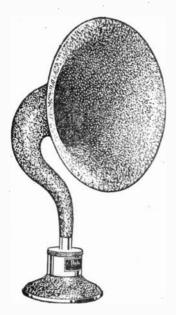


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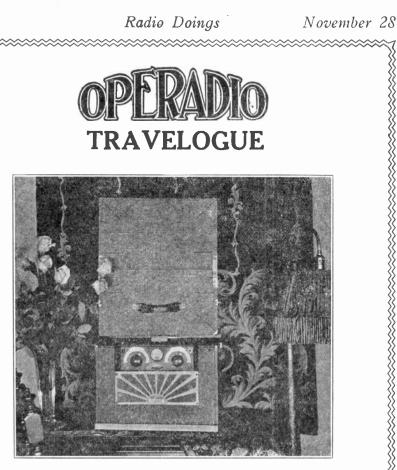
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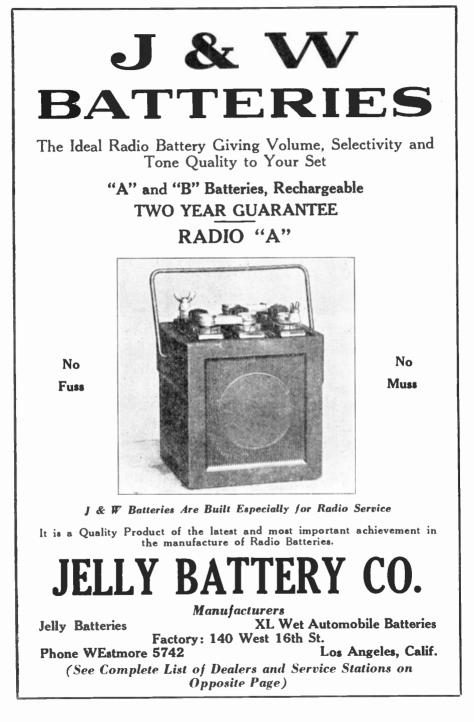
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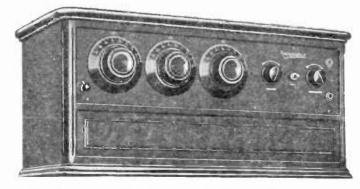
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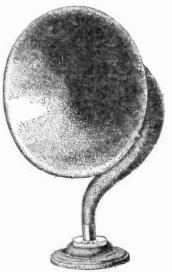
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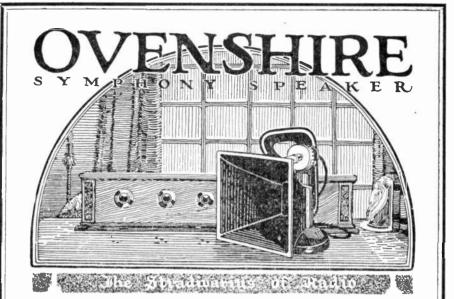
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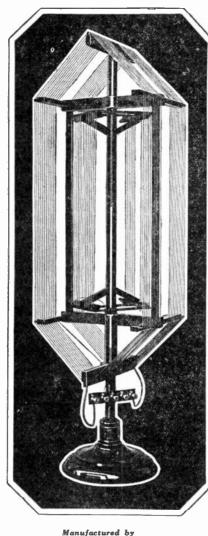
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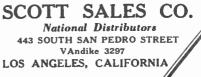
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Ye Editor's Opinion

Sink the Navy

Men and Women, it looks as if we are all growing old and "comfy" and snug together. Α while back Radio Doings got sorter coltish and came out all arrayed in new scenery. Well, if you could have read the avalanche of letters from our readers pleading for the old cover and telling us it was like losing a pal, you'd understand why it is that we're back again all in red. We just cannot resist weeping women. The folks just didn't like the new scenery, that's all.

That's that, but the thing we really wanted to tell you about this week was the letter we got from a Listener-In who must certainly love radio. Here it is:

Long Beach, Calif., Nov. 20, 1925. Radio Doings,

Will anything ever be done to eliminate the code pests of this neighborhood? Am in favor of sinking the navy if they are responsible.

Kindly advise for my peace of mind, (or otherwise) if code interference of evening programs will be done away with in near future. Seems to me proper equipment or wave lengths would handle this. Yours very truly,

HERBERT HARTSOCK.

The code pest is just as big a pest as this riled up brother says he is, but sinking the pavy is yet another thing. It's been a terrible job to sink the navy since the day that one John Paul Jones started voyaging. England, Spain and Germany have all tried it. Like Jones told the English admiral who said he'd hang him as a pirate.

you've got to catch 'em first, and the U. S. navy has never let itself be caught as yet.

17

The fact is that most of the code interference that is causing so much annoyance at this particular times comes from the spark sets that are used on the ships of the navy temporarily stationed at San Pedro. The navy men must have practice and since this is the only equipment furnished them thus far they naturally make use of it.

At the radio conference which just closed in Washington a resolution was passed urging the prohibition of this type of broadcast interference and Congress will be urged to pass a measure prohibiting it both for private and governmental use. This action is approved by Secretary Hoover and will doubtlessly be incorporated in the measure that is to be presented at the next session of the national legislature.

The entire subject of interference is going to have much more attention during the coming months than it has ever before received and the determination to license no new stations for the present is but the first step in this direction. Other important moves are scheduled to follow.

Let us try to be a bit patient. Radio Doings will help all it can, but sinking this nation's navy is one job that even the doughty Little Red Book will have to balk on. Boy, they're too tough for us.

EDWARD ROBERTS,

November 28

In Radio's Hall of Fame



Left, Herbert C. Colburn, manager of KFUU, Oakland, Cal.; right, Norma Hall, Y. W. C. A. Educational speaker; lower, Esther Fricke Green, Angelus Temple organist.

November 28 Radio Doings What the Radio Conference Did

Washington, Nov. 24.—From out of a confusing mass of resolutions, proposals, conferences and suggestions, presented, talked of and discussed at the Fourth National Radio Conference, which was held in Washington beginning on November 9, the following definite decisions were made:

> No more broadcasting stations will be licensed to go on the air until there are suitable channels released.

> No more stations will be forced to divide time or wave lengths.

The broadcasting band will remain between 202 and 545 meters.

The manufacture of radiating or regenerative receivers was condemned by the conference.

Spark sets, used by amateurs and the navy, were condemned.

Five years to be the duration of station licenses.

Government censorship was rigidly opposed.

Direct methods of advertising in broadcasting were condemned.

Designations of stations as Class A" and "Class B" to be discontinued.

Speculation in wave lengths was condemned.

Rebroadcasting.. of ..programs without permission of the station will be prohibited.

Amateur wave assignments were maintained but amateurs are to be warned to strictly observe silent hours.

Specific legislation from Congress demanded.

Appeals from the radio decisions of the Secretary of Commerce to be provided for.

No arbitrary power to be vest-

Keynote: "Public Service"

Washington, Nov. 24.—Throughout the whole conference the keynote was "service to the radio public." The manufacture and sale of radiating or regenerative receivers was opposed by the conference, it being pointed out that although control of some types of oscillating receivers were possible and that education was needed, the committee on interference was anxious at some early date to prevent the further manufacture and use of this type of listening device.

While opposing this drastic action, Powell Crosley, of Crosley Company, suggested that there were three types of receivers which might cause such interference, he was willing to let the resolution stand. Arc apparatus, it was held might be further improved and the use of highpower only when necessary was advocated.

ed in Secretary Hoover.

A special radio bill embodying all recommendations to be presented to Congress at its next session. While no attempt to draw up a radio bill was made. a number of salient features were outlined and will be presented to Congress through Chairman White of the House radio subcommittee. These recommendations covered licensing of stations, opposed a monopoly in radio communication, and sugguested an appeal over the Secretary of Commerce decisions.

The Why of Radio By K. G. ORMISTON, A. M. I. R. E. Technical Editor Radio Doings Broadcast Engineer, KFSG

EDITOR'S NOTE.—This is the twenty.second installment of RADIO DOINGS' complete Course in Radio. It began with the issue of July 4th and will cover every phase of radio from the basic principles to and including every device and set now in use. This course will be continued from week to week.

In our first installment of this series of articles, and repeatedly since, we have stated that the speed of light and radio waves in the ether is roughly 186,000 miles per second. Also, in explaining the conversion of meters wave-length to kilocycles frequency, we used the figure 300,000,000 meters per second as the speed of the waves, which is the metric equivalent of 186,000 miles.

Truly this is a tremendous velocity. circling our little earth more than seven times in a second, and yet in the infinite reaches of space light must travel for hundreds and even thousands of years to reach our telescopes from many of the visible suns of the universe. In astronomy, the unit of measurement is a light-year, meaning the distance travelled by light in a year, at the rate of 186,000 miles per second. Don't try to figure out how many miles a light-year represents, because you will be unable to read the result when you get through, having more ciphers than you have names for.

At any rate, such a speed fairly staggers the human imagination, and I am not surprised that the humble scribe of this "Why" series should have received several letters asking for an explanation of how the speed of light was determined. The fact that our readers are thinking and wondering about radio is gratifying indeed, and when I make a flat statement without giving the reason behind it I am only too happy to receive a "Why?" by the next mail. Thinking and reasoning concerning the fascinating theories and fundamental principles involved in radio is mighty fine exercise for the mind. I care not whether you

are a lad who eats, sleeps and lives radio, or a bank president who finds in radio a hobby which provides relaxation and entertainment and the necessary PLAY, which every normal man must mix with work and sleep in correct proportion. To exercise the mind in a channel outside the regular routine of your daily work is refreshing, and I personally know of no study which provides more real interest and fascination than radio. Perhaps I'm prejudiced, for I must admit that to me radio has held the center of the stage from the time I was 12 years old. At that tender age my future life was shaped and determined by the act of a school chum, who shyly presented me with a home-made carbarundum crystal detector as an evidence of friendship. That simple deed probaly kept me from being a preacher, bootleger or candlestick-maker! At any rate, that fat little school boy of 20 years ago has my eternal thanks, publicly expressed herewith. His name was and is Edwin Lovejov, now U. S. Radio Inspector in Col. Dillon's office. San Francisco.

But as usual I seem to be getting off the track again! We were talking about the speed of light and how it has been determined to be 300,000,000 meters per second. There are many methods which have been used. The first and earliest attempts were astronomical in nature. In 1676, a Danish astronomer named Romer, determined the speed of light from his observations of the intervals of time between eclipses of Jupiter's inner satelite when the earth was approaching and receding from the closest point to Jupiter. In 1721, Bradley, an English

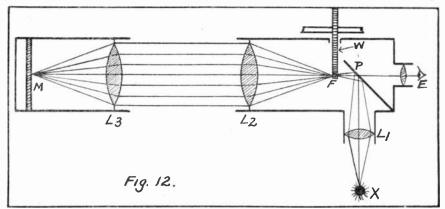
November 28 Radio Doings The Why of Radio—Continued

astronomer, by another method arrived at the velocity of 300,000,000 meters per second, while Romer's result had been 299,600,000 meters.

Then in later years, scientists named Fizeau, Cornu, Foucalt, Michelson and lastly Professor Newcomb performed experiments which determined the velocity of light on the earth's surface, without resorting to astronomical observations. The method which I will describe will be the most simple one of the lot, the method of Fizeau and Cornu, first performed in 1849.

This method depends upon the eclipse of a source of light by means of a rapidly rotating toothed wheel. In Figure 12, cused on a mirror M, which reflects it back on it's own path. The beam of light returns to lens L2, is focused at F as before, diverges again and at P, the inclined glass plate, a portion of the light is reflected and a portion continues straight through and reaches the eye of the observer at E, producing the appearance of a bright star at F.

Now when the toothed wheel is rotated rapidly each space in the edge of the wheel lets through a detached train of light waves, which after travelling over a definite distance reach the eye at E, providing the return trip is not interrupted at F by a tooth having taken the place of the space which let the light



the arrangement of apparatus is illustrated. At X we have a bright source of light. The light is focused by means of the lens LI on to the sloping piece of plate glass P, which reflects it so that the focal point falls at F. W is a toothed wheel, mounted so as to be rotated at any desired speed, and at F the beam of light either passes through a space between teeth or is obstructed by a tooth as the wheel revolves. The beam then widens out beyond the focal point and is changed into a parallel beam by the lens L2. It travels as a parallel beam over considerable distance (nearly five miles) and upon reaching lens L3, is fothrough on the outward trip. What appears first to the observer at E is a bright star, and then as the speed of the wheel is increased the light will diminish in intensity until a point is reached where it is entirely extinguished. Then as the speed is further increased the light begins to appear again.

Now it is evident that at the speed where no light got through on the return trip that during the interval required for the light to travel from F to M and back to F, the rotating wheel had replaced an open space by a tooth. Get that clear in your mind before we go any further. At (Continued on Page 84)

Movie Queen's Newest Pet

-++**

An enthusiastice radio fan is Miss Ruth Roland, prominent motion picture star. This photograph was taken during a moment when she was particu-larly enjoying a splendid program reproduced by the Stewart-Warner Model 320 Highboy Console, the aristocrat of the Stewart-Warner line.



Five New Broadcasters Licensed

Just following the termination of the Radio Conference the Department of Commerce issued licenses to five new broadcasters, which will be the last granted rights of way through the ether for some time, it is believed.

While a few stations, located in uncongested districts may be permitted to go on the air, it is the plan of the department to reduce the otal, rather than add to it.

		Frequency	Wavelength	Power										
Call	New Class A Stations	Keys	Meters	Watts										
WJBQ	Bucknell University, Lewisburg, Pa		211.1	100										
KFYR	Hoskins-Meyer, Inc., Bismarck, North D	akota1210	248	10										
KFUT	University of Utah, Salt Lake City, Utah.		261	100										
NEW CLASS "B" STATIONS														
WRVA	Sarus & Brother Co., Inc., Richmond, Va	1170	256	1000										
KPSN	Star-News Publishing Co., Pasadena, Ca	lif 950	315.6	1000										
TRANSFERS FROM CLASS "A" TO CLASS "B"														
KFAU	Independent School District of Boise Cit	ty,												
	Boise, Idaho		282.6	750										
KFDJ	Oregon Agricultural College, Corvallis, O)re1060	282.8	500										
KTAB	Tenth Avenue Baptist Church, Oakland,	Calif 900	333.1	1000										
KFKU	The University of Kansas, Lawrence, Ka	ansas1090	275	500										

All In Favor, Say, "Aye"!

November 20, 1925.

Radio Doings,

527 Van Nuys Bldg.,

Los Angeles, Calif.

Gentlemen :

Having known Mr. W. D. Scott for some time, it was when reading your article in the current number of "Radio Doings" that I was struck with the thought that the Howl Drug Company is certainly overlooking a bet in not using "Scotty's" photograph as a **truthful** advertisement of its Reliable Hair Restorer.

> Yours very truly, H. W. ALLEN.

DX Hounds, Please Answer!

Radio Doings, 527 Van Nuys Bldg., Los Angeles, Calif.

Gentlemen :

Radio A-2BL, Sydney, Australia, broadcasting on 353 meters, would like to know if they are heard on the Pacific Coast. Will you ask your readers to report to you their reception of A-2BL, Sydney, and will you then please forward the information to us?

Sincerely yours, EARLE C. ANTHONY, Inc. By Carl Haverlin, Asst. Advertising Manager.

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Questions and Answers

By K. G. ORMISTON Technical Editor, Radio Doings

NOTE.—Owing to the increased popularity of the Radio Doings Questions and Answer Seition and the large number of letters we receive daily, we desire to announce that in the future more space will be given to this department. We maintain a Technical Staff, whose knowledge and experience is at the disposal of all radio fans. Let us help to solve your radio problems.

QUESTION—I have several 45-volt B batteries that show 30 volts each. Can I use three of these batteries to make my required 90 volts of B battery for a 5-tube Stewart Warner set. It seems that I read a negative answer to this question, but did not state the reason. If your answer is "No," please explain why.

ALBERT LINDHOLM, Prescott, Arizona.

ANSWER-Atta Boy! Pardon the enthusiasm, but I sure like the fellow that wants to know "Why?" and won't take a plain yes or no for an answer. The answer is "No," and the reason as follows: The mere fact that a cell of dry battery consists of certain chemicals causes it to produce a certain voltage, and as long as those chemicals are present in active form they will produce the voltage, regardless of the quantity of the chemicals. In other words, in a dry cell the zinc, carbon and salamoniac kick up from a volt to a volt and a half no-load terminal voltage. Now, the ability to produce current, depends upon the QUANTITY of these elements which are present in useful form. Your B batteries may be dead as far as their current-producing ability is concerned, and yet still shows lots of voltage. This open circuit terminal voltage drops away to nothing, of course, when you attempt to put a load on the battery and draw current therefrom. If they would maintain their 30 volts each while giving you the necessary number of milliamperes current for the operation of your set, they would work for you O. K., but such is not the case. The ash heap is the proper place for 'em.

