forecasting Fruit Production, by H. C. Taylor, chief, United States Bureau of Agricultural Economics. 2. Experience with the New Crop Estimating Plan of the California Walnut Growers Association. 3. Discussion of the two preceding talks by S. W. Shear, Associate in Rural Institutions, and E. E. Kaufman, agricultural statistician, Sacramento, Cal. 4. Influence of Advertising on Demand, Mr. Frank T. Swett, president California Pear Growers Association. Discussion.

8:00 to 10:00 p. m.

Evening session. 1. The f. o. b. Auction System of Selling Fruits. Two speakers to be provided, one to present the merits and the other the limitations or objections to the system. 2. Discussion. 3. The Clearing House Plan of Distribution for Perishable Fruits and Vegetables. Speaker and leaders of discussion to be provided.

FRIDAY, NOVEMBER 21—

8:00 to 10:20 p. m.

Studio program celebrating the first anniversary of the present KLX station, which was dedicated to the public on November 21, 1923, and which has since that date helped to make radio broadcasting history. 1. Address, "The First Anniversary of KLX," Joseph R. Knowland, publisher of The Tribune. 2. Address, "Accomplishments in Radio Broadcasting," Col. J. F. Dillon, supervisor of radio for the sixth district. 3. Band selections, Group One, Aahmes Shrine Band. 4. Vocal quartet selections, Obapesla Quartet, Leon Mills, first tenor; O. L. Padell, second tenor; W. H. Bundy, first bass; N. P. Wilkie, second bass; Alice Gray Padell, accompanist. 5. Instrumental selections, Group One, KLX Trio, under the direction of Ethel Guvon. 6. Tenor solos, E. Harold Dana. 7. Vocal selections, Myrtle Wilen. 8. Baritone solos, Jack Hillman. 9. Band selections, Group Two, Aahmes Shrine Band. 10. Lyric soprano solos, Grace D. Le Page. 11. Instrumental numbers, Paia's KLX Hawaiians. 12. Tenor solos, H. K. Townsend. 13. Instrumental selections, The American Theater Orchestra. 14. Organ selections, Clement Barker. 15. Announcement from the KLX Studio.

SATURDAY, NOVEMBER 22—

2:30 p. m.

Broadcast of "Big Game" between Stanford and University of California direct from Memorial Stadium, University of California.

K F R C—Radioart Studio—280 Meters

BULLETIN RADIO HEADQUARTERS, HOTEL WHITCOMB SAN FRANCISCO, CALIF.

SUNDAY, NOVEMBER 16—

- 6:30 to 7:00 p. m. Popular concert by Bem's Little Symphony Orchestra, Stanislas Bem, director, playing in Drury Lane, Hotel Whitcomb.
 8:00 to 9:00 p. m. Program by Bem's Little Symphony Orchestra: Overture—"Hungarian Lustspiel" (Keler-Bela). Waltz—"Traumdeale" (Fucik). Selection—"Eva" (Lehar). "Hindoo Song" (Bemberg).
 9:00 to 9:05 p. m. Late news bulletins and the weather report.
 9:05 to 10:00 p. m. Program by Bem's Little Symphony Orchestra (continued): Andante, from the Fifth Symphony (Tschaiowsky). "Kamenoi Ostrow", by request (Rubinstein). Grand Opera selection, "Carmen" Dance music played on the roof garden of the Hotel Whitcomb by Frank Taylor's El Camino Orchestra.
 10:00 to 12:00 p. m.

WEDNESDAY, NOVEMBER 19—

- 7:00 to 7:30 p. m. Popular numbers played by Bem's Little Symphony Orchestra, Stanislas Bem, director, playing in Drury Lane, Hotel Whitcomb.
 8:00 to 9:00 p. m. Concert by Bem's Little Symphony Orchestra: Selection—"Blossom Time" (Willner). "Hymn to the Sun" (Rimsky-Korsakoff). "Andalous" (Pessard). "Liebesfreud" (Kreisler).
 9:00 to 10:00 p. m. KFRC Health Service—Answers to questions submitted by listeners. Address—"How to Avoid Cancer," by Dr. Alson Kilgore, instructor in surgery at the University of California and director of the American Society for the Prevention of Cancer, under whose auspices the address is being given. Popular songs and instrumental selections. KFRC educational course in radio, given by members of the technical staff of the Radioart Studio.

FRIDAY, NOVEMBER 21—

- 7:00 to 7:30 p. m. Popular numbers played by Bem's Little Symphony Orchestra, Stanislas Bem, director, playing in Drury Lane, Hotel Whitcomb. Between numbers popular selections will be rendered in the studio by Steve McNeil, pianist.
 8:00 to 9:00 p. m. Concert by Bem's Little Symphony Orchestra: Waltz—"Die Werber" (Lanner). Selection, "Girl in the Train" (Fall). "Serenade du Tsigane" (Valdez). "Hajnalka" (Roberts).
 9:00 to 10:00 p. m. Instrumental selections and popular numbers, sung by George Smith of Stanford University.

SATURDAY, NOVEMBER 22—

- 7:00 to 7:30 p. m. Dance music by Elmer Ohlsen's Hotel Whitcomb Dance Orchestra.

K G W—The Morning Oregonian—492 Meters

PORTLAND, OREGON

(PACIFIC TIME)

PROGRAM FOR WEEK NOVEMBER 16 TO NOVEMBER 22, 1924

SUNDAY, NOVEMBER 16—

- 6:00 p. m. Church services sponsored by Portland Council of Churches.
 7:00 p. m. Dinner concert by Colburn Concert Orchestra of Hotel Portland.

MONDAY, NOVEMBER 17—

- 5:00 p. m. Children's program; travel story by Aunt Nell.
 7:15 p. m. Markets, weather, news bulletins and police reports.
 8:00 p. m. Concert by the Oregonian Concert Orchestra.

TUESDAY, NOVEMBER 18—

- 11:30 a. m. U. S. Weather Forecast.
 12:30 p. m. Concert.
 5:00 p. m. Children's program. Story by Jean Adkins.
 7:15 p. m. Markets, weather, news bulletins and police reports.
 8:00 p. m. Agricultural lecture provided by Oregon Agricultural College Extension Service.
 8:30 p. m. Concert by Roosevelt High School Glee Clubs.

WEDNESDAY, NOVEMBER 19—

- 12:30 p. m. Concert by Bill Darby's Orchestra of Cotillion Hall.
 5:00 p. m. Children's program. Fairy story by Aunt Nell.
 7:15 p. m. Markets, weather, news bulletins and police reports.
 8:00 p. m. Concert by Anstow-Pozzi Schoop trio.
 10:00 p. m. Dance music by George Olsen's Metropolitan Orchestra of the Hotel Portland. (Two hours.)

THURSDAY, NOVEMBER 20—

- 12:30 p. m. Concert sponsored by Civic Music Club of Portland.
 5:00 p. m. Children's program.
 7:15 p. m. Markets, weather, news bulletins and police reports. After 8 o'clock KGW is silent for long distance reception.

FRIDAY, NOVEMBER 21—

- 12:30 p. m. Concert by Multnomah Hotel Strollers, Dwight Johnson, director.
 5:00 p. m. Children's program. Story by Aunt Nell.
 7:15 p. m. Markets, weather, news bulletins and police reports.
 8:00 p. m. Popular lecture provided by University of Oregon extension division.
 10:30 p. m. Hoot Owls.

SATURDAY, NOVEMBER 22—

- 10:00 p. m. Dance music by George Olsen's Metropolitan Orchestra of the Hotel Portland. Weather and news bulletins.

KDPT—The Union-Tribune and Southern Electrical Company—244 Meters

Operated by the Radio Department of the Southern Electrical Company
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WILLIAM O. HEATHCOTE, Program Director and Announcer
J. W. SCHRADER, Operator

PROGRAM FOR THE WEEK OF NOV. 16 TO 22

MONDAY, NOVEMBER 17—

Silent.

TUESDAY, NOVEMBER 18—

8:00 to 9:00 p. m. Special program under the auspices of The Powell Motor Co., featuring the Powell's Headquarters Orchestra under the leadership of A. C. Epplar. Program hour of dance music with violin solos by A. C. Epplar.

WEDNESDAY, NOVEMBER 19—

8:00 to 9:45 p. m. Regular Wednesday night de luxe program furnished through the courtesy of the Nick Harris Detectives under the direction of F. R. Settle, resident mgr. Program will feature Willis Slee and Lewis Crecenzo, George Beech, well known baritone, Marion MacLeod's Orchestra, Miss Bernice Patterson, contralto and pupil of Mrs. Chelsea Mills of the San Diego Conservatory of Music, and a short talk by Chesley Kemply, district attorney.

THURSDAY, NOVEMBER 20—

6:00 to 6:45 p. m. Program through the courtesy of the Thearle Music Co.

FRIDAY, NOVEMBER 21—

6:00 to 6:45 p. m. Classical program furnished by artists from the Thearle Music Co. Studios.

KOB—New Mexico State Agricultural College

LOCATED AT STATE COLLEGE, NEW MEXICO. 360 METERS—500 WATTS
PACIFIC TIME

MONDAY, NOVEMBER 17—

6:30 to 7:30 p. m. Musical program.

WEDNESDAY, NOVEMBER 19—

6:30 to 7:30 p. m. Radio talks: Professor Jordan, "The Importance of Crop Rotation." Professor Botkin, "Chemical Prize Essay Contest." Music, student recital.

FRIDAY, NOVEMBER 21—

6:30 to 7:30 p. m. Music: The Ariel Quartet of El Paso, Mrs. Alice B. Marshall, director. Radio talk, Dr. D. H. Lewis, "Nose and Throat Hygiene, I."

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LOS ANGELES

KFAE—State College of Washington—330 Meters

(State College of Washington, Pullman, Wash. Miss Alice L. Webb, News Editor.)

MONDAY, NOVEMBER 17—

7:30 to 9:00 p. m. String Trio selections: Gladys Fraser, Waterville, violin; Lillian Pettibone, Greenacres, piano; Vincent Hiden, Rochester, 'cello. 1, Four poetic studies by Loth: (a) Soliloquy; (b) Poeme erotique; (c) Polonaise; (d) The Story of a Rose. 2, Hungarian Dance (Brahms). Important Points in Poultry Raising, Talk III, J. S. Carver. Pointers on Dairy Farming, Talk III, E. V. Ellington. How to Fire Your Furnace Economically, B. L. Steele. Sheep in the Palouse and Big Bend Country, C. M. Hubbard.

WEDNESDAY, NOVEMBER 19—

7:30 to 9:00 p. m. Entire program by State College Orchestra, Karel Haylicek, conductor. 1, Overture from Tancredi (Rossini); 2, Three String Quartet Selections; 3, Peer Gynt Suite (Grieg); 4, LaUuit (Saint-Saens); 5, Overture from Figaro (Mozart). Some Results of Drainage in 1924, Talk II, A. B. Crane.

FRIDAY, NOVEMBER 21—

7:30 to 9:00 p. m. Soprano solos, Catherine Hunt, Spokane: 1, Old English Group—(a) A Pastoral; (b) My Lovely Celia; (c) Shepherd! Thy De-mourour Vary; (d) Drink to Me Only with Thine Eyes; 2, Robin, Robin, Sing Me a Song (Spross). Piano numbers, Lillian Pettibone, Greenacres—1, Ballade A flat, by Chopin; 2, A Walking Tune, by Goossens; 3, The Marionette Show, by Goossens. Essentials of Successful Farm Management, Talk III, by Prof. Geo. Severance. Fall Hints for Garden and Home Grounds, by M. D. Armstrong. Engineering Talk. Book Chat by Alice L. Webb.

K F O A—Pacific Northwest Station—455 Meters

RHODES DEPARTMENT STORE—ARCADE SQUARE, SEATTLE, WASH.