QUESTION—How do you determine the capacity of storage batteries in amperes. I purchased a new storage A battery and they told me it was 90 ampere-hours. After using it 12 hours Saturday and eight hours Sunday, my hydrometer showed the battery had discharged. It was fully charged or supposed to be when I started operations Saturday. The tubes draw 1/4 ampere, and I used four of them during the 20 hours, so should have consumed but 20 ampere-hours. It seems this proves the battery to be of much lower capacity than 90 A. H. How about it?

O. C. COX, Pasadena, Cal.

ANSWER-The capacity of a storage battery is computed from the area of the active surface of the plates and the number of plates. Radio batteries have for the most part been over-rated, however. Your hydrometer readings are inaccurate guides also, the important thing being to be able to maintain a potential of 5 volts at the terminals of the tube filaments for a reasonable number of hours with respect to the battery rating. You should be able to operate for, say, 60 hours before the voltage drop will begin to impair your reception.

November 28 Radio Doings Questions and Answers—Continued

QUESTION—it seems that when one wants radio information he turns to you, and in this case can you advise if there are any schools in Los Angeles teaching code. I desire to explore the air wave extensively and find out what the dots and dashes say.

-L. G. HICKS, Los Angeles, Cal.

ANSWER—There are two splendidly equipped schools in Los Angeles where the code is taught. The Y. M. C. A. Radio School, and the National Automotive and Electrical School.

QUESTION—As a regular subscriber to Radio Doings I wish to ask a question. I am enclosing a clipping of the "Kelcoil" circuit. Will a set so constructed squeal like an Armstrong regenerative? If so, can it be suppressed efficiently, and how?

-WALTER CLEMENT, Greenfield, Cal.

ANSWER-The Kelcoil circuit IS the Armstrong regenerative. This type of circuit squeals when the operator makes it squeal, through the use of too much regeneration. A properly designed and operated regenerative set need never squeal unless the operator desires that it should to aid him in finding a distant station. This is a characteristic of every regenerative set, and if suppressed you destroy the sensitiveness of the circuit and throw away efficiency. The way to suppress the squealing is to learn how to tune the set. This is properly done by advancing the regeneration control in such a way as you tune the wave-length adjustment that the tube is always just a wee bit below the point of oscillation.

QUESTION—I have been using Amperite automatic filament control on my set. I now desire to use the new Radiotron UX-112 in my last audio stage, and am writing to ask if the standard Amperite will be satisfactory on this new tube.

-LeROY ANDERSON, Ventura, Cal.

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ANSWER—No, do not use the same Amperite you have been using. Coincident with the appearance of the new tubes the Radiall Company, manufacturers of Amperite, brought out two new units. one intended for use with Radiotron UX-112 and one for UX-120. There are known as Amperite No. 112 and 120 respectively. Procure this new unit for use with your new tube.

QUESTION—Is it possible to make a one-tube regenerative or super-regenerator to work off a loop, which would be very directional for locating interference in a town of about one mile square, no electric railways to contend with? Do you know of a good underground receiving antenna which would answer the purpose for demonstrating sets on the main street of a town which is very noisy, and would not be directional?

ANSWER-It depends upon the volume of the interference. Orindarily a regenerative receiver will not give much satisfaction on a loop, unless you have good volume equivalent to that of a local broadcasting station. The superregenerative circuit has never proved practical in operation. Any set with a stage or two of R. F. amplification should serve the purpose. To increase the directional effect of the loop it is a good scheme to shield the set and ground the shield to prevent the windings in the set picking up any energy, depending solely upon the loop for reception. Yes, an underground antenna which will serve your purpose is advertised in this issue of Radio Doings.



November 10, 1925.

"Listeners-in-Club", Radio Doings, Los Angeles, Calif. My Dear Fans:

It has been a good while since I have written in to "Radio Doings" and so I am taking this opportunity to get my mind cleared.

I wish to congratulate Mr. Holt of this city in his fine reception this summer using 1-tube. Fine work, old man, keep it up!

My DX starting Oct. 31 has been WOK, WLS, WEBH, WHT, WCBD, WLIB, WENR, WMBB and WGN at Chicago. Then WSMB, WDAI, WFAA, WGR, WOAW, WDAF, KSD and KFKX. Am using 2 tubes now.

Clinton Kuhn of McKenzie Bridge, Ore., has the right idea shield those regenerative sets!

Jimmie Kilian: Thanks for ground idea. Will try it.

The new 1,000 watt station KQP has taken the air here in Portland. KQP operates on 248 meters and is the only Pacific Coast station to operate exclusively by remote control, being 7 miles outside the city. The studio is at the Portland Hotel. KQP is Class B and is a Western Electric station.

This affords the distant "listeners-in" a new station to tune for.

KFDJ at Cowallis, and KFWB at Hollywood have been retrodyning each other, so making it almost nil to hear either in Portland. KFDI has been on 254 meters, 500 watts and KFWB being two meters lower; now the wave of KFDJ is 282.5 meters, (Class B) which clears the interfering factors. KFDJ is on Mondays, Wednesdays and Fridays, from 7:30 to 9:00 P. M.

Fellows, have you noticed the queer calls now being used such as KTNT at Muscatine, Ia., and WPDQ at Buffalo, N. Y.?

Mr. F. M. Foster is right—kick the 50 watters from the time tables. Just use 100 watts and up.

My last week's issue of Radio Doings makes the 75th issue I have purchased. It sure is a great magazine.

Well, friends, pardon the space I have taken but I feel better now, hi. Cue, 73's.

W. J. BOHRER, 147 W. Emerson St., Portland, Oregon.

October 29, 1925.

Dear Editor:

I always read "The Red Book" from cover to cover every week and find it more interesting even than many other magazines costing five times more.

The LISTENERS-IN CLUB is one of the features that I am sure will be a success. As I have a home-made 7-tube Silver Marshall Superheterodyne and I have obtained very good results picking up stations from Mexico City to Calgary and from Honolulu to New York during this summer, I will like to hear from other owners of the same kind of set and compare our results and troubles.

A strange thing about my set is that I get Vancouver, Portland and St. Paul much better with less fading than any other station more powerful and closer to me.

> E. J. PELLET, 1191 Benton St., Santa Clara, Calif.

November 28



Buckeye, Arizona, November 12, 1925.

Listeners-in-Club, Radio Doings, Gentlemen:

How many of you agree with me that there is not a radio publication selling for five times its price that equals our little Red Book? Especially the arrangement of the programs and the Questions and Answers department are well worth more than it costs.

There appears to be a general belief that reception on the desert is not dependable. May I deny this through your columns. Using an Atwater Kent during the past summer when the mercury sometimes went up above 120 out here in Arizona I could always depend on one or two good nights every week. With cooler weather here now, reception is almost ideal. To illustrate: We have no difficulty in getting, with loud speaker volume every station with programs listed in the Red Book broadcasting on wavelengths between 270 and 500. Also KFKX of course, WFAA, WBAP, two Kansas City stations, two in Chicago, one in Cincinnati, San Antonio, Omaha, Des Moines and dozens of others. No. I'll take that back about the Pacific Coast stations. I have never been able to get KFOA. Can some of you tell me why?

A suggestion: Isn't there some way the listeners-in can get together and induce the broadcasfers to devote a part of the time at least to music that is now being wasted on jazz? A great deal of alleged "dinner music" that clutters up the air would give a deaf mule the colic.

C. A. NARRAMORE,

Buckeye, Arizona.

Dear Mr. Roberts:

What is the cure for the "Radio Boob"—the insufferable individual who ruins everybody else's radio reception.

For example: 5:30 p. m. today there is some ignoramous switching his or her dials around and thereby killing reception of anything over 1,000 miles. Chicago, Fort Worth, Kansas, Idaho and Arizona stations broadcast is ruined by some idiot. Each of these are coming in.

Sometimes I have the unkind wish that my 3 tuber radiated but then while I might kill the boob's reception I would hurt others who like myself are at all times desirous of "playing ball."

> HASTINGS, 5613 Speedway, Venice, Calif.

November 16, 1925.

Dear Sir:

It was hard enough to squeeze through local broadcasting before, but now that KPSN has appeared on the scene it will be harder on the DX bugs.

KPSN will ruin KSL and KOA. Why don't you publish article pro and con on the subject of a silent night, or two nights when the upper wavelength viz: KHJ, KFI, KNX will keep off the air and visa-versa.

After impartially presenting the question, you could take a vote on the subject by means of a voting blank in your magazine. If the vote was pro-silent night, the stations should agree to adopt the plan of the majority. If they wouldn't agree, well, blacklisting worked in Chicago. That's off my chest. Good luck and prosperity to the "big nickle's worth." Sincerely, ELMER JONES.

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November 13, 1925.

November 23

Thirty Stations Quit Air in October

CALL CLASS A STATIONS DELETED-КОР Apple City Radio Club, Hood River, Oregon. KFWD Arkansas Light & Power Co., Arkadelphia, Arkansas. WCBU Arnold Wireless Supply Co., Arnold, Pa. KFJZ W. E. Branch, Fort Worth, Texas, WGBG Breitenbach's Radio Shop, Thrifton, Va. WSAU Camp Marienfeld, Chesham, New Hampshire. WHBB The Copps Co., Stevens Point, Wis, KFCC The First Congregational Church, Helena, Mont. WIBP First Presbyterian Church, Merdiian, Miss. WTHS Flint Senior High School, Flint, Mich. WGBT Furman University, Greenville, S. C. WABB Harrisburg Sporting Goods Co., Harrisburg, Pa. WEAY Iris Theatre, Houston, Texas. WABA Lake Forest University, Lake Forest, Ill. KFRL Mens Club of the First Presbyterian Church, Grand Forks, N. D. WIBT Orlando Edgar Miller, (Portable Station) New York, N. Y. WHK The Radiovox Co., Cleveland, Ohio, **KFOL** Leslie M. Schafbuch, Marengo, Iowa, C. T. Sherer Co., Worcester, Mass. WCTS Southern Radio Corporation, Charlotte, N. C. **WBT** University of the City of Toledo, Toledo, Ohio. WIBK KFAN University of Idaho, Moscow, Idaho, WCBC University of Michigan, Ann Arbor, Mich. University of Utah, Salt Lake City, Utah. KFUT KFSY The Van Blaricom Co., Helena, Mont. KFUV G. Pearson Ward, Springfield, Mo. X-L Radio Service, Joliet, Ill. WIBD KFUZ Y. M. C. A., Virginia, Minn.

CLASS "B" BROADCASTING STATIONS DELETED.

WSACClemson Agricultural College of So. Carolina, Clemson Col., S. C.KFRUEtherical Radio Co., Bristow, Oklahoma.

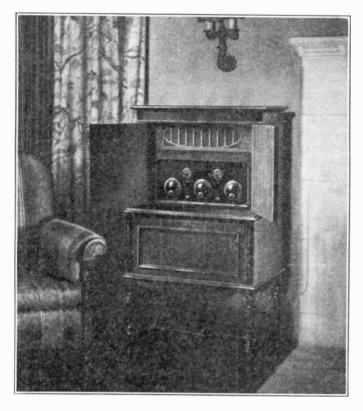
L. R. Tucker, Big Brother of KPO, is training a parrot to speak over the air. Big Brother, after telling his audience a story about parrots, received a number of requests from children to have a bird broadcast as they had never heard a parrot talk.



28



Special Equipment in a Magnificent Console



Other new Gilfillan models that may be seen at the dealers are a 5-tube set at \$110, and a 4-tube at \$70. The latter operates with dry batteries. Be sure to hear Gilfillan before you buy. Every Gilfillan dealer will be glad to demonstrate.



November 28

Radio Topics of the Day

A Weekly Review of Radio News, Thought and Opinion

SHORT WAVE TEST

Short-wave signals transmitted by WGY at Schenectady have been received with fair quality and easily read volume during the day 8,850 miles from the sending station and have been inaudible 200 miles from the transmitter. For several months tests have been conducted by the radio engineers of the General Electric Company on 41.88 meters wave length using approximately one kilowatt of power and from the reports received over a great territory it is apparent that this wave length is especially suitable for daylight transmission.

All programs of WGY have been transmitted on 41.88 meters, 109 meters and 1,560 meters, in addition to the assigned wave length of the station, 379.5 meters. The 41.88-meters transmitter has been used under the call letters 2XAF.

WGY recently received a letter from Robert L. Simpson of Pretoria, South Africa, stating that he had picked up the short waves on the morning of August 2, at 4:50 o'clock, South African time. His log checked with that of the station. His most interesting statement was: "As it got lighter here the signal strength increased gradually." Pretoria is 7,988 miles from Schenectady.

W. P. Huggins of Grey Lynn, Auckland, New Zealand, reported reception of WGY's 41.88-meter signal on the afternoon of July 4 and 5, between 3:15 and 4:30 o'clock. His log checked with the records of WGY, Auckland is 8,850 miles from WGY.

Stanley McClatchie, a radio experimenter residing in Stuttgart, Germany, received WGY on a receiving set in the Alps in daylight. Fans living in Belfast, Ireland; Liverpool, London and Furness, England; La Platte, Argentina and Calgary, Alberta, Canada, have successfully heard Schenectady.

TUBES TO LAST LONGER

The filaments of most low consumption tubes are made of thoriated-coated tungsten and naturally, when the thorium wears off the surface, the lectronic emission almost ceases. If the filament could be made of solid thorium, its life would be greatly lengthened, but heretofore this metal has been obtainable in limited quantities only. In the December Radio Broadcast magazine, Professor Morecroft, past president of the Institute of Radio Engineers, says that thorium is now available in considerably greater quantities, and that in the near future we may expect to have tubes of a much longer life than those at present on the market.

AUDIO AMPLIFICATION

Much has been written the past few months of the advantages and disadvantages of resistance-coupled audio frequency amplification, and generally it has been agreed that the quality obtained from such an amplifier is an improvement over that emanating from most transformer-coupled amplifiers. Describing a new receiver in the December Radio Broadcast magazine, Glenn H. Browning, of Browning-Drake fame, advocates the use of choke, or impedancecoupled stages, for the audio amplification. Radio Topics of the Day

A Weekly Review of Radio News, Thought and Opinion

Manual Manual

INTERNATIONAL TESTS

Complete co-operation from broadcasters in England and Europe is assured for International Radio Week, January 24 to 30, 1926, Arthur H. Lynch, editor of Radio Broadcast told the Fourth National Radio Conference refering to wireless messages just received from radio officials in Europe and England. Mr. Lynch, chairman of the committee handling the international radio broadcasting tests which will be a feature of International Radio Week early next year, states that U. S. stations are required to be silent only one hour each night or seven hours all told.

The National Association of Broadcasters, by formal vote, officially endorsed the movement, making more than twenty associations in the United States who are sponsors for the week.

COYPRIGHT QUESTION

Washington, Nov. 23 .- In the threeday discussions of the copyright committee headed by Representative Wallace White, Maine, which attempted to reach an agreement between the Society of Authors, Publishers and Composers and the broadcasters, the members were unable to dispose of this vexatious problem. After the committee had recommended to the conference that legislation be enacted to settle the question, Secretary Hoover advised that the matter be left as it now stood until a further effort has been made at concilliation. The recommendation of the Secretary was accepted, and the report tabled.

BEHIND THE MICROPHONE

When Dolly Macdonald sang for her radio tryout she was the most nervous girl the KFI judges had ever seen, in spite of which she made a very favorable impression and was booked for the 10 to 11 program the following night. Her log for the following night would read as follows: "9:00-left home for KFI. 9:05-my sedan wrecked by speeding car which turned over twice. 9:20-police station to report. 9:30-police car took me to KFI. 9:45-KFI elevator stuck. 9:55-KFI elevator unstuck. 9:56-9:57-accompanist faints. music lost. 9:58-music found. 10:00—sang two songs and accompanied myself." The moral seems to be-when singing for a radio station, leave home an hour before scheduled. When Miss Mcdonald was complimented on her nerve she said, "After trying out in front of that instrument of torture they call a microphone, nothing will ever have any effect on me again."

ACROSS THE ATLANTIC

International broadcasts from England and Germany are expected to reach this country for rebroadcasting soon, according to David Sarnof of the R. C. A. In exchange he expects to transmit a suitable program abroad. An R. C. A. station as Belfast, Me., is now experimenting with broadcast reception and retransmission of European signals. Already they hear Daventry's 40 KW set on 1600 meters, but weakly. Hope to transmit and retransmit over the Atlantic this year is expressed by R. C. A.