(Pacific Time)

CARL E. HAYMOND, PROGRAM ANNOUNCER

MONDAY, NOVEMBER 17—

8:30 p. m. The Seattle Post Intelligencer by remote control.

TUESDAY, NOVEMBER 18—

12:30 to 1:30 p. m. The noonday luncheon program of the Seattle Ad Club.

8:30 p. m. The Seattle Post Intelligencer by remote control.

WEDNESDAY, NOVEMBER 19—

12:30 to 1:30 p. m. A remarkably diversified evening's entertainment has been arranged by Miss Monique Thomas, one of Seattle's popular musical entertainers. An 8 piece orchestra composed of Monique Thomas and Billy Barrett, violins; Dick Cook, banjo; Gretchen Fengler and Ray Ramsden, saxophones; Leroy Huston, drums; Mr. Cushing, trumpet; and Aubrey Knoff, piano. Ruth Prior, soprano soloist. Harry Knoff, baritone soloist.

THURSDAY, NOVEMBER 20—

8:30 p. m. The Seattle Post Intelligencer by remote control.

FRIDAY, NOVEMBER 21—

12:30 to 1:30 p. m. The noonday luncheon program of the Members' Council of the Seattle Chamber of Commerce.

8:30 to 9:00 p. m. An educational program sponsored by the Seattle Public Schools, under the direction of Mr. McClure.

9:00 to 9:45 p. m. Earl Grey and his orchestra of the Butler Cafe.

9:40 to 10:00 p. m. Rose Lewis, pianist.

K F A U—Boise High School—270 Meters

BOISE, IDAHO

(Pacific Time)

2:30 to 3:15 p. m. Market reports, weather reports, health talk, and educational features by Home Economics and Agricultural Departments on Monday, Tuesday, Wednesday, Thursday and Friday.

MONDAY, NOVEMBER 17—

7:00 p. m. Musical program furnished by the Presbyterian Choir under the direction of Mrs. Bell.

FRIDAY, NOVEMBER 21—

7:00 p. m. Mrs. Laurel Elam playing the Methodist Church Organ and Mr. Ed Hoffman, baritone.

WBAP—Fort Worth Star-Telegram—476 Meters

(PACIFIC TIME) FORT WORTH, TEXAS

(Class B Station)—1000 Watts—476 Meters

SATURDAY ONLY—

- 11:00 a. m. Bradstreet's financial reviews.
 5:00 p. m. Review of the interdenominational Sunday school lesson by Mrs. W. F. Barnum.

SUNDAY ONLY—

- 9:00 a. m. Complete services of the First Methodist Church, Rev. J. W. Bergin, pastor; Will Foster, organist.
 2:00 p. m. Concert from the Rialto Theater.
 9:00 to 10:00 p. m. Midnight Frolics by Ted Miller's California Jazz Band playing in lobby of the Crazy Wells Hotel, Mineral Wells, Texas, broadcast by remote control.

MONDAY, NOVEMBER 17—

- 5:30 to 6:30 p. m. "Moments From the Majestic," featuring stars from the Majestic Theater.
 7:30 to 8:45 p. m. Organ recital by Will Foster, popular WBAP radio organist.

TUESDAY, NOVEMBER 18—

- 5:30 to 6:30 p. m. Monthly concert by the John Tarleton A. & M. College of Stephenville, Texas.
 7:30 to 8:45 p. m. Semi-monthly concert by the Fort Worth Harmony Club

WEDNESDAY, NOVEMBER 19—

- 5:30 to 6:30 p. m. Concert by Charlotte Hamilton, contralto, and assisting artists.
 7:30 to 8:45 p. m. Popular dance concert by Jim Riley's Texas Hotel Orchestra.

THURSDAY, NOVEMBER 20—

- 5:30 to 6:30 p. m. Concert by the Collinsville "Sympathy" Orchestra, F. R. Walthall, director.
 7:30 to 8:45 p. m. Semi-monthly concert by the School of Music of the Texas Christian University, under the direction of Prof. H. D. Guelick.

FRIDAY, NOVEMBER 21—

- 5:30 to 6:30 p. m. Old Time Fiddlers of Arlington, Texas.
 7:30 to 8:45 p. m. Concert by the Alvarado Municipal Band, O. E. Hale, director.

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OPEN EVENINGS

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W F A A—Dallas News-Journal—476 Meters

(PACIFIC TIME) DALLAS, TEXAS

MONDAY, NOVEMBER 17—

10:30 to 11:00 a. m. Address, Dr. J. D. Boon, astronomer, Southern Methodist University.
 6:30 to 7:30 p. m. Belcanto Quartet of male singers in recital.

TUESDAY, NOVEMBER 18—

10:30 to 11:00 a. m. Musical program by artists from a Dallas theater.
 6:30 to 7:30 p. m. Vocal recital by G. Hayden Jones and assisting artists.
 9:00 to 10:00 p. m. Organ recital and features at the Palace Theater, Dwight Brown, playing.

WEDNESDAY, NOVEMBER 19—

10:30 to 11:00 a. m. Address, DeWitt McMurray, editor. The Semi-Weekly Farm News, in a medley of humor, pathos and wisdom. Station WFAA will be silent for the remainder of the day.

THURSDAY, NOVEMBER 20—

10:30 to 11:00 a. m. Address, Charles E. Osborne, physical director, Dallas Young Men's Christian Association, on "Doing Your Stuff."
 6:30 to 7:30 p. m. Recital by musicians from the First Baptist Church, Van Alstyne, Texas.
 9:00 to 10:00 p. m. Dance music program by the Adolphus Hotel Orchestra, in the junior ballroom of the hotel.

FRIDAY, NOVEMBER 21—

10:30 to 11:00 a. m. Address, Dr. Robert Stewart Hyer, president emeritus and professor of physics, Southern Methodist University, on "The Sunday School Lesson."
 6:30 to 7:30 p. m. Edwin Lisman, basso, and assisting musicians, in recital.

SATURDAY, NOVEMBER 22—

10:30 to 11:00 p. m. Address, Dr. J. B. Cranfill, on "How Can Two Walk Together?"
 6:30 to 7:30 p. m. Musical recital presenting Mrs. LaRue Nelson and assisting musicians in song.
 9:00 to 10:00 p. m. Adolphus Hotel Orchestra playing for the dance in the junior ballroom of the hotel.

SUNDAY, NOVEMBER 23—

4:00 to 5:00 p. m. Radio Bible Class, Dr. William M. Anderson, pastor First Presbyterian Church, teacher; Bible study and Gospel song.
 5:30 to 6:30 p. m. Westminster Presbyterian Church, Dr. T. O. Perrin, pastor; Miss Daisy Polk, soloist and director.
 7:00 to 7:30 p. m. Sacred songs by choristers from First Church of Christ, A. O. Colley, minister.
 7:30 to 9:00 p. m. Dick Richardson and his Lakewood Country Club Orchestra, Dot Keyes Richardson, soprano, and Walter C. Emerson, tenor, singing.

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The reception was very clear and loud enough to be heard all over the house. I was so pleased with the ease of operation and clearness of reception that I bought a "Dayton" the very next day.

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(PACIFIC TIME)

KYW, "The World Crier," will broadcast the latest news of the world every half hour—on the hour and half hour—during the day and night. This service is furnished from 3 a. m. to 3 p. m. by the Chicago Evening American, International News Service, and Cosmopolitan News Service. KYW bulletins are provided from 3 p. m. to 3 a. m. by the Universal News Service in co-operation with the Chicago Herald & Examiner.

MONDAY, NOVEMBER 17—

KYW will not be on the air between 7:00 p. m. and 12 p. m. All Chicago stations are silent on Monday night.

TUESDAY, NOVEMBER 18—

6:00 to 9:30 p. m. Musical program. Rose Meyers, soprano; Samuel G. Rowe, tenor; Louise Rood Lutes, pianist; Sandy Meek, baritone. Speeches under the auspices of the American Farm Bureau Federation: "Review of Live Stock Markets," by J. D. Harper, Information Department of the National Live Stock Producers Association; "Where Our Lumber Comes From," by Theodore Knappen, director of Research of the National Lumber Manufacturers Association, Washington, D. C. Musical program continued. "At Home" program broadcast from KYW's studio in Hearst Square. 8:45 and 9:00 p. m., Sanders Original Nighthawks broadcasting from the ballroom of the Congress.

WEDNESDAY, NOVEMBER 19—

6:00 to 12:30 p. m. Musical program: Ann Kelly, soprano; George D. Horne, baritone; Harold O'Brian, violinist; The Four Legionnaires (male quartet). "Around the Town with KYW in Chicago" (stage review). Musical program continued. Midnight revue. This is a Westinghouse-Chicago Evening American feature broadcast from KYW's studio in Hearst Square. Coon-Sanders Original Nighthawks will broadcast from the Balloon Room in the Congress Hotel at 9 p. m., 11 p. m. and 11:05 p. m. W. Remington Welch will render selections on the organ at McVickers theater at 10:30 a. m.

THURSDAY, NOVEMBER 20—

6:00 to 9:30 p. m. "Twenty Minutes of Good Reading" by Rev. C. J. Pernin, S.J., Head of Dept. of English, Loyola University, Chicago. Musical program under the direction of John Loring Cook. Artists and program will be announced by radiophone. "Safety First" talk by Mr. Z. C. Elkin of Chicago Motor Club. "At Home" program broadcast from KYW's studio in Hearst Square. Coon-Sanders Original Nighthawks will broadcast from the Balloon Room in the Congress Hotel at 8:45 and 9:05 p. m.

FRIDAY, NOVEMBER 21—

6:20 to 12:30 p. m. Speeches under the auspices of the American Farm Bureau Federation: "When the Prairie Schooners Stopped," by A. C. Page, editor, Orange Judd Illinois Farmer. "All Set for the Third National Boys' and Girls' Club Congress," by G. L. Noble, Secretary, National Committee on Boys' and Girls' Club work. Midnight revue. This is a Westinghouse-Chicago Evening American feature broadcast from KYW's studio in Hearst Square. Midnight revue continued. Coon-Sanders Original Nighthawks playing in the Balloon Room of the Congress Hotel, will broadcast at 9 p. m., 11 p. m. and 11:45 p. m. W. Remington Welch, organist at McVicker's theater, Chicago, will render an organologue at 10:30 p. m. on McVicker's organ.

SATURDAY, NOVEMBER 22—

6:00 to 12:00 p. m. Musical program: Dorothy Wood, soprano; Arthur G. Bowes, tenor; Marion Laffey, violinist; Anne Peterson, pianist; Bernice Barber, whistler; James Russell Hogg, accompanist. Youth's Companion—including short stories, articles, and humorous sketches. Late show broadcast from KYW's studio in the Congress Hotel, Chicago. Show broadcast from the Congress Hotel studio featuring Coon-Sanders Original Nighthawks playing in the Balloon Room.



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PARAGON

Letters to the Editor

Dear Editor: As a member of your rapidly growing family, I am wondering what a straw vote among your readers will bring out regarding a silent period for listening in for distance. Given an even break, I have found that even the three dead months have possibilities.

The broadcasters are making and killing the game by their short-sighted policy. Given a silent hour every night in the year will do more to stimulate radio than everything else put together. Sets will be purchased, built, and altered. Who is spending the money? It's the one who is and keeps at all times interested. Set after set is left in cold storage by disgusted owners who have lost heart, and only hope to get local, nothing more. A few dollars, an hour's time, and a couple of tubes will handle local, in which I include KGO.

Once we were told crystal sets demanded that the air be kept jammed. I believe that this is no longer true. It is apparent that the crystals are being incorporated into something more. Now if we could get some of the stations to rid themselves of their harmonics, and lose the fear that they must hog the air, radio will receive a tremendous impetus. Personally, I believe that one silent hour, given a chance, will receive hearty co-operation from distance stations, and prove in the long run better than a silent night. We eventually would have a working arrangement for coast to coast reception by friendly gentlemen's agreement.