Reinartz Short Wave Set

Radio Doings

By K, G. ORMISTON

There is apparently sufficient interest in short wave reception, to warrant the publishing of the diagram for a set designed for such purpose. By short-waves we mean those in the neighborhood of 100 meters and under. While at present there are but a few stations to be heard, it affords considerable interest for the experimenter. In addition to KDKA and WGY, the short-wave fan now will have the mobile broadcast stations which are coming more into use daily.

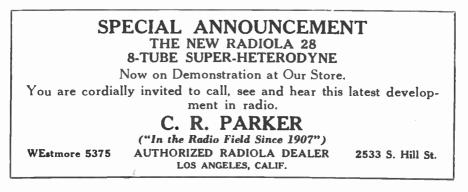
There is also a real thrill in the reception of KDKA in the late afternoon, and for the fan who is learning or who knows the International Morse Code, the amateur traffic on 80 meters affords an unusual source of interest and entertainment.

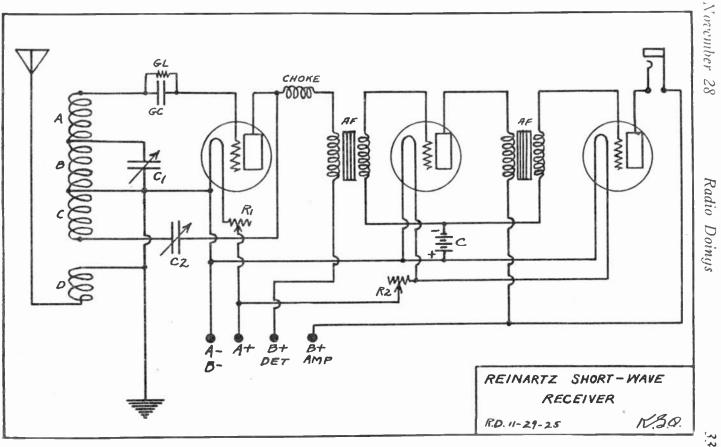
The amateurs have pioneered the short waves, hence we look to them for the most desirable circuit, and the one which we are illustrating is perhaps the most popular among the "hams," being the development of John Reinartz, famous for his work in short-wave amateur radio telegraphy. The receiver is of the regenerative type.

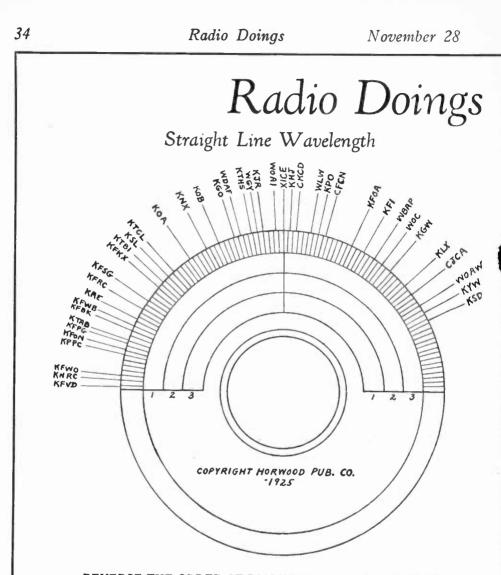
Coil ABC is in reality one winding tapped at two points. It may consist of 36 turns of No. 16 D. C. C. wire, tapped at 12 and 24 turns, wound on a $3\frac{1}{2}$ inch cardboard tube. Any form of coil or type of winding having equivalent inductance value may be used, there being some on the market of special low-loss type intended for this circuit. Coil D consists of about 10 turns of No. 16, $3\frac{1}{2}$ inch diameter. The coupling between coil D and coil ABC may be fixed when the best position is determined by experiment. The two tuning condensers CI and C2 are of 11 plates with vernier adjustment.

The choke coil in the lead from detector plate to audio transformer consists of a 3 inch length of broom-stick wound full with No. 30 D. C. C. wire. It's purpose is to restrict all radio frequency energy to the tuned circuits and to prevent the audio transformer primary capacity having any effect upon the tuned circuits.

Either a dry cell or storage battery tube may be used with 45 volts on the plate. The grid and plate leads in the detector circuit must be kept as short as possible. This type of regenerative circuit, has in general, been found more satisfactory than the standard threecircuit variety for the reason that the control of regeneration is more easily and accurately accomplished by means of condenser C2, than by the usual tickler adjustment.







REVERSE THE ORDER OF DIALING IF YOUR SET DIALS IN OPPOSITE DIRECTION TO ABOVE DIALOGRAM

We believe that the average fan, especially the beginner, can more readily find a distant station when he knows its relative position on the dial with respect to his local stations, rather than puzzling over the meters, wave length or frequency which mean so little to him.

The above diagram illustrates the relative position of the stations with respect to each other on the dial of the ordinary type of variable condenser. It is accurate for a strtaight-line-wave length condenser with tuning range of 200-600 meters, and relative on dials which cover a different range.

Space for logging your actual dial settings is provided.

Kur Kos

2 3

Dialogram

3

2

Straight Line Frequency

KTBI KTBI

KFWO_____ KNRC_____ KFVD_____

> COPYRIGHT-HORWOOD PUB. CO. 1925

REVERSE THE ORDER OF DIALING IF YOUR SET DIALS IN OPPOSITE DIRECTION TO ABOVE DIALOGRAM

This Dialogram is intended as an aid in tuning where condensers of the straight line frequency type are used. It is understood that the position of the stations as indicated are only relative, except on a pure S.L.F. condenser with tuning range from 1,500 to 500 kilocycles, when it is accurate as is.

If there is any doubt as to which type of condenser is used in your set, you can readily determine the type after tuning in two or three of the local stations and observing the spacing on your dial as compared with these two Dialograms.

Some condensers employ straight-line-frequency characteristics over the first half of the dial, and straight-line wavelength characteristics over the last half, in which case both Dialograms should be used to find the relative position of distant stations with respect to the locals.

Space for logging your actual dial settings is provided.



FOA

November 28

SUNDAY TIME TABLE

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ALL TIME TABLES ADJUSTED TO PACIFIC TIME (X) indicates Station is On the Air

(X) Indicates Station is On the Air																														
STATIONS		10-12 A.M.			12-2 P.M.			2-4 P.M.				4-8 P.M.				6-8 P.M.				8-10 P.M.				10-12 P.M.						
CALL	Wave Length Meters Power in Watts	STATION	10.00-10.30	10.30-11 00	11 00-11 30	11 30-12 00	12 00-12 30	12 30- 1 00	1.00-1 30	1 30- 2.00	2.00-230	2.30- 3 00	3 00- 3.30	3 30- 4 00	4 00- 4 30	4 30- 5.00	5 00~ 5 30	5 30- 6 00	5	6 30- 7 30	7 00~ 7.30	7 30- 8 00	8 00- 8 30	8 30- 9 00	9 00- 9 30	9 30-10 00				11 30-12 00
кні	405 500	Los Angeles	X	X	i X	X	X		i	1	i	1	<u> </u>	1	I X	X				X	X	I V	1 1 X I	1 1 1 X 1	X	X	X	-		-
KFI		Los Angeles	$\frac{1}{X}$		•	X			<u> </u>	<u> </u>	1	1		,	1 X	1			6 1	X					_	·				<u>. </u>
КТВІ	294 250	Los Angeles	-	X	<u> </u>	X	i xi			1	÷	-	1	1	1	<u></u>				X	X	X		X	X					_
KFSG		Los Angeles		X					· ·	1	÷	IX	X	X	X	r				_	X	X			- I	X				_
KNX	337 500	Los Angeles	x						1.1	<u> </u>	İX										X	X			X			-		<u> </u>
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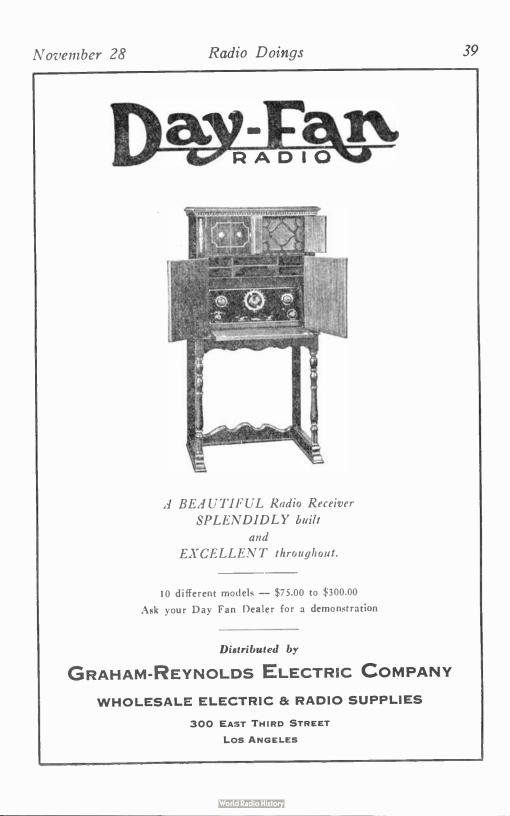


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THURSDAY TIME TABLE ADJUSTED TO PACIFIC TIME (X) Indicates Station is On the Air

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KTAB	240	1000	Oakland	1.	I	<u>.</u>															.			X	XI	X	X				<u> </u>
KGO	361	3000	Oakland.	1	X		X	X	X		X					X	X	XI	X	X		X		X	XI	XI	X	X	X	X	X
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KTHS	375		Hot Springs, Ark.	· · ·	X	·	•							÷		•			÷		÷	X	<u> X</u>	X	X	·	<u> </u>				
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Radio Doings



"Is there a more exacting test than this?"

The Howard Neutrodyne is built and tested in the midst of a group of the most powerful broadcasting stations in the country.

KYW, WGN, WMAQ, WLS, WQJ, WEBH, and others are all so close to the Howard plant that it is a real acchievement to tune in clearly any one of these stations while the others are operating. To break through such a formidable wall of high powered stations and pick up distant points with utmost clarity and volume is a real test.

A severe test indeed. But we actually welcome an opportunity to prove Howard qualities under similar unfavorable circumstances. We know that Howard owners will seldom if ever have to contend with conditions anywhere near so exacting.

If we were content with the ordinary tests it would take much less time, less care to produce a Howard. Our product would go out faster, and probably give "satisfaction"—as the term is generally understood.

But the Howard "Six" must do more than give average satisfaction. It must produce extraordinary results performance that is beyond anything previously experienced. We make certain of this by proving that each set is capable of such results *before* it leaves our plant.

Any Howard dealer will welcome the opportunity to demonstrate the new "Six" and put it to the most vigorous test you may choose.

Write for name of nearest Howard dealer, who will gladly demonstrate the new "Six" at your convenience



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47

SATURDAY TIME TABLE ADJUSTED TO PACIFIC TIME (X) Indicates Station is On the Air

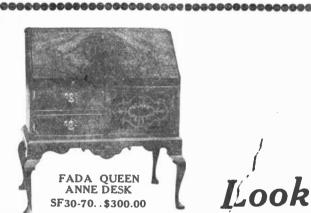
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Radio Doings

November 28

November 28

Radio Doings



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World Radio History





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Radio Doings

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640 KILOCYCLES-3000 WATTS

1000 SOUTH HOPE ST., LOS ANGELES, CALIFORNIA. Phone TR. 5141 Class "B" 5000-Watt Western Electric Station Operating on 3000 Watts GLEN RICE, Program Manager

DAILY EXCEPT SUNDAY-

5:30 to 6:00 p.m.—L. A. Examiner matinee program. 6:00 p.m.—KFI Nightly Doings and Amusement Information Service. 6:45 p.m.—KFI Radiotorial Period.

WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29-

10:00 a.m.-Morning servcices under the direction of the Los Angeles Church Federation.

4:00 p.m.--Vesper services, arranged by Gae Imlah.

6:30 p.m.-KF1 Nightly Doings and Amusement Information Service.

6:45 p.m.-Father Ricard's Sun Spot Weather Forecast. Music Appreciation Chat.

7:00 p.m .- Acolian Organ Recital, Dan L. MacFarland at the console.

*8:00 p.m.—Classic Hour, featuring Virginia Flohri, coloratura soprano, with assisting artists.

9:00 p.m.-Program presented by L. A. Examiner.

10:00 p.m.-Packard Six Orchestra, under the codirection of Bill Hennessy and Chet Mit tendorf. Dick Barton, soloist.

MONDAY, NOVEMBER 30-

7:00 p.m.-The Hollywood Serenaders, Jack McGuire, Manager.

8:00 p.m.-Artists Students Club of Pasadena, unde rthe direction of Dr. Leonard Siever.

*9:00 p.m.—Program of the Walter M. Murphy Motors Company, featuring Virginia Flohri, soprano, and the Pryor Moore Concert Orchestra,

10:00 p.m.-Program presented by L. A. Examiner.

TUESDAY, DECEMBER 1-

7:00 p.m .- The Odeon Trio with clarinet, bassoon and piano, with Drury Lennington, tenor, as soloist.

8:00 p.m .- Program presented by L. A. Examiner.

9:00 p.m .--- Program arranged by Hans Thorston and assisting artists.

*10:00 p.m.—Packard Ballad Hour, featuring The Ashley Sister, Billy Hall, Bobbie Gross, Polly Grant Hall, Charles Cole, Dick Barton, McLaughlin and Barabee. Marion Boogar and others.

WEDNESDAY, DECEMBER 2-

7:00 p.m.-Nick Harris: Detective Stories. Wednesday Night variety program with KF1 favorites.

7:20 p.m.-Program arranged by E. C. Bishop.

*8:00 p. m.—Weekly program of the Ventura Refining Company, presenting the Ventura String Quartet and other radio favorites.

9:00 p.m.—Program presented by L. A. Examiner. 10:00 p.m.—Betty Patrick and Patrick-Marsh Orchestra.

THURSDAY, DECEMBER 3-

7:00 p.m.—Program by students, University of Southern California. 8:00 p.m.—Rexall Stores of Southern California and Arizona. *9:00 p.m.—Program presented by the Southern California Music Company, from Chickering Hall. Los Angeles. 10:00 p.m.—Program presented by L. A. Examiner.

FRIDAY, DECEMBER 4-

7:00 p. m.—Program presented by L. A. Examiner. 8:00 p. m.—Aeolian Organ. Dan L. McFarland at the console. 9:00 p. m.—Variety program featuring Lee Bolin, tenor; Emma Kimmel, soprano. William MacDaugall, Scotch comedian.

*9:30 p. m.—Program of Mutual Motors, Inc., featuring music and "Joke Contest." 10:00 p. m.—Program presented by John Smallman and pupils.

SATURDAY, DECEMBER 5-

7:00 p. m.—Program presented by the Posadena Athletic and Country Club Quintet.
8:00 p. m.—Program presented by L. A. Examiner.
9:00 p. m.—The Oscar Seiling Ensemble.
10:00 p. m.—Packard Radio Club, featuring the Carlson Sisters, Dick Barton, Charles Cole. Polly Grant Hall, Bobbie Gross, Marion Boogar, Billy Hall and Howard Stevensen.
*11:00 p. m.—KF1 Midnite Frolic: Don Meaney presenting artists of screen and stage. William Beaudine, master of ceremonies. Program until 3 a. m. Copyright. 1925, Earle C. Anthony, Inc.

K H J-Los Angeles Times-405.2 Meters

500 WATTS-740 KILOCYCLES

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WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

DAILY EXCEPT SUNDAY-

7:00 to 7:15 a.m.—"Setting-up Exercises" conducted by Prof. Barclay L. Severns. 12:00 to 12:30 p.m.—Leighton's Arcade Cafeteria Orchestra, directed by Jack Cronshaw. 6:00 to 6:30 p.m.—Leighton's Arcade Cafeteria Orchestra.

SUNDAY, NOVEMBER 29-

JNDAT, NOVEMBER 29 10:00 a.m.-Sermon from KHJ studio by Miss Annette Foster.
 10:30 a.m. 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.
 4:00 to 5:00 p.m.-Afternoon musicale through the courtesy of the Western Auto Sup-

 B:30 to 7:00 p. m.—Leighton's Arcade Cafeteria Orchestra; Jack Cronshaw, director.
 7:00 to 7:30 p.,m.—Organ recital from the First Methodist Episcopal Church.
 8:00 to 10:30 p. m.—Program sponsored by Silverwood's, "The Home of Hart, Schaffner & Marc Clothes" Marx Clothes.