A lot of the time it is apparent that the stations could well omit an hour with no detriment to their listeners. So why not a silent hour, 7 to 8, or 7:30 to 8:30, which would not even interfere with the children, would stimulate and encourage the novice, and not confine the coast listeners to a more or less fixed limit of reception, and gladden the heart of the fan. Just how does your large family feel, and how shall we go at it? Or shall we keep on and stay in the rut we seem to be forced into and have no chance to expand, due primarily, I believe, to the selfishness of certain stations.

GEO. S. LEWIN, M.D.

394 W. Channel Road, Santa Monica Canyon, Santa Monica, Calif.

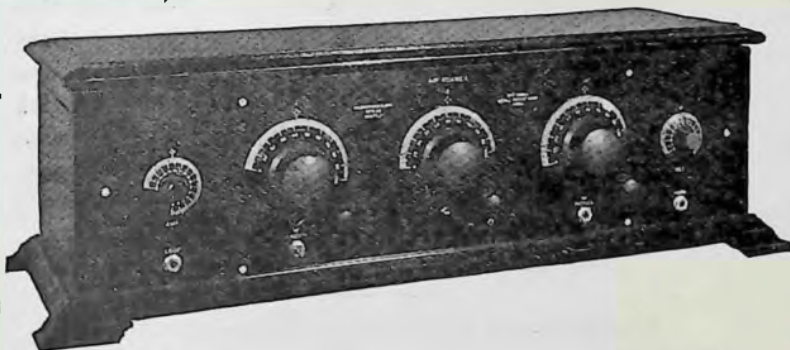
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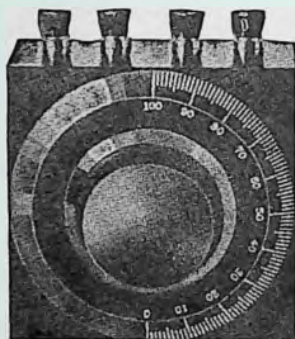
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 "SELECTIVE & FREE FROM NOISE". Chicago Daily News
 "TRULY REMARKABLE — CALIFORNIA AND MASSACHUSETTS STATIONS WITH GREAT VOLUME ON LOUD SPEAKER. BUILDING PHUSIFORMER SET FOR USE IN OUR OPERATING ROOM".....
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Letters to the Editor

Dear Sir: Supplemental to my letter of a few days ago relative to my reception of radiophone of NERK, Shenandoah, on October 22, over Dublin, Arizona, I thought you might be interested to know that I received this morning a postal from Richard Kelley of 6BDZ, forwarded via 6CFT from NERK, as follows:

"Many thanks for message. Distance about 800 miles; best range we know of." (Signed) "NERK," U. S. S. Shenandoah.

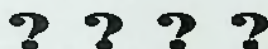
Kelley advises me that he was unable to forward via radio, which, of course, is natural, as I cannot get below 200 meters with my six-tube Atwater-Kent.

The kick and thrill from the experience increases, however, as I find that I have accomplished a second reception of NERK, and incidentally spurs me to become an active amateur when I get permanently located.

Trust I have not bored you with my recital. Sincerely,

GEORGE B. CARPENTER, Del Monte Lodge,
Pebble Beach, Calif.

Oct. 29, 1924.



QUESTION—I have been a constant reader of your fine little book, but I have never taken advantage of your question department before. Can you tell the whereabouts of Station 6XG? I get them between 9 and 10 in the morning with great volume. (2) Could I get stronger signals from the east if I ran my aerial east and west and took the lead-in off the west end?

ARTHUR SCHMIDT, Salinas, Calif.

ANSWER—6XG is the experimental call of the General Electric station at Oakland, whose broadcasting call is KGO. Theoretically, you receive best from the east when the antenna is east and west, with the lead off the east end, but you would probably notice little difference in actual practice.

QUESTION—I suppose every radio fan has his troubles. My trouble is poor selectivity. I have a three-tube Harkness reflex, but only use two tubes, as the third howls so much it is useless. I have an 85-foot aerial with about a 40-foot lead-in, and a 6-foot ground to water pipe. I get 23 stations when the night is just right. But small local stations cut out the more distant. One poor little fellow with a bum phonograph imagines he owns a mountain which he likes to advertise. He must sleep in the daytime, for I never caught him asleep at night. How can I increase my selectivity?

ERWIN LALOND, Portage, Wash.

ANSWER—You are all set to build the new Harkness three-tube circuit, which will greatly increase your selectivity. Give up your useless third stage of audio, and use that tube for detector.

"THE RADIO DOCTORS"

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WE can definitely determine the reasons for inferior results with any type set, and can repair or rebuild and guarantee complete satisfaction.

OUR SPECIALTY—Custom-built sets to fit your Console, Phonograph, Book Case, Automobile and bank account. Our sets are doing distance now. Is yours?

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R. O. GORDON

N. P. JACK

Laboratory 510 East Saturn St., Huntington Park, Calif.

???

QUESTION—I am a subscriber to your very valuable paper. I have constructed a deForest ultraudion set according to the diagram published in Radio Doings Oct. 12. I would appreciate very much if you would answer a few questions. I do not seem to get the amount of volume on loud speaker that one would expect from a 3-tube set. The tone is very good, clear and natural. Selectivity is excellent. I have received long distance on the headphones and will give you a list of stations logged in one evening—KHJ, WBAP, KNX, KFRC, KFI, KFNE, WCAL, CHCN, KGW, KPO, KFON, KFSG, KLZ, KGO, WEBH, CKCD, KFKX and Cleveland, Ohio, but could not make out call letters. So this is not so bad, but I think a good many of these should be heard on the speaker. I use a 301A tube for detector and UV201A tubes for amplification.

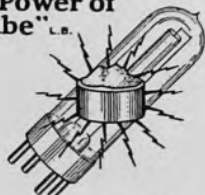
E. V. ANDERSON, Carlsbad, Cal.

ANSWER—You are getting good results with your detector, but apparently the two-stage amplifier which you added is a bit weak. Kindly sketch a diagram of your entire set and mail it in for our examination.

QUESTION—I have been an ardent reader of Radio Doings and I always get my nickel's worth every week. I own a two-tube Harkness and it has worked real good. But now I have to turn my rheostat full on or it will not work, and each station comes in with a whistle. I get KFON, KGO, KDYL, KDPT, KOB, KLX, KPO, KFRC, and one night I had KGW in Portland. I think the tubes are O. K. because they work fine when the rheostat is full on. I have tried burning them with B battery disconnected. What's the difficulty? PAUL SANDERSON, Los Angeles.

ANSWER—Looks like tube trouble. When it is necessary to fully advance the rheostat with new batteries or fully charged batteries in order to get satisfactory results, it is a pretty certain indication that the tubes are fast becoming useless. The whistle is due to self-oscillation of the first tube and is caused by faulty design, unbalanced units, or may even be caused by the wiring of the set.

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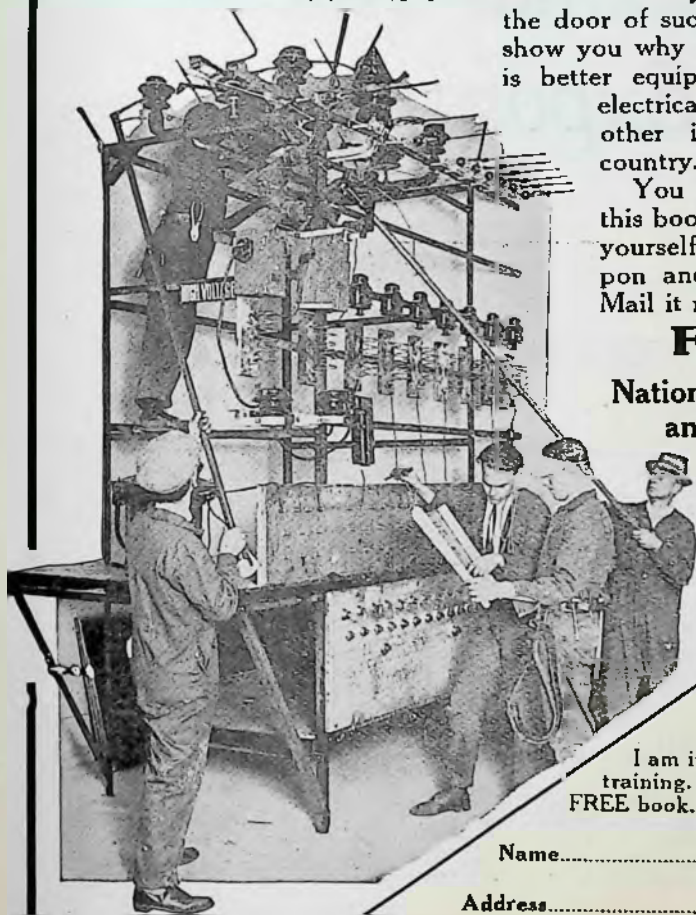
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QUESTION—I am still having some trouble with my two-tube Harkness reflex. My trouble is that when I tune close for distant stations I get a howl. I have decided that this is regeneration in the set, and have tried to get rid of it by rewiring, without success. At present I get KGO, KLX, KPO and KGW. Have had Hastings on when other stations were off. Get Long Beach on loud speaker. I do not get any howl on local stations, and get them so loud I have to tune down on the rheostat. Can I eliminate this howl? Permit me to add that for compactness, usefulness, and ease of locating hours on which stations broadcast, Radio Doings is "top hole," and that statement could be enlarged upon without limit.

K. B. KENNICOTT, Los Angeles.

ANSWER—The excellent results which you are obtaining, indicate an unusual degree of sensitiveness, and this is probably due to the fact that your radio frequency amplifier tube is close to the point of self-oscillation. The howl which comes in when you are tuning closely for distance is no doubt the result of too much regeneration. This condition is caused by your particular arrangement of units, characteristics of units used, etc. While it has given you added sensitiveness, the fact that actual oscillations are sometimes set up, causes the howl. Mr. Harkness has solved this difficulty with his new "counterdon," which is the connection of a small variable condenser (vernier size) from the plate of the first tube to the filament side of the secondary of the first R. F. transformer. See article in this issue on the new Harkness circuit.

QUESTION—Having been a constant reader for something over a year, I have at last come to you for some advice. I am at present using a one-lung Harkness which has a wallop second only to Radio Doings. Some of the fans say they can't get DX on this set. About a month ago, on a Monday evening, I received the following: KOB, KFKX, KFPT, KFAE, KGO, KLX and KFON. Now

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?? ??

for the question. I just got my "Doings" hot off the press, and am interested in the new Harkness Counterflex. Would you send me a detailed diagram of the circuit? I am figuring on building a new aerial as per sketch. Would it be O. K.? I am in favor of a silent night, and believe that a radio set without Radio Doings would be like trying to shave without a razor.

HAL BAKER, Inglewood, Cal.

ANSWER.—Your "one-lunger" is performing as it should, and should inspire other fans to greater efforts. For the circuit of the Counterflex see page 40 of our last issue. The new antenna shown in your sketch would be O. K., but for the counterflex the over-all length should not be more than sixty feet.