MONDAY, NOVEMBER 30-

12:00 to 12:30 p.m.—Leighton's Arcade Cafeteria Orchestra, directed by Jack Cronshaw. 12:30 to 1:30 p.m.—Program presenting the Piggly Wiggly Stores. TUESDAY, DECEMBER 1—

ULESDAY, DECEMBER 1—
12:00 to 12:30 p. m.—Leighton's Arcade Cafeteria Orchestra; Jack Cronshaw, director.
12:30 to 1:30 p. m.—Program of dance music.
2:30 to 3:30 p. m.—Matinee program sponsored by the Pacific States Electric Co.
3:30 p. m.—Weekly auction bridge game.
6:30 to 7:30 p. m.—Children's program presenting Prof. Walter Sylvester Hertzog. Radio Historian; weekly visit of the Radio Fairies. Queen Titania and her Sandman; Louis F., Kisis harmonia, autohary: Charles Leslie Hill Asversold reader and Lengre Kil. Klein, harmonica and autoharp; Charles Leslie Hill, 4-year-old reader, and Lenore Killian, contralto.

7:30 p. m.—H. M. Robertson will talk on "Dogs."
7:45 p. m.—O. G. Pirie, associate editor of the Radio Blue Book Magazine, will talk on "Cruise of the Radio Ship Wireless."

8:00 to 10:00 p. m.—Program sponsored by the Frank Meline Company (Trees). 10:00 to 11:00 p. m.—Art Hickman and his Biltmore Dance Orchestra.

WEDNESDAY, DECEMBER 2-

 12:00 to 12:30 p. m.—Leighton's Arcade Cafeteria Orchestra; Jack Cronshaw, director.
 12:30 to 1:30 p. m.—Program presenting Le Roy Parry and his Elite Orchestra.
 1:30 p. m.—Fred C. McNab of Aggeler & Musser Seed Co. will give his weekly "Garden Talk.

2:30 to 3:30 p.m .- Matinee program through the courtesy of the Pacific States Electric Company.

6:30 to 7:30 p.m.--Children's program presenting Prof. Walter Sylvester Hertzog, Radio Historian; Dick Winslow, screen juvenile reporter; Mickey McBan, screen juvenile; Carl Eastwood, 11 years, and Harold Marshall, 12 years, saxophonists, pupils of the Thomp-Eastwood, 11 years, and marold Warshall, 12 years, saxophonists, pupils of the son Progressive School for Saxophone, and Vivian Marple, "Blue Bell of KHJ,"
8:00 p. m.—Dr. Mars Baumgardt will lecture on "Astronomy."
8:30 to 10:30 p. m.—Program sponsored by the Peerless Laundry Co.
10:30 to 11:30 p. m.—Art Hickman and his Biltmore Dance Orchestra.

THURSDAY, DECEMBER 3-

THURSDAY, DECEMBER 3— And the Distinct Contestration of the orthogenetic orthogenetic or Radio

RIDAY, DECEMBER 4— 12:00 to 12:30 p.m.—Leighton's Arcade Cafeteria Orchestra, directed by Jack Cronshaw. 12:30 to 1:30 p.m.—Rod Loring's Oaks Tavern Orohestra and Betty Abbott, girl baritone. 2:30 to 3:30 p.m.—Matinee program sponsored by the Pacific States Electric Co. 6:30 to 7:30 p.m.—Children's program presenting Prof. Walter Sylvester Hertzog, Radio Historian; Richard Headrick, screen juvenile; Bettiemae Pfefferkorn, 7-year-old singer, 1990 Korl Britandt, Const. and Karl Brigandi, cornet. 8:00 to 10:00 p.m.—Art Hickman and his Biltmore Dance Orchestra.

10:00 to 11:00 p.m.—Art Hickman and his Biltmore Dance Orchestra.
SATURDAY, DECEMBER 5—
12:00 to 12:30 p.m.—Leighton's Arcade Cafeteria Orchestra, directed by Jack Cronshaw.
12:30 to 1:30 p.m.—Program of dance music by the Egyptian Ballroom Orchestra
2:30 to 3:30 p.m.—Matinee program sponsored by the Pacific States Electric Co.
6:30 to 7:30 p.m.—Children's program presenting Prof. Walter Sylvester Hertzog, Radio Historian; Dollie Wright, "Dolly of Radioland," and Henrietta Poland.
8:00 to 10:00 p.m.—Program through the courtesy of the White Auto Co., distributors of Auburn cars

10:00 to 11:00 p.m.—Art Hickman and his Biltmore Dance Orchestra. 11:30 p.m. to 2:00 a.m.—The Times Tomcats will "Meow" from KHJ.

Sleward Warner

Why Stewart-Warner Radio?

Stewart-Warner radio equipment is the result of over two years of constant experimenting on the part of skilled radio engineers who, while thousands of experimental sets were being placed on the market as perfected articles, devoted their entire time to the development of the Matched Unit radio that is now being sold by over 60 exclusive Stewart-Warner dealers in Southern California.

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K N X-Los Angeles Evening Express-337 Meters

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Paul G. Hoffman's Studebaker Building, 6116 Hollywood Blvd., Hollywood. Phone HO. 2800 NAYLOR ROGERS, Manager CARRIE P. RITTMEISTER, Program Manager

DAILY EXCEPT SUNDAY—
7:30 a.m.—K N X Morning Gym, directed by J. C. Casey, physiotherapist.
.8:00 a.m.—Inspirational talk and morning prayer.
9:00 a.m.—Town Crier of the Day's morning message.
10:30 a.m.—Kate Brew Vaughn, director Household Economics, Evening Express.
12:00 noon to 1:00 p.m.—Wurlitzer organ recital from Wurlitzer Studio (except Sunday of Monday) and Monday).

1:30 p.m .--- The Book Worm.

2:00 to 5:00 p.m.—Radio matinee. Market reports. 5:30 to 6:15 p.m.—Wurlitzer organ concert, Wurlitzer Studio. 5:55 p.m.—The Town Tattler. 6:15 p.m.—W. F. Alder, travelogue.

6:30 to 7:00 p.m.—Atwater-Kent Orchestra, Ray Thomas, Inc., su Equipment Co., distributors of Atwater-Kent radio receiving sets. Inc., successors to Electric

WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29-

10:00 a.m. to 12:00 noon--First Presbyterian Church of Hollywood,

2:00 to 4:00 p.m.-City Park Board musical program.

2100 to 8100 p. m.—First Presbyterian Church of Hollywood, Rev. Stewart P. MacLennan. 8:00 to 9:00 p. m.—Ambassedor Concert Orchestra, Josef Rosenfeld leader.

9:00 to 10:30 p.m.-Reeve-Gartzmann, Inc., courtesy program.

MONDAY, NOVEMBER 30-

2:00 to 3:00 p. m.-West Coast Theatres from West Coast Studio. 2:00 to 3:00 p. m.-Ward Heater Co. courtesy program.

4:00 p.m.-Helen's Household Hints.

4:00 p. m.—Helen's Household Hints.
7:00 to 7:30 p. m.—Outual Motors Inc. mirth contest. Town Crier of the Night Watch.
7:30 to 8:00 p. m.—Columbia Outfitting Co. courtesy program.
8:00 to 9:00 p. m.—L. W. Stockwell Co. courtesy program.
9:00 to 10:00 p. m.—Listenwalter & Gough courtesy program.
10:00 to 11:00 p. m.—B. F. Goodrich Rubber Co. of Akron, Ohio, courtesy program.
10:00 to 12:00 p. m.—Hotel Ambassador -Ray West's Cocoanut Grove Orchestra.

TUESDAY, DECEMBER 1-2:00 to 3:00 p.m.-Mother's Hour 7:00 to 7:45 p.m.-Roy L. Donley Co., manufacturers of Meritas Fabric Coupe Bodies,

5:45 p.m.—Talk on health by Dr. Robert T. Williams. **8:00** to 9:00 p.m.—Zinke's Re-Bottoming Shoe Co. program. Town Crier of the Day.

Biolo to 9:00 p. m.—Zinke's Re-Bottoming Since Co. program.
9:00 to 9:30 p. m.—Cavalier Shoe Stores courtesy program.
10:00 to 12:00 p. m.—(Movie Night) Ambassador Hotel; Ray West's Cocoanut Grove Orchestra and Town Crier of the Night Watch.

WEDNESDAY, DECEMBER 2-

(EDNESDAY, DECEMBER 2—
8:45 a. m.—Wesley Beans, baritone.
4:00 to 5:00 p. m.—Talk on care of children by Dr. Wayne B. Burr.
7:00 to 8:00 p. m.—Iotel Ambassador Concert Orchestra: Joseph Rosenfeld, leader.
8:00 to 9:00 p. m.—Vecurity Trust & Savings Bank courtesy program.
9:00 to 10:00 p. m.—Dance Orchestra.

THURSDAY, DECEMBER 3-

11:00 a.m.—Nature talk, courtesy Marvel Ant Gelatine Co.
7:00 to 8:00 p.m.—H. L. Crockett Co., Hudson-Essex Dealer; Town Crier of the Night.
8:00 to 9:00 p.m.—Willys-Overland Dealers of Southern California courtesy program.
9:00 to 10:00 p.m.—M. Weinstein courtesy program.
10:00 to 11:00 p.m.—Hotel Ambassador. Ray West's Cocoanut Grove Orchestra.
FRIDAY, DECEMBER 4—

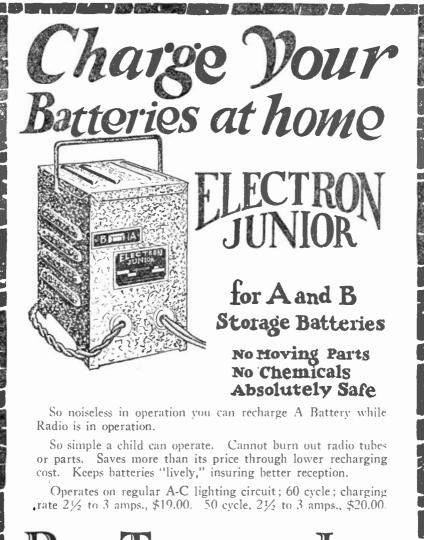
1:00 p.m.—The Village Gossip.
2:00 to 3:00 p.m.—L. A. District Federation ? Women's Clubs musical program.
7:00 to 7:30 p.m.—El Patio Ballroom Orchestra.

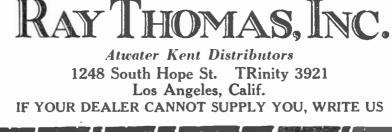
7:30 p. m.—Eastern Outfitting Co. courtesy program; Town Crier of the Night Watch. 8:00 to 9:00 p. m.—West Coast Theatres from West Coast Studio.

9:00 to 10:00 p.m.—West Coast Incatres from west Coast Studio. 9:00 to 10:00 p.m.—Davis Perfection Bread Co. courtesy program. 10:00 to 11:00 p.m.—Walter G. Scheck Inc. courtesy program. 11:00 to 12:00 p.m.—Hotel Ambassador; Ray West's Cocoanut Grove Orchestra. SATURDAY, DECEMBER 5—

ATURDAY, DECEMBER 5—
8:15 a.m.—Pacific Electric Art and his banjo.
10:30 a.m.—French lesson by Floryane of KNX.
2:00 p.m.—Broadcasting the football game; U. S. C. vs. Oregon Aggies.
7:00 p.m.—Announcement of Sunday services by the leading L. A. Churches.
7:30 to 8:00 p.m.—Wurlitzer organ concert from Wurlitzer studio.
8:00 to 10:00 p.m.—Commercial Construction Co. program; Town Crier of the Day Watch.
11:00 p.m. to 2:00 a.m.—Hollywood Night.

11:00 p.m. to 2:00 a.m.-Hollywood Night.





K F W B-Warner Bros. Motion Picture Studios

500 WATTS-252 METERS-1190 KILOCYCLES

"MOVIELAND"

Warner Bros. West Coast Studio—5842 Sunset Boulevard, Hollywood, California CHARLIE WELLMAN, Manager and Announcer Phone GL. 9461

WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29-

SUIDAT, NOVEMBER 29—
 9:00 to 11:00 p.m.—George Cronk's California Serenaders; the California Blue Boys— Chas. Hamp and Earl Reynolds; Wilda Bernard, soprano; Tom Breneman, baritone: Jack Kurtz, pianist and whistler; Albert Keglovich, violin; Charlie Cole, popular songs; Jean-nette Rubens, guest accompanist. Several of Warner Bros. Stars always drop in the studio on Sunday evenings and participate in the entertainment.
 MONDAY, NOVEMBER 30—

5:00 to 6:00 p.m.—Children's Hour, conducted by Big Brother of KFWB. 7:00 to 8:00 p.m.—Microphone Brevities. 8:00 to 9:00 p.m.—Program presented by courtesy of the Globe Ice Cream Company and the Weber Baking Company.

9:00 to 10:00 p. m.—Program presented by courtesy of the Star Motor Car Company, featuring the Million Dollar Four Orchestra; Estelle Shake, Blue singer; Tom Breneman, baritone; Ray Kellogg and Bill Hatch, violin and piano (popular numbers).
10:00 to 11:00 p. m.—Warner Bros', Frolic.
11:00 to 12:00 p. m.—Henry Halstead's Orchestra broadcasting from the Hollywood Roof Britterer

Ballroom

TUESDAY, DECEMBER 1-

5:00 to 6:00 p. m.—Children's Hour, conducted by Big Brother of KFWB. 7:00 to 7:15 p. m.—Dr. W. I. Schuster, weekly health talk.

7:00 to 7:15 p.m.—Dr. W. I. Schuster, weekly health talk.
7:15 to 7:30 p.m.—Microphone Brevities.
7:30 to 8:00 p.m.—Program presented by courtesy of Elmer R. Sly Co.
9:00 to 10:00 p.m.—Program presented by courtesy of the Paralta Photographic Studios, featuring the Paralta String Trio, violin, 'cello and organ; Drove Norton Lindsay, tenor.
10:00 to 12:00 p.m.—Henry Halstead's Orchestra broadcasting from the Hollywood Roof Ballroom.

Ballroom.

WEDNESDAY, DECEMBER 2-

5:00 to 6:00 p.m.—Children's Hour, conducted by Big Brother of KFWB. 7:00 to 7:30 p.m.—Program presented by courtesy of Mutual Motors, Inc. Several jokes

are read during this half hour and cash prizes are awarded.

7:30 p.m.—Microphone Brevities.
8:00 to 9:00 p.m.—Program presented by courtesy of the Cheek-Neal Coffee Company, featuring the Maxwell House Coffee String Quartet, under direction of Harry Jackson;

Teaturing the Maxwell House Correcting Quartet, under direction of Harry Jackson; Charles Beauchamp, tenor; Lee Kent and her terrapache.
9:00 to 10:00 p.m.—Program presented by courtesy of the Western Pacific Securities Company, Santa Monica, featuring Bill Hatch's Hoot Owl Orchestra, Peggy Mathews, Blue singer; Frank Stever, baritone, among others.
10:00 to 11:00 p.m.—Warner Bros.' Frolic.
11:00 to 12:00 p.m.—Henry Halstead's Orchestra broadcasting from the Hollywood Roof

Ballroom.

THURSDAY, DECEMBER 3-7:00 to 7:15 p.m.—Dr. T. Lloyd Brown, plastic and facial surgeon. 7:15 to 7:30 p.m.—Microphone Brevities.

7:30 to 8:00 p. m.—Program presented by courtesy of Elmer R. Sly Co. 8:00 to 9:00 p. m.—Program presented by courtesy of the Starr Piano Company, featuring the Hollywood Rhythm Kings and other artists.

9:00 to 10:00 p.m.—Program presented by courtesy of Don P. Smith, Inc., featuring the Diana-Moon Orchestra and other artists.
10:00 to 11:00 p.m.—Warner Bros.' Frolic, of which Charley Ilch's Sunset Canyon Country

Club Orchestra will be a feature.

11:00 to 12:00 p.m.-Henry Halstead's Orchestra broadcasting from the Hollywood Roof Ballroom

FRIDAY, DECEMBER 4-

7:10 p. m.—Edgar Johnson, sergeant of police, Traffic Bureau, Los Angeles, will give a short talk on "Safety First."
 7:20 p. m.—Jack Boaz, hunting and fishing scout of the New York Hardware Trading Co.
 7:30 p. m.—Herbert S. Marshutz, short Eye-ologue.

7:40 p.m.-Microphone Brevities.

8:00 to 9:00 p. m.—Program presented by courtesy of John Wright, the Right Tailor. 9:00 to 10:00 p. m.—Program presented by courtesy of the Western Super-Service Garage, 10:00 to 11:00 p. m.—Warner Bros.' Frolic. 11:00 to 12:00 p. m.—Henry Halstead's Orchestra broadcasting from the Hollywood Roof Ballroom

SATURDAY, DECEMBER 5-

 IURDAY, DECEMBER 5—
 7:45 p. m.—Microphone Brevities.
 8:00 to 10:00 p. m.—Program presented by courtesy of Radio Doings, "Radio Doings Revels," featuring Bill Blake, tenor; Emma Kimmel, soprano; the Hollywood String Trio, and others. Besides a high class musical entertainment, Radio Doings will give you a great deal of technical information in regards to your sets, how to dial them in order to the the travity of the set. to obtain the best results, etc.

10:00.to.11:00.p.m.—Warner Bros.' Frolic. 11:00 to 12:00 p.m.—Henry Halstead's Orchestra broadcasting from the Hollywood Roof Ballroom.

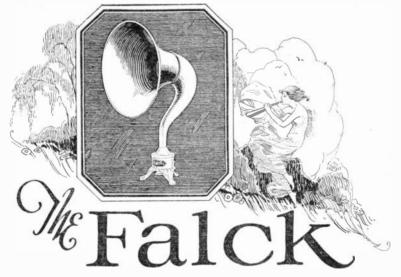
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KFSG—Angelus Temple—275.1 Meters

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WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29-

60

10:30 a.m. to 12:30 p.m.—Complete church service. Sermon by Aimee Semple McPherson. Charlotte Tyson Foljombe, soprano. Angelus Temple Male Quartet. Temple choir. directed by Gladwyn N. Nichols. Great Temple organ and chimes played by Esther Fricke Greene.

Estner Fricke Greene.
2:30 to 4:30 p. m.—Afternoon service with dispensational address by Aimee Semple Mc-Pherson. Special numbers by the Temple Silver Band, directed by Gladwyn N. Nichols. Mrs. C. D. Smith, fancy drummer and xylophone player. Will J. Stitt, baritone.
7:00 to 8:00 p. m.—Musical hour. Continuity program. Thomas Johnson, baritone. Bible School Quartet. Choir and band, direction of Gladwyn N. Nichols.
8:00 to 9:45 p. m.—Revival service conducted by Aimee Semple McPherson. Illustrated

Altar Call and After Service. message.

10:00 to 11:00 p.m .- Organ recital by Esther Fricke Greene. Helen Stanhope, soprano, and Gladwyn N. Nichols in sacred ducts and solos.

TUESDAY, DECEMBER 1— 10:30 to 11:30 a.m.—Sunshine Hour. Fanny Ashby, Radio Girl. Helen Stanhope, soprano and accompanist. Sermon and prayers for the sick by Rev. Gladwyn N. Nichols. 11:30 a.m. to 12:30 p.m.—Organ recital by B. Earnest Ballard. Margaret McNeil and

Ruth Winter Hanna, sopranos.

 3:30 to 4:30 p. m.—Organ recital by B. Earnest Ballard.
 6:30 to 7:30 p. m.—Gray Studio program by Harry James Beardsley and Eugene Lamb, pianist. Cousin Jim's hour with the children—stories and articles taken from "Compton's Picture Encyclonedia" ton's Picture Encyclopedia.

WEDNESDAY, DECEMBER 2-

10:30 to 11:30 a.m.-Sunshine Hour. Sermon and prayers for the sick by Anita Hopper. 11:30 a.m. to 12:30 p.m.—Organ recital by B. Earnest Ballard. Amanda Garden, reader. Felecia Lavender Black, soprano. Eleanor Maegle, violinist.
2:30 to 5:30 p.m.—Regular Divine Healing Service by Aimee Semple McPherson.
6:30 to 7:30 p.m.—Angelus Hour. Program presented by Angelus Temple Ukulele Band

THURSDAY, DECEMBER 3-

10:30 to 11:30 a.m.—Sunshine Hour. Sermon by Anita Hopper. Prayers for the sick by Rev. Bert Bruffett. Fanny Ashby, Radio Girl. Helen Stanhope, soprano 11:30 a.m. to 12:30 p.m.—Organ recital by Esther Fricke Greene.

3:30 to 4:30 p.m.—Organ recital by B. Earnest Ballard. 7:30 to 9:15 p.m.—Regular Water Baptismal Service conducted by Aimee Semple Mc-Pherson.

9:15 to 10:00 p.m.—Gray Studio program by Ruth Frances Thomas. 10:00 to 11:00 p.m.—Organ recital by Esther Fricke Greene.

FRIDAY, DECEMBER 4---10:30 to 11:30 a.m.-Sunshine Hour. Sermon and prayers for the sick by Anita Hopper.

10:30 to 11:30 a.m.—Sunshine Hour. Sermon and prayers for the sick by Anita Hopper.
11:30 a.m. to 12:30 p.m.—Organ recital by Esther Fricke Greene.
3:30 to 4:30 p.m.—Organ recital by Esther Fricke Greene. Organ numbers.
7:30 to 9:30 p.m.—Crusader Rally. Address by Alimee Semple McPherson. Live-wire program arranged by the young people for the young people.
9:30 to 10:30 p.m.—Cray Studio program presented by the Temple Silver Band,
SATURDAY, DECEMBER 5—
10:30 to 11:30 a.m.—Sunshine Hour. Sermon and prayer for the sick by Rev. Gladwyn N. Nichols. Fanny Ashby, Radio Girl. Helen Stanhope, soprano and accompanist.
11:30 a.m. to 12:30 p.m.—Crigan recital by Esther Fricke Greene. Clyde Umhey, baritone.
3:30 to 4:30 p.m.—Children's Orchestra directed by Helen McNaughton.
7:30 to 9:30 p.m.—Divine Healing Service conducted by Aimee Semple McPherson.

PENETROLA

TEST No. 1.-Los Angeles: Receiver dials set at 300 meters. Tuning broad. Interference without Penetrola severe from both KNX and KFSG. Nothing else audible but static. Throwing Penetrola switch on without another adjustment faded all interfence and gave KSL every word clear and distinct with good loud speaker volume.

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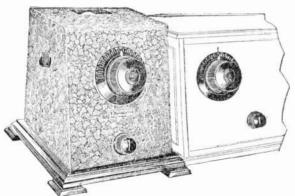
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3.Tube Regenative Less Penetrola With Penetrola	0 -	WQJ, Chicago 2,000* 0
5-Tube Tuned R.F. Less Penetrola With Penetrola	CNRW, Winnipeg 0 1.300	WGN, Chicago 150 0
6-Tube Super Less Penetrola With Penetrola	0	WLS, Chicago 350 0

*Maximum reading on audibility meter.

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LOS ANGELES

K T B I-Bible Institute of Los Angeles-294 Meters

750 WATTS-1020 KILOCYCLES MR. M. E. CARRIER, Manager Phone ME. 6701 PROF. H. G. TOVEY, Director of Programs WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29-10:45 a.m. to 12:30 p.m.—Regular morning services of the Church of the Open Door. 6:00 to 6:45 p.m.—Radio Vesper service. Sermon by Rev. E. E. Ford. 7:15 to 9:30 p.m.—Regular evening services of the Church of the Open Door.

 MONDAY, NOVEMBER 30—
 8:00 to 9:00 p.m.—Musical program featuring Winnifred Pennell, organist; Clifford Lily-guist, bass soloist; Leland Green, saxophone soloist; Miss Thelma Grene and Miss Helen Yeths, accompanists.

TUESDAY, DECEMBER 1-8:00 to 9:00 p.m.-Salvation Army Citadel Band under the direction of H. A. Gooding. WEDNESDAY, DECEMBER 2-

8:00 to 9:00 p.m.—Program arranged by the Alhambra Community Broadcasters. THURSDAY, DECEMBER 3— 8:00 to 9:00 p.m.—Exposition of the Whole Bible Sunday School lesson FRIDAY, DECEMBER 4—

7:00 to 8:00 p.m.-International Sunday School lesson taught by Rev. J. A. Hubbard.

K F W O-The Island Station-211.1 Meters "Katalina for Wonderful Outings" AVALON, SANTA CATALINA ISLAND, CALIFORNIA MAJOR LAWRENCE MOTT

MISS FRANCES HEWITT

Owner-Operator

Studio and Program Director

Power 250 Watts-Western Electric Equipment WEEK COMMENCING MONDAY, NOVEMBER 30, 1925

DAILY-

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12:30, to 1:30; 6:30 to 7:45 p.m.-Hotel St. Catherine Orchestra and Studio.

TUESDAY, DECEMBER 1 --5:00 to 6:00 p.m.-Miss Hewitt's "Golden Hour."
7:45 to 8:30 p.m.-Studio and Mrs. C. B. Parker, the only woman fish taxidermist in the world, in weekly talks on "Game Fish of the Pacific."

The world, in weekly talks on "Game Fish of the Pacific."
THURSDAY, DECEMBER 3—

7:45 to 8:30 p.m.—Judge Ernest Windle, studio discussion on Psychology.

FRIDAY, DECEMBER 4—

5:00 to 6:00 p.m.—Miss Hewitt's "Golden Hour" and the Rev. LaRue C. Watson.
7:45 to 9:00 p.m.—"Overseas Night" and K F W O Quartette. (Miss Hewitt, soprano; Mrs. Williams, contralto; Mr. C. E. Patterson, tenor; Mr. Williams, bass.)

SUNDAY, DECEMBER 6-

5:00 to 6:00 p.m.—Miss Hewitt's "Golden Hour." 8:15 to 9:15 p.m.—Hotel St. Catherine Concert Orchestra in lobby of hotel.

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SUNDAY, NOVEMBER 29-

5:00 to 6:00 p.m.—Classical program by Kennedy Orchestra. 7:00 to 9:00 p.m.—Dance program by Kennedy Orchestra.

MONDAY, NOVEMBER 30—
12:00 to 1:00 p.m.—Owen Fallon's California Orchestra.
1:00 to 3:00 p.m.—Thappy Dodge," the KNRC minstrel, and his Blue Monday musical.
7:00 to 9:00 p.m.—Rod Loring and his Oaks Tavern Orchestra, Betty Abbott, the girl baritone, assisting.

28th and Dayton.

-Chesterfield Syncopaters dance hour. 8:00 to 9:00 p.m.-

WEDNESDAY, DECEMBER 2-3:30 to 4:30 p.m.-Matinee dance program by Geo. Lane Orchestra. 7:00 to 9:00 p.m.-lack Smith's KNRC Orchestra.

 THURSDAY, DECEMBER 3 -- 3:30 to 4:30 p. m. -- Matinee dance program of Kennedv Orchestra.
 7:00 to 9:00 p. m. -- Mosby's Blue Blowers, courtesy Fred Solomon, "Dance King," of Los Angeles

FRIDAY, DECEMBER 4— 3:30 to 4:30 p.m.—Greenwich Village Orchestra, courtesy of Greenwich Village, Hotel Christie, Hollywood.

Christie, Hollywood,
 7:00 to 9:00 p. m.— Jimmy Tighe Orchestra, assisted by entertainers of Sutton Cafe.
 SATURDAY, DECEMBER 5—

 3:30 to 4:30 p. m.— Matinee musical furnished by the Figueroa Music Shop of Los Angeles.
 7:00 to 9:00 p. m.— Dance program, courtesy Beach Amusements.

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Daily except Sunday, at 9:00 a.m.—Postal Telegraph Time Signal. DAILY EXCEPT SUNDAY— 9:00 a.m.—'Dad's Hour," by Dad King. 10:00 a.m.—Educational hour.

2:00 p. m.—Turner radio program. 2:30 p. m.—Easy Chair program. WFEK COMMENCING MONDAY, NOVEMBER 30, 1925

WPEN COMMENCENT INCLUSING, 1, 10 CLART, 1, 10 CLART, 1, 10 CLART, 1, 10 CLART, 1, 10 CLART, 1, 10 CLART, 1, 10 CLART and the Ukulele Kids. 7:15 p.m.—Program through the courtesy of the Los Angeles Y. M. C. A. 8:00 to 10:00 p.m.—KMTR Concert Hour, presenting the Turner Orchestra, Loren Powell.

director

TUESDAY, DECEMBER 1-

ESDAY, DECEMBER 1— 9:30 a.m.—Sylvia Szymanski, "The Blind Cook." 3:00 p.m.—Rev. S. J. Skevington, pastor of Hollywood Baptist Church. 4:00 to 5:00 p.m.—Tryout Hour, (Not broadcast.) 5:00 p.m.—Home Hour, conducted by Georgia Simmons, with Billy Lord, Margaret Bond and neighborhood children.

-E. P. Barclay, lecturer and explorer, will talk on the diamond mines of Central 7:30 p.m.-Africa.

8:00 to 10:00 p.m.-KMTR Concert Hour, presenting the Turner Orchestra. Loren Powell, director. Tom Mitchell. WEDNESDAY, DECEMBER 2-Tom Mitchell, baritone.

12:00 to 1:00 p.m.—Luncheon program by the Windsor Ensemble.
3:00 p.m.—Mr. F. J. Schwankowsky on "Art Appreciation."
5:00 p.m.—Home Hour, conducted by Georgia Simmons, with pupils of Geraldine Kasal.
7:00 p.m.—Dr. Dain T. Tasker, vice-president of the Osteopathic Sanitarium Hospital. 7:00 p. m.—Dr. Dain T. Tasker, vice-president of the Osteopathic Sanitarium Hospital, will talk on "Health." 8:00 to 10:00 p. m.—KMTR Concert Hour, presenting the Turner Orchestra, Loren Powell,

director. Rondeau Male Quartette.

THURSDAY, DECEMBER 3-

9:30 a. m.—Sylvia Szymanski, "The Blind Cook." 10:30 a. m.—Sylvia Szymanski, "The Blind Cook." 10:30 a. m.—Willsie Martin, D.D., pastor of First Methodist Church, Hollywood. 2:30 p. m.—Easy Chair Hour, presenting Charles G. Milham, secretary of the All-Year Club, on "The Future of Los Angeles." 5:00 m.—Home Hours conducted by Country Structure Structure and Structure and Structure Structu

Stolp, m.—Home Hour, conducted by Georgia Simmons, presenting pupils of Carter Weaver's School of the Drama and Pantomime.
 7:15 p. m.—University of California, Southern Branch, "Campus Nite."
 8:00 to 10:00 p. m.—KMTR Concert Hour, presenting the Turner Orchestra, Loren Powell,

director.

FRIDAY, DECEMBER 4-1:00 p. m.—Turner Radio program.

1:00 p. m.—lurner Rado program. Tryouts. (Not broadcast.)
5:00 p. m.—Home Hour, conducted by Georgia Simmons, with neighborhood children.
7:00 p. m.—Charles W. Beam on "Color Photography."
7:30 p. m.—Prof. Alfred Cookman, president of the Los Angeles Nature Club, on "The Wonders of Nature," birds and animal life.
8:00 to 10:00 p. m.—KMTR Concert Hour, presenting the Turner Orchestra, Loren Powell,

director.

 SATURDAY, DECEMBER 5—
 1:00 p.m.—Dr. F. P. Woellner, Associate Professor of Education of the University of California, Southern Branch, will talk.
 1:30 to 1:45 p.m.—G. Cordon-Whitnall, director-manager of City Planning Commission.
 8:00 to 10:00 p.m.—KMTR Concert Hour, presenting the Turner Orchestra, Loren Powell, director.

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REV. ROBERT FREEMAN, D.D., Pastor G. ANTON POHLMAN, Announcer

WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29-

10:30 a.m.—Tower chimes by Samuel L. Allen, and announcements. 11:00 a.m.—Sermon by Rev. Robert Freeman, D.D. Music by church quartet.

7:00 p.m.-Organ recital

7:30 p. m.—Sermon by Rev. Robert Freeman, D.D., Galata Tower, Constantinople—The Religion of the Green Turban. Music by church quartet.

WEDNESDAY, DECEMBER 2—
 7:00 p.m.— The Religion of the Bible in the World Today," last of series of supper lectures by Dr. Freeman.

7:30 p.m.-Prayer meeting, led by Dr. Freeman. Discussional question, If you had your life to live over again, what main changes would you make?