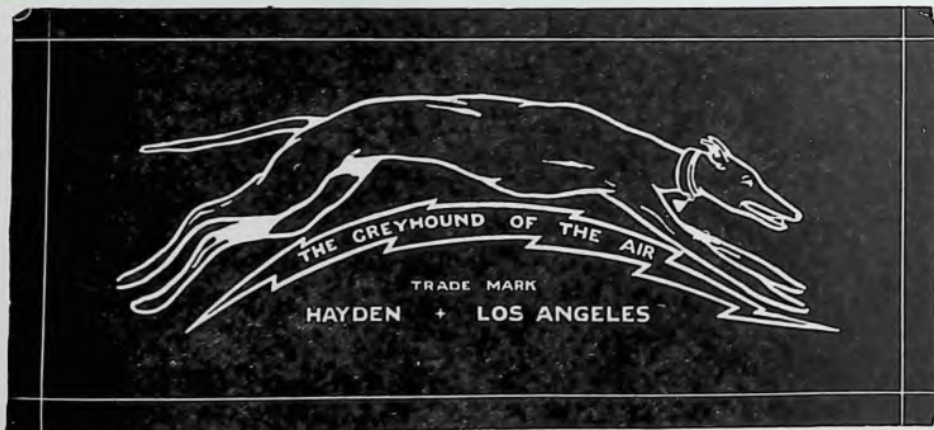
QUESTION.—My set is a three-tube Armstrong hook-up using UV-199 tubes, and when I first built it I used home-made honeycomb coils, getting fair results, but no distance other than KGO and KFON. I replaced my coils with a Kelcoil and get much better results, bringing in KOB, KLX, KGW, and even brought in KFRU, a 50-watt station in San Francisco on 230 meters, while KFSG was going full blast here on 278. I call that selective. Not satisfied yet, I got a hook-up which I am enclosing for a stage of radio frequency which I have added to my set, using a coil of 60 turns as secondary and 10 turns as primary. The only results I get is an awful lot of howling, and the set is very difficult to tune. Can you tell me if this hook-up is O. K.?

WM. H. PRITCHARD, Los Angeles.

ANSWER.—You tackled a tricky proposition when you added that type of R. F. ahead of your Kelcoil. The added tube is apt to oscillate all the time itself, hence killing the effectiveness of not only the R. F. step but the regenerative detector as well. If you have a means of preventing self-oscillation in the first tube, then you will be able to use your regeneration and get good results. Your coupling coil is O. K. if the ten turns are wound right on top of the sixty turns. Would suggest that you try controlling oscillation of the first tube by means of a counteracting condenser consisting of a small variable condenser connected from the plate of the first tube to the filament. Increasing

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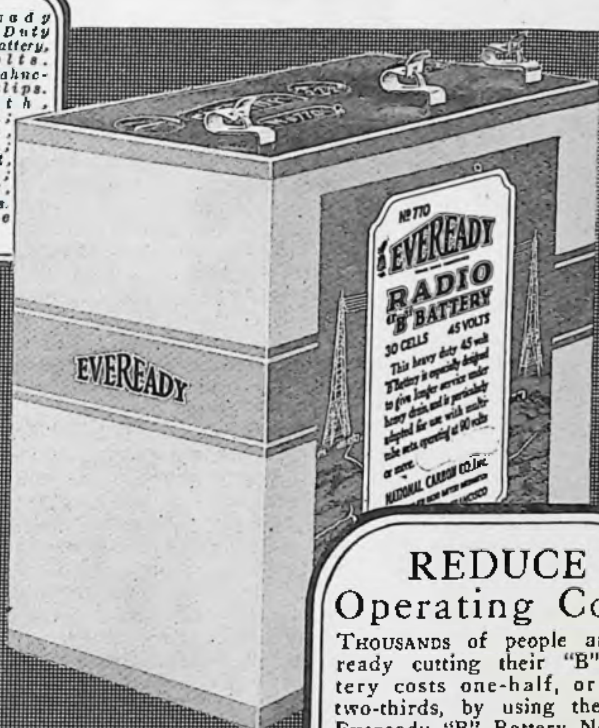
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capacity in this condenser tends to stop self-oscillation of the tube. This means of controlling tube oscillation was shown in the diagram of the deForest ultraudion in Radio Doings for October 12, where we called it an "absorption" condenser. Mr. Harkness calls it a "counterdon," or counteracting condenser.

QUESTION—Being a yearly subscriber to your Radio Doings, I wish to ask a question. Why do we not get any more distant station than Oakland and San Francisco? I have a neutrodyne set. As you will observe from the address, we reside close to the ocean. I get Los Angeles, Long Beach and San Francisco. My antenna is 18 feet from the ground and 100 feet in length, running from garage to the house. I have the set grounded to the gas pipe. I am anxious to secure other stations. Any information you may give me will be much appreciated.

PETER E. PRUSSING, Santa Monica, Calif.

ANSWER—Get that antenna of yours off the ground and up in the air, the higher the better. Then take your ground wire off the gas pipe and made a good, clean, solid connection to the cold water pipe close to where it goes underground.

QUESTION—We use your little book so much that it is well worn by Saturday night. We have a five-tube neutrodyne set. We get very good results except that distant stations such as Calgary and Fort Worth are so weak that we can't understand what is being said. Is there any way we can add another tube or is there anything we could add to amplify the reception? We have tried different kinds of aeriels and finally decided on one about 40 feet from the ground and 100 feet long. I think Los Angeles is about the only city of any size in the U. S. where the radio stations do not observe one silent night out of seven. Of course they do not have to be all silent one night nor silent all one night. But I think there are many fans who would appreciate a chance to get Eastern stations.

PAUL ROGERS, Ontario, Calif.

ANSWER—With a five-tube neutrodyne you should have high efficiency, and we would not suggest making any addition to it. Your course would be to make sure that you are obtaining the greatest possible efficiency from your instrument. We would say from the meager information at hand that you are not getting the best out of your set now.

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QUESTION—I am the owner of a Radiola Super-Het and wish to get further distance, if possible. Am using a loop, but if I put an antenna on the roof will I get better results? If so, how much wire to use, including lead-in. The best distance I have had is KYW, WEBB, KDKA, the latter only a couple of times. Enjoy your magazine very much, and particularly the DX discussion by Hashimura Togo.

ANSWER—This particular instrument should not be used on an outside antenna of any size. The manufacturer recommends the loop or a small antenna wire, not to exceed 30 feet in length.

P. H. BEHEART, San Francisco.

QUESTION—I have made a rectifier, but it does not work. I have never tried it on my storage battery, because it does not change the A. C. to D. C., which is necessary in order to charge a storage battery. I connected an electro-magnet to the terminals which is supposed to be direct current, and the result was a rapid vibration which proves it is still alternating current. Enclosed find diagram of rectifier I have tried.