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K P O-Hale Brothers & The Chronicle, 428.3 Meters SAN FRANCISCO, CALIFORNIA 1000 WATTS-700 KILOCYCLES ing Director. MRS. FREDERICK CROWE, Program Director. OLIVER W. TUTTLE, Managing Director. CLAIR E. MORRISON, Technical Director DAILY EXCEPT SUNDAY-7:00, 7:30, 8:00 a.m.—Daily dozen exercises given under the direction of the Y. M. C. A. 10:30 a.m.—'Ye Towne Cryer' and amusement information service. U. S. weather forecast. 12:00 noon—Time signals. Scripture reading. 1:00 to 2:00 p.m.—Rudy Seiger's Fairmont Hotel Orchestra. 2:30 p.m.-A short talk appropriate for Constitution Day, which opens Educational Week. WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925 SUNDAY, NOVEMBER 29— 9:45 to 10:45 a. m.—Undenominational and non-sectarian church service. Talk, "Thanksgiving and Thanksliving," by Dr. W. A. Philips, pastor St. John's Presbyterian Church, 10:45 a. m.—"Ye Towne Cryer" and amusement information service. 5:00 to 6:00 p. m.—Organ recital by Marshall W. Giselman 6:00 to 6:30 p. m.—Waldemar Lind and the States Restaurant Orchestra. 6:30 p. m.—Waldemar Lind and the States Restaurant Orchestra. 6:30 p. m.—Palace Hotel Concert Orchestra, Cyrus Trobbe, director. 8:30 to 10:00 p. m.—Rudy Seiger's Fairmont Hotel Orchestra. MONDAY, NOVEMBER 30— 2:30 to 3:30 p. m.—Program given by the trip from the Truett-George Studie SUNDAY, NOVEMBER 29-MONDAY, NOVEMBER 30— 2:30 to 3:30 p.m.—Program given by the trio from the Truett-George Studio, 5:30 to 6:15 p.m.—Children's hour stories by Big Brother 6:15 to 6:30 p.m.—A. A. Housman stock market quotations. 6:30 to 6:15 p.m.—Children's hour stories by Big Brother 6:40 p.m.—'Ye Towne Cryer' and amusement information service. 6:40 to 7:00 p.m.—Waldemar Lind and the States Restaurant Orchestra. 7:00 to 7:30 p.m.—Rudy Seiger's Fairmont Hotel Orchestra. 8:00 to 8:45 p.m.—Uda Waldrop Night. Organ recital by Uda Waldrop, 8:45 to 9:00 p.m.—Program featuring baritone solos by Austin Black, trio selections by the Philharmonic Trio from Modesto, with Uda Waldrop as accompanist 10:00 to 11:00 p.m.—Waldemar Lind and the States Restaurant Orchestra. TUESDAY, DECEMBER 1— 2:30 p.m.—Studio matinee program. 2:30 p. m.—Studio matinee program. 3:30 to 4:30 p. m.—Cyrus Trobbe's Palace Hotel Concert Orchestra. 5:30 to 6:15 p. m.—Children's hour stories by Big Brother 6:15 p. m.—A. A. Housman stock market quotations. 6:30 p. m.—'Ye Towne Cryer' and amusement information service. 6:40 p. m.—Waldemar Lind and the States Restaurant Orchestra. 7:00 to 7:30 p.m.—Rudy Seiger's Fairmont Hotel Orchestra. 8:00 to 9:00 p.m.—Studio program. 9:00 to 10:00 p.m.—Program given through the courtesy of the Mona Motor Oil 10:00 to 11:00 p.m.—Jack Coakley's Cabirians playing at Cabiria Cafe. WEDNESDAY, DECEMBER 2-2:30 p. m.-Program of Hawaiian music by Duke Kamoku's Royal Hawaijans 5:30 to 6:15 p.m.-Children's hour stories by Big Brother 5:30 to 6:15 p.m.—Children's hour stories by Big Brother 6:15 p.m.—A. A. Housman stock market quotations. 6:30 p.m.—'Ye Towne Cryer'' and amusement information service. 6:40 to 7:00 p.m.—Waldemar Lind and the States Restaurant Orchestra. 7:00 to 7:30 p.m.—Rudy Seiger's Fairmont Hotel Orchestra. 8:00 to 9:00 p.m.—Program by the Atwater Kent Artists 9:00 to 10:00 p.m.—Waldemar Lind and the States Restaurant Orchestra. 10:00 to 11:00 p.m.—Waldemar Lind and the States Restaurant Orchestra. THURSDAY, DECEMBER 3— 2:30 to 3:30 m. mathematics program IURSDAY, DECEMBER 3--2:30 to 3:30 p. m.—Studio matinee program. 3:30 to 4:30 p. m.—Cyrus Trobbe's Palace Hotel Concert Orchestra. 5:30 to 6:15 p. m.—Children's hour stories by Big Brother of KPO. 6:15 p. m.—A. A. Housman stock market quotations. 6:30 p. m.—Ye Towne Cryer" and amusement information service. 6:40 to 7:00 p. m.—Rudy Seiger's Fairmont Hotel Orchestra. 8:00 to 9:00 p. m.—Program given through the courtesy of the Don Lee Cadillac Co. 9:00 to 10:00 p.m.—Jack Coakley's Cabirians playing at the Cabiria Cafe. FRIDAY, DECEMBER 4— RIDAY, DECEMBER 4— 12:45 p.m.—Talk from the Commonwealth Club luncheon at the Palace Hotel. 5:30 to 6:00 p.m.—Big Brother's Uncle Jack in entertainment for the children. 6:00 to 6:10 p.m.—'Ye Towne Cryer' and amusement information service. 6:10 to 6:20 p.m.—A. A. Housman stcok market quotations. 7:00 to 7:30 p.m.—Cyrus Trobbe's Concert Orchestra from the Palace Hotel. 8:00 to 11:00 p.m.—Palace Hotel Concert Orchestra, Cyrus Trobbe, director. SATURDAY, DECEMBER 5 2:30 p.m .- Program under the direction of Lincoln Batcheldor, 2:30 p. m.—Program under the direction of Lincoln Batcheldor, 3:30 p. m.—Palace Hotel Concert Orchestra, Cyrus Trbobe, director. 6:15 p. m.—Football scores. A. A. Housman stock market quotations. 6:30 p. m.—'Ye Towne Cryer' and amusement information service, 6:35 to 7:30 p. m.—Waldemar Lind and the States Restaurant Orchestra. 8:00 to 12:00 p. m.—Cabiria Cafe Orchestra, Jack Coakley, director.

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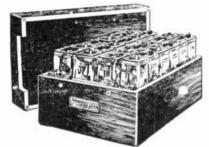
K F R C-City of Paris Dry Goods Co.-268 Meters 50 WATTS-1120 KILOCYCLES SAN FRANCISCO, CALIFORNIA ser HARRISON HOLLIWAY, Station Master LANSING TEVIS, Manager WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925 SUNDAY, NOVEMBER 29-5:30 to 6:30 p. m.—Program, courtesy of "Noah's Ark." 6:30 to 7:30 p. m.—Concert in Drury Lane, Hotel Whitcomb, by Stanislaus Bem's Little Symphony Orchestra: Symptony Orcnestra: 8:00 to 10:00 p.m.—Overture, Die Fledermaus, Strauss; Wintersturme, Waltz, Fucik; Selections from Die Bajadere, Kalman; Dreams, Wagner; L'Arlesienne Suit, Bizot. 10:00 to 12:00 p.m.—Dance music from 11 Trovatore Cafe, by Paul Kelli's Orchestra. MONDAY, NOVEMBER 30— MONDAY, NOVEMBER 30— 10:00 a.m.—Household Hints by Mary Lewis Haines. 5:15 p.m.—Talks on Law, Marcus L. Samuels. 5:30 to 6:30 p.m.—'Mac and His Cang' and The Stamp Man, Mr. Morell. 6:30 to 7:00 p.m.—Jo Mendell and his Pep Band, Lido's Cafe. 7:15 to 7:30 p.m.—'Intakes and Exhausts,' Gasoline George. 8:00 to 9:00 p.m.—'Mac' Round the Camp-Fire. 9:15 to 10:00 p.m.—Theatre Arts Club Players, directed by Talma Zetta-Wilbur. TUESDAY, DECEMBER 1— 2:30 to 3:30 p.m.—''and the camp's Havening Outbeaters ESDAY, DECEMBER 1— 2:30 to 3:30 p.m.—James Lano's Hawaiian Orchestra, 5:30 to 6:30 p.m.—''Mac and His Gang." 6:30 to 7:00 p.m.—Fred McKinley of Bijin's, popular songs, 7:00 to 7:15 p.m.—Talk by J. M. Cunningham, Anglo California Trust Company. 8:00 to 9:00 p.m.—Studio Program: Ruth Linrud Thompson, harp and voice, 9:00 to 9:30 p.m.—Feature Studio Program; Wayland Sisters, Paula George. 9:00 to 9:30 p.m.—Feature Studio Program; Wayland Sisters, Paula George. WEDNESDAY, DECEMBER 2— 10:00 a.m.—Household Hints, Mary Lewis Haines, S. F. "Call." 11:00 a.m.—Warvel Ant Gelatin Company." 12:00 noon to 12:20 p.m.—Inspirational Talk, Mary Katherine Maule. 2:30 to 3:30 p.m.—James Lano's Hawaiians. 5:30 to 6:30 p.m.—"Mac and His Gang." 6:30 to 7:30 p.m.—Concert from Drury Lane, Hotel Whitcomb. 8:00 to 9:00 p.m.—Bem's Little Symphony. Intermission solos, Edythe West, sop 8:15 p.m.—University of California Extension Lecture. Intermission Health Talk. 9:00 to 10:00 p.m.—Studio program. THURSDAY, DEMEMBER 3— 12:00 noon to 12:20 p.m.—Inspirational Talk, Mary Katherine Maule soprano. 12:00 noon to 12:20 p.m.—Inspirational Talk, Mary Katherine Maule. 4:00 to 5:00 p.m.—Rex Glissman's Orchestra, Taverne De Paris. 5:15 to 5:30 p.m.—Talks on Law, by Marcus L. Samuels. 5:30 to 6:30 p.m.—Unce music, Norman Woodsides Metropolitan Orchestra from Roberts-at-the-Beach. 10:00 to 10:30 p.m.—Cressy Ferrar-Sollmon. SATURDAY, DECEMBER 5— 12:00 noon to 12:20 p.m.—Inspirational Talk, Mary Katherine Maule. 4:00 to 5:00 p.m.—Tea hour music, Stanislaus Bem's Little Symphony Orchestra, 5:30 to 6:30 p.m.—Wac and His Gang." 6:30 to 7:30 p.m.—Wilt Cunzendorfor's Band, playing in Drury Lane, Hotel Whitcomb. 8:00 to 1:00 a.m.—Wilt Gunzendorfor's Band. Get the Distance TALLY'S BOOSTER-LOOP (\bigcirc) °°° (O) FOR

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WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29-

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9:45 to 10:45 a.m.—Bible Lecture by Prof. E. G. Linsley. 11:00 a.m. to 12:30 p.m.—Church Service. 7:45 to 9:00 p.m.—Church Service 9:30 to 11:00 p.m.—After-Service concert.

MONDAY, NOVEMBER 30-

9:00 to 9:30 a.m.—Prayer Service by Rev. E. L. Spaulding. 4:00 to 5:00 p.m.—Women's Club notes. 8:00 to 10:00 p.m.—Program by Western States Life Insurance Company.

TUESDAY, DECEMBER 1-

9:00 to 9:30 a.m.—Prayer Service by Rev. G. W. Phillips. 8:00 to 10:00 p.m.—Program by Mutual Stores.

WEDNESDAY, DECEMBER 2-

9:00 to 9:30 a.m.-Prayer Service by Rev. G. W. Phillips.

THURSDAY, DECEMBER 3---

9:00 to 9:30 a.m.—Prayer Service by Rev. G. W. Phillips. 8:00 to 10:00 p.m.—Studio program.

FRIDAY, DECEMBER 4-

9:00 to 9:30 a.m.—Prayer Service by Rev. E. L. Spaulding. 8:00 to 10:00 p.m.—Program by Breuner's.

- SATURDAY, DECEMBER 5-
 - 9:00 to 9:30 a.m.—Prayer Service by Rev. E. L. Spaulding.

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DAILY EXCEPT SUNDAY

7:15 to 7:30 a.m.—Health Training Exercises. 7:45 a.m.—''Pep'' class.

8:15 to 8:30 a.m.—Health Training Exercises. 8:30 a.m.—Daily Strength, "Cherrio."

11:30 a.m. to 1:00 p.m.—Luncheon concert, courtesy Pacific States Commercial Co

12:00 non-Time signals. 12:30 p.m.-U. S. weather reports. 1:30 p.m.-N. Y. and S. F. stock reports.

WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29-

11:00 a.m.—Service of Calvary Presbyterian Church, San Francisco; Rev. Ezra Allen Van Nuva, D.D., minister.

7:30 p. m.—Concert by KGO Little Symphony Orchestra. Hymn to the Sun, orchestra. 7:30 p. m.—Service of the Calvary Presbyterian Church, San Francisco. 7:30 p.m.—Service of the Calvary Presbyterian Church, San rrancisco. MONDAY, NOVEMBEBR 30— 3:00 to 4:00 p.m.—Musical program. 5:30 to 6:00 p.m.—Aunt Betty stories and KGO Kiddies' Klub, Ruth Thompson. 6:00 to 7:00 p.m.—Dinner concert from Sherman, Clay & Co. studio, San Francisco. 7:00 p.m.—News items. 7:10 p.m.—Weather Bureau report.

7:13 p. m.—Weather Bureau report. 7:13 p. m.—New York stock reports (closing). 7:20 p. m.—San Francisco stock reports (closing).

8:00 p. m.—Educational program. 8:10 p. m.—"Physical Culture for the Family," Hugh Barrett Dobbs. 8:25 p. m.—"Chats About New Books," Joseph Henry Jackson. 8:45 p. m.—"Spanish Names in California." Dr. John T. Grant. 9:05 p. m.—"All About Some So-called Bad Children," Dr. Albertine Richards Nash. 9:30 p. m.—"All About Some So-called Bad Children," Dr. Albertine Richards Nash. 9:36 p. m.—National Farm Radio Council. Poor Butterfly, Arion Trio. 1:40 p. m.—San Francisco V.

ESDAY, DECEMBER 1— 1:40 p. m.—San Francisco stock reports. 1:45 p. m.—Weather Bureau reports. 4:00 to 5:30 p. m.—Concert Orchestra of the Hotel St. Francis, San Francisco, 5:30 p. m.—''As a Woman Thinketh,'' Louise Landis, newspaper woman's page writer. 6:00 to 7:00 p. m.—Dinner concert from Sherman, Clay & Co.

7:00 p. m.—News items. 7:10 p. m.—Weather Bureau report.

7:10 p. m.— Weather Bureau report.
7:13 p. m.—New York stock reports (closing).
7:20 p. m.—San Francisco stock reports (closing).
8:00 p. m.— "Radio Breezes" by K C B, famous newspaper columnist.
8:10 p. m.—Oakland studio program. Concert by KGO Little Symphony Orchestra.
9:30 p. m.— "Auction Bridge Feature."
10:00 to 11:00 p. m.—Dance music program from the Hotel St. Francis, San Francisco. WEDNESDAY, DECEMBER 2-

1:40 p. m.—San Francisco stock reports.
1:45 p. m.—Weather Bureau reports.
3:00 to 4:00 p. m.—Oakland High School Orchestra program.
4:00 to 5:30 p. m.—Concert Orchestra of the Hotel St. Francis, San Francisco.

5:30 p.m.—Mr. Fix·it. 7:00 p.m.—News items.

7:10 p.m.—Weather Bureau report.

7:13 p.m.—New York stock reports (closing). 7:20 p.m.—San Francisco stock reports (closing).

7:20 p.m.—San Francisco stock reports (closing). THURSDAY, DECEMBER 3— 1:40 p.m.—San Francisco stock reports. 1:45 p.m.—Weather Bureau reports. 4:00 to 5:30 p.m.—Concert Orchestra of the Hotel St. Francis, San Francisco, 5:30 to 6:30 p.m.—George W. Ludlow, "Friend to Boys."

5:30 to 6:30 p.m.—George W. Ludlow, "Friend to Boys."
8:00 p.m.—Oakland studio program.
10:00 p.m. to 12 midnight—Dance music program by Ben Black's Orchestra.
FRIDAY, DECEMBER 4—

IDAY, DECEMBER 4—
1:40 p.m.—San Francisco stock reports.
3:30 to 4:00 p. m.—''Magazine Article Digest" by Literary Service Bureau.
4:00 to 5:30 p.m.—Concert Orchestra of the Hotel St. Francis, San Francisco.
5:30 to 6:00 p. m.—Dinner concert from Sherman, Clay & Co. studio, San Francisco.
7:00 p.m.—News items.
7:10 p.m.—Weather Bureau report.
7:12 p.m.—Weather Bureau tech report.

7:13 p. m.—New York stock reports (closing). 7:20 p. m.—San Francisco stock reports (closing).

SATURDAY, DECEMBER 5-

A:00 to 5:30 p. m.—Concert Orchestra of the Hotel St. Francis, San Francisco, ¹
8:00 p. m.—Weekly "Sport Review" by Al Santoro.
8:10 p. m.—National Carbon Co. program, San Francisco studio. "The Merry Wi
10:00 p. m. to 12 midnight—Dance music program from the Hotel St. Francis, comic opera by Franz Lehar, presented under the direction of Carl Anderson; "The Merry Widow,"

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WEEK COMMENCING MONDAY, NOVEMBER 30, 1925

MONDAY, NOVEMBER 30-

4:00 to 5:00 p.m.—Women's hour.
5:00 to 5:30 p.m.—Aunt Elsie's Sunset Matinee.
7:00 to 7:30 p.m.—News broadcast.
8:00 to 9:00 p.m.—Program through courtesy of Piggly Wiggly stores .
9:00 to 10:30 p.m.—Meting of the Protective Order of Lake Merritt Ducks. Special guest night: Knights of Pythias.

TUESDAY, DECEMBER 1-

7:00 to 7:30 p.m.—News broadcast. Silent after 7:30 p.m.

WEDNESDAY, DECEMBER 2-

4:00 to 5:00 p.m.—Women's hour. 5:00 to 5:30 p.m.—Aunt Elsie's Sunset Matinee. 7:00 to 7:30 p.m.—News broadcast. 8:00 to 9:00 p.m.—Educational program.

9:00 to 10:00 p.m.—Evocational program broadcast through the courtesy of Olin S. Grove Radio Store. 10:00 to 11:30 p.m.—Sweet's ballroom; Tom Gernovich and his entertainers.

THURSDAY, DECEMBER 3-

7:00 to 7:30 p.m.—News broadcast. Silent after 7:30 p.m.

FRIDAY, DECEMBER 4-

4:00 to 5:00 p.m.-Women's hour.

5:00 to 5:30 p.m.—Aunt Elsie's Sunset Matinee. 7:00 to 7:30 p.m.—News broadcast. 8:00 to 9:45 p.m.—Special program. 9:45 to 10:30 p.m.—Sweet's ballroom; Tom Gernovich and his entertainers.

SATURDAY, DECEMBER 5-

7:00 to 7:30 p.m.—News broadcast. Silent after 7:30 p.m.

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K R E-Berkeley Daily Gazette-259 Meters

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DAILY EXCEPT SUNDAY— 7:30 a.m.—Good Thought Service for Today. (Conducted by Rev. Chas. Nott.) 11:15 a.m.—Physical Exercises for Women.

7:00 p.m.-Current news by leased wire.

WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29 10:00 to 11:00 a.m.—Church service conducted by the University Christian Church of Berk-eley, California, Rev. Chas. E. Watson, pastor.

6:30 to 7:30 p. m.—Dinner concert by the California Trio of San Francisco.
 8:15 to 9:00 p. m.—Social concert by the California Trio and assisting vocalists.
 9:00 to 10:00 p. m.—Hour of Sacred Music
 MONDAY, NOVEMBER 30—

8:00 to 10:00 p.m.-(Play Night.) Studio program. TUESDAY, DECEMBER 1-

9:00 p.m.—(Educational Night.) Studio progragram: Part I—Travelogue Talk, "A Trip to the Filipino Islands," by B. L. Stetson, of Crabtree's Travel Office, Berkeley.
9:15 p.m.—Studio program: Part II—Musical program arranged and sponsored by the Twentieth Century Club of Berkeley, Calif., Mrs. G. A. Mattern, president.
10:15 to 11:00 p.m.—Dance program.

WEDNESDAY, DECEMBER 2-

EDNESDAY, DECEMBER 2— 5:00 to 6:00 p.m.—Kiddies' Hour with Big Brother. Stories and reading of letters. 5:30 p.m.—Kiddies' Entertainment by pupils from the John Muir Elementary School 12:00 midnight—Dance program by Horace Heidt and his Hotel Claremont Dance Orchestra 6:30 p. m.—Studio program: Special entertainment by artists from the Berkeley Theaters 10:00 p. m.—Studio program. 10:00 p.m.—Studio program. THURSDAY, DECEMBER 3— 8:00 to 10:00 p.m.—(Community Night.) Studio program arranged 10:00 to 11:00 p.m.—Dance program. FRIDAY, DECEMBER 4— 9:00 to 12:00 p.m.—Dance program 9:30 p.m.—Studio program: Intermission solos by members of the orchestra.

The Aristocrat E-Z-Toon group control can be had with either master dial or master pointer knob for use on engraved panel. The illustra-tion chowe the diel

tion shows the dial.

For the set you the s

9:30 p.m.—Studio program: Intern
 SATURDAY, DECEMBER 5—
 8:00 to 1:00 a.m.—Dance program
 9:00 p.m.—Studio program:
 10:00 p.m.—Studio program:

Kurz-Kasch Aristocrat E-Z-Toon Group Control

For the set you have - For the set you build



Makes tuning easy by grouping two or more tuning units together under control of a single master dial, or pointer knob, and at the same time provides a

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Announcement—

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To Dealers and Individual Radio Owners: We are pleased to announce our perfection of a combination A and B eliminator unit for peanut tube sets.

This is not merely a makeshift battery and charger tie-up but a REAL and Scientific Eliminator—utilizing and rectifying BOTH WAVES—and also

The Automatic Six Volt Battery Charger

which eliminates all worries for owners of big sets, is now offered in addition to our already well-known and established

B Power Unit

Merely connect the AUTOMATIC CHARGER to the battery and electric light current and then

Forget It!

To save delay, get YOUR order in early

DEMONSTRATIONS at dealers-jobbers-factory showroom

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K F O A-Pacific Northwest Station-454.3 Meters 500 WATTS-660 KILOCYCLES

RHODES DEPARTMENT STORE, ARCADE SQUARE, SEATTLE, WASHINGTON (Paolific Time) CARL E. HAYMOND, Station Director

WEEK COMMENCING MONDAY, NOVEMBER 30, 1925

MONDAY, NOVEMBER 30

12:45 to 1:30 p. m.—The Lions Club luncheon program
6:00 to 6:45 p. m.—The Lions Club luncheon program.
4:00 to 5:15 p. m.—The Times "Afternoon at Home" program. Today's recipe.
6:00 to 6:45 p. m.—Pacific States Electric Co., :
6:45 to 8:15 p. m.—The Times dance program by Goodrich Silvertown Cord Orchestra.

TUESDAY, DECEMBER 1

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TUESDAY, DECEMBER 1— Intros dance program 4:00 to 5:15 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Concert Orchestra.
6:00 to 5:15 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Concert Orchestra.
6:00 to 6:45 p.m.—Pacific States Electric Co., presenting the Hoffman Concert Orchestra.
6:15 p.m.—Weather report and Special Announcements.
9:30 to 11:30 p.m.—Eddie Harkness Dance Orchestra ;
WEDNESDAY, DECEMBER 2—
12:30 to 1:30 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Orchestra.
6:00 to 6:45 p.m.—The Rotary Club luncheon program
4:00 to 5:15 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Orchestra.
6:00 to 6:45 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Orchestra.
6:00 to 6:45 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Orchestra.
6:00 to 6:45 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Orchestra.
6:00 to 6:45 p.m.—The Times Organ Recital from the Elk's Club.
THURSDAY, DECEMBER 3—
12:30 to 1:30 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Concert Orchestra.
6:00 to 6:45 p.m.—The Times Organ Recital from the Elk's Club.
THURSDAY, DECEMBER 4—
12:30 to 1:30 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Concert Orchestra.
12:30 to 1:30 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Concert Orchestra.
12:30 to 1:30 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Concert Orchestra.
FRIDAY, DECEMBER 4—
12:30 to 1:30 p.m.—Seattle Chamber of Commerce program from C. of C. Building.

FRIDAY, DECEMBER 4—
12:30 to 1:30 p. m.—Seattle Chamber of Commerce program from C. of C. Building,
4:00 to 5:15 p. m.—The Times, Wm. F. Hoffman's Olympic Hotel Concert Orchestra.
6:00 to 6:45 p. m.—Pacific States Electric Co., presenting the Hoffman Concert Orchestra
6:45 to 8:15 p. m.—Sherman, Clay & Company studio program.
8:30 to 10:00 p. m.—The Times studio program.
10:00 to 11:30 p. m.—Eddie Harkness Dance Orchestra,
SATURDAY, DECEMBER 5—

4:00 to 5:15 p.m.—The Times, Wm. F. Hoffman's Olympic Hotel Concert Orchestra.
6:00 to 6:45 p.m.—Pacific States Electric Co., presenting the Hoffman Concert Orchestra
9:30 to 11:30 p.m.—Eddie Harkness Dance Orchestra,



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Concert Grand \$35.00 Mica Diaphragm

This is Mr. Baldwin's latest invention, and the last work in radio. Do not buy a loud speaker until you have heard a genuine Nathaniel Baldwin on both local and especially distance broadcasting.

Other styles of Baldwin Loud Speakers are:

Concert-Metal Diaphragm - Gold or Silver Crackle-\$30.00. Cabinet Style-\$30.00.

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Symphony-Metal Diaphragm-Black Crackle-\$17.50. Utility-Mica Diaphragm-Black Crackle-\$14.00.

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PORTLAND, OREGON 500 WATTS-610 KILOCYCLES

DAILY EXCEPT SUNDAY.

AILY EXCEPT SUNDAY— 7:15 a.m.—Physical Culture Exercises. 10:30 a.m.—Town Crier, weather reports, news items and shopping guide. 12:30 to 1:30 p.m.—Rose City Trio, courtesy Pacific States Commercial Company. 7:30 to 7:45 p.m.—Weather, market, police reports, sporting results and news items.

WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29

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10:55 to 9:00 p. m.—Services by wire telephony from St. Stephens Pro-Cathedral. 7:55 to 9:00 p. m.—Services by wire telephony from First Church of Christ, Scientist. MONDAY, NOVEMBER 30—

6:00 to 7:00 p.m.—Dinner concert, courtesy Olds, Worthman & King. 9:00 to 10:00 p.m.—Concert.

9:00 to 10:00 p. m.—Concert.
TUESDAY, DECEMBER 1—
6:00 to 7:00 p. m.—Dinner concert, courtesy Olds, Worthman & King.
7:45 to 8:00 p. m.—Talk, Oregon Bankers' Association.
8:00 to 10:00 p. m.—Educational program. Talk, "Sound Investments," courtesy George H. Burr. Conrad & Broom, Auction Bridge Lessons. "Style" Talk, by the Sage of Yamhill County, courtesy of Charles F. Berg. Music by McElroy Quartette.
10:00 to 12:00 p.m.—Concert. Dance music by wire telephony from Indian Grill of Multhomah Hotel.

WEDNESDAY, DECEMBER 2-6:00 to 7:00 p.m.-Dinner concert, courtesy Olds, Worthman & King. 8:00 to 9:00 p.m.-Band concert, Seventh U. S. Infantry Band, 10:00 to 11:00 p.m.-Concert from Sherman, Clay & Co. Studio.

THURSDAY, DECEMBER 3-

2:30 p.m.-Football game by direct Western Union wire from Seattle, Washington. University of Oregon vs. University of Washington.

University of Oregon vs. University of Washington. 6:00 to 7:00 p.m.—Dinner concert, courtesy Olds, Worthman & King. 7:45 to 8:00 p.m.—Lecture, Catholic Truth Society. Silent after 8:00 FRIDAY, DECEMBER 4— 6:00 to 7:00 p.m.—Dinner concert, courtesy Olds, Worthman & King. 9:00 to 10:30 p.m.—Concert from Sherman, Clay & Company Studio. 10:30 to 12:00 midnight—Hoot Owls. Silent after 8:00 p. m.

SATURDAY, DECEMBER 5---6:00 to 7:00 p.m.—Dinner concert, courtesy Olds, Worthman & King. 9:00 to 12:00 p.m.—Dance music by wire telephony from Indian Grill of Multnomah Hotel

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K O A—Rocky Mountain Broadcasting Station

322.4 METERS-930 KILOCYCLES-2000 WATTS 322.4 METERS-930 KILOCYCLES-2000 WATTS GENERAL ELECTRIC COMPANY, DENVER, COLORADO Pacific Standard Time DAILY EXCEPT THURSDAY, SATURDAY AND SUNDAY---11:45 a. m.--Weather, stock, market and produce reports. 12:15 p. m.--Rialto Theatre music. 3:30 p. m.--Relaxing and corrective exercises. 3:30 p. m.--Relaxing and corrective exercises. 4:00 p. m.--Culinary hints. 4:15 p. m.--Fashion Review.

4:15 p.m.-Fashion Review.

6:00 p.m .- Stock reports and news bulletin.

WEEK COMMENCING SUNDAY, NOVEMBER 29, 1925

SUNDAY, NOVEMBER 29-

10:00 a.m.—Service of Augustana Lutheran Church, Denver.
 2:00 p.m.—Afternoon music hour: Thanksgiving program featuring Highlander Boys' First band, John S. Leick, director, Denver municipal auditorium.

6:30 p.m.—Service of Augustana Lutheran Church, Denver: Young People's rally of all Lutheran Churches, Denver.

MONDAY, NOVEMBER 30-

10:45 a.m.-Weather; road reports; stocks, markets; livestock and produce.

11:15 p.m.-Rialto Theater musicale.

5:00 p.m.—Stocks; markets; livestock; produce and news bulletins. 5:30 p.m.—Dinner concert, Brown Palace String Orchestra, Howard Tillotson director.

6:30 p. m.—Sandman's hour.
 7:00 p. m.—Studio program, courtesy Hattie Louise Sims vocal studios, featuring a wide variety of solos and duets. Artists taking part will be Pearl Grace, Mrs. Harry E. Bel lamy, Mrs. Maria Louisa Burns, Mrs. Anna Bliss Odlum, Mrs. L. O. Scott and Mrs. Hannah Berry, sopranos; Bert Dueringer and Richard Hynes, tenors.

TUESDAY, DECEMBER 1-

3:00 p. m.—Culinary hints.
5:30 p. m.—Dinner concert, Brown Palace String Orchestra, Howard Tillotson director.
6:30 p. m.—News.Times concert. Silent Night.

WEDNESDAY, DECEMBER 2-

5:30 p. m.—Dinner concert, Brown Palace String Orchestra, Howard Tillotson director. 6:30 p. m.—Book of Knowledge.

6:30 p. m.—Book of Knowledge.
7:00 p. m.—Studio program: Part one, miscellaneous presentation of instrumental selections by the KOA Orchestra; harp solos by Frances Cornwall and piano solos by Edna May Crothers. Also there will be a KOA book chat, and a short talk, "Insurance for Women," by Vena Allen Bryan. Members of the choir of First United Presbyterian Church, Denver, will present the cantata, "A Joyful Thankagiving," during the second part of the program. This will be given under direction of Erle E. Faber.
9:00 p. m.—Dance program. Harmony Peerless Orchestra, Colburn Hotel, Denver.

THURSDAY, DECEMBER 3-

9:30 a.m.—Thanksgiving Day. Publi music, Denver municipal auditorium. Public Thanksgiving service, speakers and appropriate

5:30 p.m.—Dinner concert, Brown Palace String Orchestra, Howard Tillotson director. 6:00 p.m.—Football fiinals. 6:30 p.m.—Farm question box. Silent Night. FRIDAY, DECEMBER 4—

IDAY, DECEMBER 4—
 3:30 p.m.—Dinuer concert, Brown Palace String Orchestra, Howard Tillotson director.
 6:30 p.m.—Preview of International Sunday school lesson.
 7:00 p.m.—Studio program, featuring Central Christian quartet; Bertha van Norman Jones, humorous' readings; Mrs. Lloyd C. Fulenwider, contralto solos; Mrs. Edith K. Rindquest and Mrs. Thos. P. Campbell, piano duet numbers and the KOA orchestra in classical selections. Another feature will be a KOA book chat.

SATURDAY, DECEMBER 5-

road reports: stocks; markets; livestock and produce. 10:45 a.m.-Weather

6:00 p.m.-Football finals.

8:00 p.m.—Wurtzbach's Orchestra, Best Cafteria, Denver. 11:15 p.m.—Rialto Theater musicale.

The New Radiola 8 Tube Super Heterodyne

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OGDEN, UTAH 500 WATTS-1150 KILOCYCLES

DAILY EXCEPT SUNDAY-

4:45 p. m.—Market reports. 4:00 to 5:00 p. m.—Ogden Radio Dealers' program.