W. ATHERTON, Los Angeles.

ANSWER—We are not certain that the test you made proves that the output of your rectifier is alternating current. The pulsating D. C. which the rectifier should produce would produce vibrations of the field of the electro-magnet, which you might easily suppose to be produced by A. C. Use a D. C. voltmeter or ammeter connected to the output with the electro-magnet, and see if you get a proper reading. If so, you have D. C. If the needle stands still and trembles, your rectifier is N. G.

Due to the numerous calls for help that we have received, Mr. K. G. Ormiston, our technical editor, has established regular hours from 1 to 2 daily, except Sunday and Monday, during which time he will be glad to receive calls from radio fans and answer questions.

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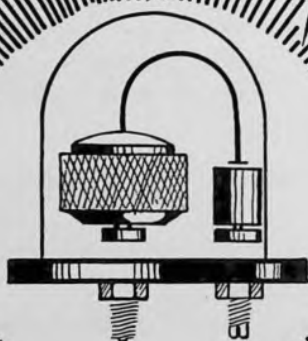
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Trade Notes

A grand banquet will take place at the Ambassador Hotel on Dec. 3rd, the second day of the Second Annual National Radio Exposition, which will be given jointly by the members of the Radio Trades throughout Southern California and the American Radio Exposition Company of New York.

There will be a number of prominent guests of international and local fame who will speak at the banquet, in addition to the musical entertainment features. A special microphone will be available in order that the speeches and musical numbers may be broadcast.

Members of the trade who wish to make reservations should at once get in touch with A. G. Farquharson, treasurer, 603 Commercial Exchange Building, Los Angeles.

The members of the Pacific Radio Trade Association of San Francisco had the privilege of being guests of the American Institute of Electrical Engineers and the Pacific Telephone and Telegraph Co. on Wednesday evening, November 5, at Native Sons Hall, in San Francisco, to hear Dr. Harvey Fletcher of the Bell System Laboratories, New York, talk on the subject, "Demonstration of Properties of Speech, Music and Noise, and Their Relations to Electrical Communications."

The lecture was illustrated and given in a more or less semi-technical manner, and was intensely interesting to everyone connected with the radio industry.

The trade will be glad to hear that Charlie Wellman, the prince of jazz, popular radio entertainer, is now calling on the Los Angeles trade in person, representing Kierulff & Ravenscroft, wholesale distributors.

A local inventor, Francis de Willy, recently of Belgium, has perfected coils to be used in tuned radio frequency circuits. With these coils, self-oscillation of the tubes is impossible, the quality of reproduction is excellent, and those important factors, selectivity and sensitiveness, are all that could be desired. Neutralizing condensers are not necessary, and the placement of the coils is a simple matter. Coupled primary and secondary windings are used, and the secret of the success of the coils is in the particular manner of winding.

Munson-Rayner Corporation, Los Angeles and San Francisco distributors of the Cheney Talking Machine, announce a radio division under the direction of E. R. Darvill, vice-president and director of sales. Among the well-known radio manufacturers to be represented in California by Munson-Rayner are the following: Colin B. Kennedy, E. R. Thompson Neutrodyne, Eisemann Magneto Co. Music dealers throughout the State will welcome this announcement.

Hall Berringer, manager of San Francisco branch of Kierulff & Ravenscroft, paid a short visit to Los Angeles to get a little sunshine to take back to his new home town.

A dispatch from Vienna tells that after 15 years of experiments, a carpenter named Schapeller has succeeded in transmitting high-power electric current by wireless.

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The lectures on "Radiology" which are being given by Mr. N. E. Brown over KFSG each Friday evening are arousing considerable interest. He is covering all phases of radio reception in an interesting and thorough manner. His talk next Friday evening will be on "The Vacuum Tube as a Detector." Mr. Brown conducts a radio laboratory at 2000 West Seventy-fifth street, and has excellent facilities for making scientific radio measurements, calibration, balancing and neutralizing adjustments, etc.

Beginning Monday night, November 24th, American broadcasting stations, practically every Class B station in the country co-operating, will send out special programs for listeners in foreign countries between the hours of 10 and 11 o'clock, Eastern Standard time. This continues to include November 30.

These programs will be exceptional in character and worth listening to. They should help the sale of sets.

Beginning Monday night, November 24th, continuing to November 30th, the British Broadcasting Corporation stations will send special programs for American listeners between the hours of 11 and 12 o'clock, Eastern Standard time.

American high power stations will stand by and observe quiet hours during this period each night of this week.

Re-broadcasting of programs from Dutch, Swiss, German and French stations will also be part of the broadcasting from the British stations.

Australian, Hawaiian and New Zealand stations will also transmit for the benefit of west coast listeners during the quiet hours on this continent.

The management of the National Radio Exposition has named RADIO DOINGS as the publishers of the OFFICIAL PROGRAM for the coming show. Their advertisement telling the time and place appears on another page. It will be our aim to print the best OFFICIAL PROGRAM that has been put out at any show. Among the special features that it will contain are: A complete, up-to-date list of all licensed stations in the United States, Canada and Cuba, with wave-length and power in watts, corrected up to Nov. 30; stories of "The Famous Men of Radio," with pictures; pictures of the announcers of the larger stations on the Pacific Coast and Western States; stories of the large super-stations which will soon be on the air, with illustrations; and other articles and stories of interest to those interested in radio. In fact, it will be a book that none can afford to be without.

Colonel J. H. Dillon, Supervisor for the Sixth District, is a visitor in Los Angeles. He is looking over the field preparatory to assigning the new wave-lengths to the various stations in this locality. The Colonel tells us that the new wave-lengths will not be given out until they have been approved by the Department of Commerce at Washington.

Ruth Rogers, hostess and accompanist at the Evening Herald, Los Angeles, has returned from England, where she had been called owing to the illness of her mother. We are glad to hear that she is back and that her mother has entirely recovered.

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