WEDNESDAY, DECEMBER 2-

WEDNESDAY, DECEMBER 2—
8:00 to 9:00 p.m.—Studio program.
FRIDAY, DECEMBER 4—
8:00 to 9:00 p.m.—Musical program presented by the Lion Coal Co. and Ellis Fuel Co.
SATURDAY, DECEMBER 5—
8:00 to 11:00 p.m.—Dance music by Olie Reeves and his orchestra, playing at the Berthana Ball Room.

C F A C-The Calgary Herald-435.8 Meters 2000 WATTS-CALGARY, CANADA-688 KILOCYCLES FRED CARLETON, Announcer

DAILY EXCEPT SUNDAY-12:00 noon-United Grain Growers' program. 12:15 p.m.-Grain and cattle markets and weather reports.

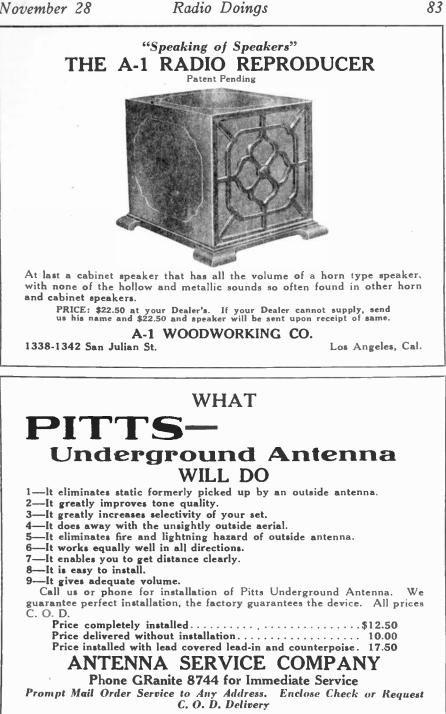
MONDAY, NOVEMBER 30---7:00 to 8:00 p.m.-Dean Bros. of Dean's Music House. **TUESDAY, DECEMBER 1--**7:00 to 8:00 p.m.-Ladies' Concert Trio, under the direction of Gladys Webb Foster. WEDNESDAY, DECEMBER 3---3:00 p.m.-Red Cross address. 7:00 to 8:00 p.m.-Studio program arranged by Alice Thurston. THURSDAY, DECEMBER 3---6:000 m.m.-Bedtime story by the Badio Lady.

IHURSDAY, DECEMBER 3—
 6:00 p. m.—Bedtime story by the Radio Lady.
 8:00 p. m.—Canadian National Railways program. Andy Davison, tenor; Mrs. E. L. Tucker, pianist; assisted by the C. N. R. Orchestra.
 FRIDAY, DECEMBER 4—
 6:00 to 7:00 p. m.—Salon broadcoast under the direction of Gladys Webb Foster.
 SATURDAY, DECEMBER 5—
 11:00 a m.—Inited Comparison

11:00 a.m.-United Grain Growers' program.

12:00 noon-Grain and cattle markets and old country football results.





84 Radio Doings November 28 The Why of Radio—Continued

(Continued from Page 21)

a definite speed of the wheel each train of light waves which pass through the open spaces in the wheel at F outward bound, will be obstructed by a tooth on the return trip and therefore no light will be seen at E. This speed is accurately determined in the experiment, and from the figures of the number of teeth, speed of the wheel, and distance from F to M, it is a simple mathematical problem to calculate the speed of light.

For example, Fizeau found that with a wheel of 720 teeth and hence 1440 equal divisions, his eclipse of the light occurred at 12.6 revolutions per second. Therefore, a space was replaced by a tooth in 1-18144 part of a second. Measuring his distance from F to M and back again, and multiplying this by 18,144 he arrived at a result of 300,400,000 meters per second as the speed of light.

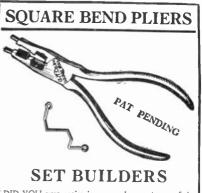
Michelson and Newcomb used a more complicated and more accurate method, and determined a speed of 299,860,000 meters, plus or minus 30,000 meters. For all general purposes 300,000,000 meters is used as the speed of light.

Now since radio waves are in the ether, they have the same speed as light, since all waves in a common medium travel at the same speed, regardless of frequency of vibration or wave-length. The fact that radio waves are of a different frequency than light makes no difference in the speed.

This latter fact is true of ordinary sound waves in air, the bass drum sounds traveling with the same speed as the high notes of a violin. Sound waves in air travel at about 1100 feet per second, which is exceedingly slow in comparison to ether waves, and therefore very easy of measurement. Strange as it may seem, when you are listening to an artist in a distant broadcasting studio, you are hearing each note sung or played BEFORE the people actually in that studio hear it! For while sound is travelling but a few feet, the speeding ether waves have covered a thousand miles!

An interesting example of the production and transmission of sound waves in air on a gigantic scale occurred in 1883 when the Krakatoa eruption culminated in an explosion so terrific that it was clearly audible for 2000 miles, but more than that effected barometers throughout the world to such an extent that half way round the earth from Krakatoa the barometers indicated the air waves 18 hours later, showing a speed of 700 miles per hour. The waves continued. three more complete circles of the earth being recorded every 36 hours. Therefore, the sound waves produced by the terrific eruption lasted for 126 hours and travelled more than 88,000 miles.

Next week—REGENERATION.



DID YOU ever notice in a magazine, a picture of the back of a set? All nice and neat and square? Looks trim and business-like.

WELL—You can wire and rewire a set as often as you want to and get the same effect. Takes less time less cussing—less wire—less mistakes and you get a lot more fun out of it.

The fact is, like one user says: "They do everything but read the diagram."

The pliers are made of drop forged steel. Have round tips for just the sizes of loops you want—Automatic forming die bends 45° or 90° angles—Cutter in proper position—Knurled handles—fully machined—Highly polished—Guaranteed. They fill a longfult want for Radio Experimenters.

Ask your dealer to show you a pair. If he can't supply them, order direct from factory. \$1.75 Postpaid. Here is a fine Christmas present for your boy.





A BATTERY CHARGER That Keeps Batteries Fit Without Any Extra Work For You

Here is a Battery Charger that is as convenient to use as any modern electrical household appliance. As shuple, safe and easy to use as an electric iron—connect to the electric light socket, slip on the battery terminals and turn the switch —nothing more!

The Model 19 Rectifier charges either A or B battery. When charging the B battery there is absolutely no drain on the A battery. The charging rate for either A or B battery is conducted at a safe rate, as shown by the combination meter.

Made in open and closed models for A battery charging; and combination types for A and B batteries.

Prices \$17.50 to \$26.50.

Manufactured by

The Sterling Manufacturing Co. Cleveland, Ohio

> Jobbing Representatives DETSCH & COMPANY 3217 South Figueroa Street Los Angeles, California



The Little Service Station in Your Home



The Ideal Gift

is the AUTOMATIC RADIO LOG CHART. Every Radio fan wants one. It is the simplest, most complete and compact Radio log ever manufactured.

Measures 8 inches in diameter, handsomely finished in two colors, adds pleasure and charm to any radio set.

There is no better Radio Log Chart at any price.

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•	Centralia, Wash. Gentlemen—Enclosed is \$
÷.	SendAutomatic Radio Log
E.	Charts to
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	Street 1
	CityState
50	

85

Radio Doings Trade Notes

C. C. Longevan, Pacific Coast representative of the General Radio Co., announces several new items now ready for delivery from this company. Mr. Longevan is now visiting the trade in Los Angeles.

Retail Radio Dealers of So. California are being asked by Secy. Glass of the Pacific Retail Radio Dealers Association if it is advisable to compile a value sheet on used radios, the same to be used as a basis where "trade-ins" are necessary in making sale of new sets.

"Accurate trade-in values of used radio sets is hardly possible, but it will give something 'to shoot at'--per se the automotive trade---and, in a measure, valuable.

"We sincerely trust every Retail Radio Dealer in the territory will voice his sentiments on this matter, and shoot a letter or postal contributing same."

All mail should be addressed to J. D. Glass, Secy., 318 Union Oil Building. Los Angeles, Calif.

The largest addition to membership since the formation of the Pacific Retail Radio Dealers Association, last June, was for the week closing November 21 when 47 dealers were added to the honor roster.

The determination of the Executive Board of the P. R. R. D. not to cease the

LOW LOSS Select Station at Will Elimite Interference Cut out interference and undesired sta-tions. Tune in loud and clear. Results amazing with any make tube or crystal set using any kind of aerial except loop antenna. 50,000 Sold First 8 Weeks. No Radie Set Absorbs Static---Increases **Complete Without It.** Volume Better reception You can now enjoy real reception-get the station you want-do away er your money refunded. Bank Bank with interference. guarantee. Assembled complete; at-tach te scrial in two min-utes. Ne tools. Dossn't disturb present log. No additional tubes or bat-NOTICE----If your dealer ean-not supply you, send a Sne Dollar Bill direct and we will STEINITE LABORATORIES 814 S. Olive St., Los Angeles, Calif. send Eliminator prepaid. Phone TUcker 7262

vigor of the campaign until 80%, or more, of the 600 Retail Radio Dealers in So. California are enrolled, has significance.

Ernest Walker Sawyer has moved his office from the Chapman Building to 1915 Santa Fe Avenue, Los Angeles.

Sawyer last year was vice-president and general manager of Electrad and previously was well known for his activities in the formation of the Chas. Freshman Company and others.

The latest development known as Pitts Underground Antenna is now being successfully put on the market in the Los Angeles district. Sawyer is factory representative on this device which is being manufactured by the Osborne-Kelsey Company of Los Angeles.

During 1925. Radio in Sweden has progressed at an exceedingly rapid rate. The number of official licenses for receiving sets granted in Sweden on January of this year was 39,800. This, by August 1, had jumped to 102,500. During July the increase was over 3,100.

Canada led in radio imports from the United States in September, taking \$411,-321 worth of radio apparatus out of total exports aggregating \$785,337. Canada's imports were over twice the value of her August imports.

Radio Doings Out of the Air

KNX, "The Voice of Hollywood," will broadcast play-by-play the following schedule of the University of Southern California, playing in the huge bowl of the Los Angeles Coliseum:

Nov. 28---Washington vs. U. S. C. Dec. 5---Oregon Aggies vs. U. S. C. Dec. 12---St. Marys vs. U. S. C.

The big East vs. West inter-sectional game held annually in the Pasadena Rose Bowl on New Mear's day will also be broadcast.

6XA, a 100-watt mobile transmitter licensed to broadcast on 110 meters, goes direct to the field where Loyal Underwood of the KNX staff broadcasts the plays as they are made. The signals from 6XA are picked up in the KNX studio and rebroadcast on 337 meters.

Radio listeners of the west will have their first opportunity of hearing another world-famous artist on Sunday, December 6, when Toscha Seidel, violinist, appears before the microphones of KPO, San Francisco, Calif.

He will be assisted in his broadcast by Arthur Looser, pianist.

The broadcast will be on the air from 9 to 10 p. m., Pacific time, and is expected to be the forerunner of similar appearances of famous musical stars in the west during the winter. More than 550,000 farms in the United States are now equipped with Radio, the department of agriculture estimates, following a nation-wide survey through county agricultural. agents. A similar survey last year showed 365,000 farms on which there were sets, and in 1923 only 145,000 farms.

WGY's 379.5-meter wave will carry another exceptional musical treat to the listeners, Saturday evenings during the winter. The Philharmonic Society's student concerts will be broadcast by WGY in co-operation with WJZ of New York on the following dates: November 28, December 19, January 2 and 30, February 6 and 13, March 20 and 27, and April 3.

To find the positive and negative posts on a storage battery, dip the wires in a diluted solution of salt in water. The most bubbles will form on the wire attached to the negative terminal of the battery.

An hour and a half of music, Tuesday night, December 1, between 8 and 9:30 o'clock, will be broadcast by the KGO Little Symphony Orchestra, under the baton of Carl Rhodehamel. Three guest artists will assist the orchestra: Arthur S. Garbett, musical interpretative writer; Ruth Waterman, contralto; and Josephine Holub, violinist.

WE FIX 'EM OR NO CHARGE

We can make your Remler Super Het just twice as sharp tuning as it is at present. Are you playing IOWA, ILLINOIS AND CANADIAN STATIONS on your REMLER SILVER MARSHALL SUPER OR RADIOLA SUPER HET? If not see us. We will guarantee you these stations or NO LABOR CHARGE.

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Announcement

We are very glad to announce that we have resumed the distribution of the MOHAWK 5-tube Radio Receiver. The Zinke Sales Co. of Chicago has entire charge of sales in the U. S. and Canada, and we are pleased to say that an entirely new National sales policy has been established.



MOHAWK MODEL 100 5 tubes. Just one dial to tune. Retail price, without accessories, \$100.

Mohawk Consolette Model 110 Retail price, without accessories, \$175.00

MOHAWK CONSOLE MODEL 115 Retail price, without accessories, \$225.00

Mohawk Portable Set with Loop, without accessories, \$135.00

COOK-NICHOLS CO.

411 S. San Pedro Street

Los Angeles, Calif.

FAber 4487 — TUcker 6659

World Radio History

PASADENA Fair Oaks 1578 LONG BEACH 657-129

November 28

EVEREADY HOUR EVERY TUESDAY AT 9 P. M.

Eastern Standard Time

For real radio enjoy-ment tune in the "Ever-eady Group." Broad-cast through stations-WEAF New York WJAR Providence WFEL Providence

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COLUMBIA IGNITOR DRY CELL RADIO, IGNITION

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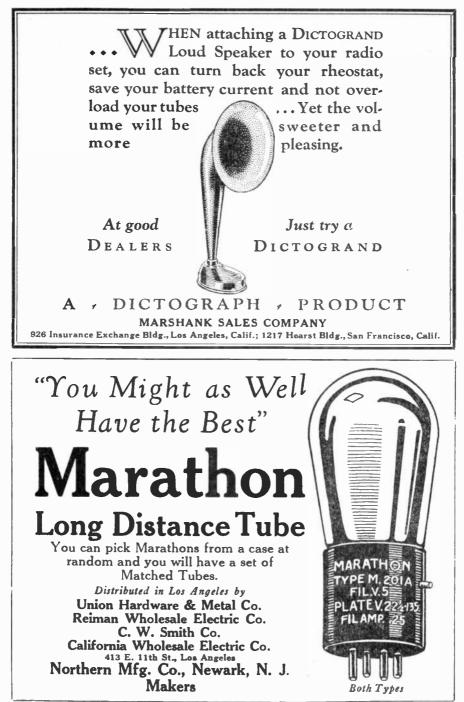
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form standard equipment with leading set manufacturers who know their use insures maximum volume, freedom from noise, natural undistorted musical quality and extreme DX reception.



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affect a great saving when capacities run larger than .005. They are especially designed for By-Pass work and are guaranteed to be free from leakage, break-down and trouble of all kinds. Extremely small (1-inch square by $\frac{1}{4}$ inch thick), and made in capacities of .005 to .1 MF.



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spreads stations evenly without crowding at any point—over the entire dial. Leading radio engineers have —and you will—acclaim it superlative in LOW PRICE. EFFICIENCY and APPEAR-ANCE.

List prices: .00025, \$2.75; .00035, \$3.10; .0005, \$3.50.

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NFW

COLLC

November 28



PITTS--Underground Antenna...

Gives a degree of selectivity, a perfection of tone quality, clarity in distance reception impossible to attain with an outside antenna.

lts selectivity enables one to go through and get such stations as KOA, KSL, KGO, KPO, KGW, KYW, KFON and others without interference while all locals are on the air.

Dealers, call us and arrange for a demonstration of this wonderful, new invention. It is a factory guaranteed product for which there is already a very large public demand.

A Demonstration Will Convince

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Once you're tuned in on Gilmore and have enjoyed the clear, strong, natural power—you'll make it your favorite station.

There are good "quality reasons" behind Gilmore's increasing popularity. You'll notice that Gilmore users are not merely satisfied they are enthusiastic!

See for yourself the reason for this loyalty. Next time you get the Gilmore station signal—

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World Radio History

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Vertical type- $22\frac{1}{2}V$. List Price, \$2.00

Keep an eye on your batterics —they're the power plant that makes the whole thing go. When static crashes and the air is full of things you do not want to hear, equip your receiver with new RAY-O-VACS, fresh and full powered.

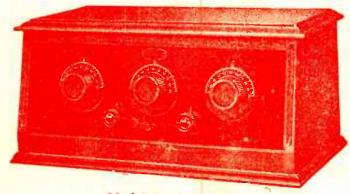
Ray-O-Vacs put your set at its best, and keep it at its best. There is a size and type built to give full service on every type of radio set.

> Equip with Ray-O-Vacs at your local dealer's and note the difference.

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