

Vol. IV.

March 16-22

No. 11

RADIO DOINGS

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Radio Doings

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Los Angeles, Calif.

(Entered as second-class matter, November 25, 1922, Los Angeles, California
Post Office, Under Act of March 3, 1897)

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Five Cents a Copy

Two Dollars a Year

Vol. IV.

Los Angeles, March 15, 1924

No. 11

How We Can Help

LAST week we told you about the broadcasters and their troubles with the the American Society of Composers, Authors and Publishers. You have heard from the various announcers what attitude the broadcasters have adopted to teach this "society" the error of their ways.

How can we as listeners-in help the broadcaster who is furnishing us with our daily entertainment?

If you believe, as we do, that the demands of the "society" are unjust and that the present copyright laws did not contemplate such a condition as now exists, write NOW to your representatives at Washington and ask them to support the new bill introduced by Senator Dill known as Senate Bill No. 2600.

Many of us are not familiar with the names of the gentlemen who represent us in Congress, we are therefore giving here the names of those from California: Senators—Hiram Johnson, Samuel Shorthridge.

Congressmen—First District, Clarence F. Lea; Second District, John E. Raker; Third District, C. F. Curry; Fourth District, Julius Kahn; Fifth District, Mrs. John I. Nolan; Sixth District, James H. MacLafferty; Seventh District, Henry B. Barbour; Eighth District, Arthur Munroe Free; Ninth District, Walter S. Linberger; Tenth District, John D. Fredericks; Eleventh District, Phil D. Swing.

Many of our readers live in other States, we will ask you to write your representatives also.

Next week or next month may be too late, DO IT NOW.

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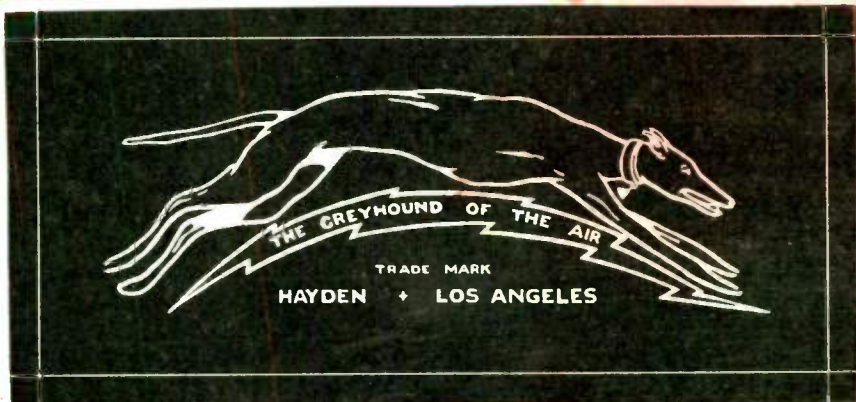
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We admit freely that improvements in radio reception are bound to come—but that is no reason why you should put off the purchase of a radio set. Styles in *clothes* are bound to change—yet you wear clothes. You are missing something every day you delay the installation of a radio set in your home. If you *realized* what you are missing—you'd place your order NOW.

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1177 W. Jefferson St., Los Angeles.

Radio Industry Growing Fast

According to Roger W. Babson, the well-known economist:

"It has been my experience that very few people realize just how important, from a business standpoint, the radio industry has become. Just because an industry is comparatively new is not a reason for assuming that it is unimportant. The radio industry is new, but it has grown so rapidly in the past two or three years that it compares favorably with many of the important long-established industries.

"On the basis of figures for 1923 it is probable that the American people will spend approximately \$350,000,000 for radio equipment during the present year. A conservative estimate of the business in vacuum tubes alone is about \$50,000,000. At least five times as much, or \$250,000,000, will be spent for radio sets and parts. The sales of batteries, both dry cell and storage batteries, will very likely amount to over \$45,000,000. Miscellaneous equipment, such as battery chargers, loud speakers and specialties, may easily account for \$50,000,000 more.

"It is interesting to see how the radio industry compares in dollars and cents with other large industries. Available figures on sporting goods, cameras, etc., show a value of about \$185,000,000 annually. Sales of radio equipment are running nearly twice as large as all kinds of sporting goods.

"The value of radio business is nearly twice as great as that of the carpet and rug business. For every dollar spent on furniture 33 cents is spent on radio. For every dollar spent on boots and shoes 25 cents is spent for radio. For every dollar spent for musical instruments of all kinds, including phonographs, pianos, organs, etc., 75 cents is spent for radio. The value of radio business amounts to nearly three-fourths of the jewelry business as a whole, including clocks, watches and novelties.

"I have given you these illustrations in order that I might emphasize the growing importance of radio from a business standpoint. It is not necessary for me to tell you of radio's importance from an educational and social standpoint. I see no reason why the radio industry should not continue to expand. There has been a decided improvement in the character of the broadcast programs, and we may doubtless look forward to still greater improvement in this direction.

"To sum the matter up, radio has passed through the fad stage and has become a utility. It has rightly achieved its proper permanent status among the important industries of the country."

Islands of the Southern Pacific ocean have been brought within range of American radio broadcasting. KGO, the new 1000-watt station of the General Electric Company at Oakland, was heard two evenings out of five at Apia, British Samoa, a distance of 4750 miles from Oakland.

The latest in museums has been introduced in the East. Believing that the time will come when early radio apparatus will be an object of interest and curiosity, a Cincinnati manufacturer has had a number of the early radio sets placed on exhibition.

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RADIO PRODUCTS

The White Radio Bill

WASHINGTON, March 13.—The new radio bill introduced by Representative Wallace White of Maine, when enacted, will grant the Secretary of Commerce authority to regulate radio communications in all the United States and its possessions. It is intended by the author, who had the assistance of Representative Davis of Tennessee and many governmental officials in framing the bill, that "H. R. 7357" will supercede the radio act of 1912 and fully meet all present legislative requirements.

The new bill, which is now before the Merchant Marine and Fisheries Committee, provides that all transmitting ship and shore stations and operators be licensed at specified fees, but exempts Government stations and all receiving stations. The bill confers upon the Secretary of Commerce general powers of regulations over all transmitting stations, in the interest of reducing interference and the development of an orderly system of communication. Certain obsolete requirements have been eliminated, ambiguities clarified, and new provisions of importance introduced.

The Secretary of Commerce is authorized to license, classify, locate, assign calls, and supervise all transmitting stations; control the nature of service rendered, allocate wave lengths, prescribe operating time and prevent interference. The President is given authority to close or take over any station in time of war or disaster.

Station licenses may not be issued to aliens, and all licenses may be revoked or suspended by the Commerce head. Whereas present laws place no time limitation upon licenses, time limit for licenses is now authorized at 10 years. Special provisions seek to promote efficiency of mobile stations, making for safety of ships at sea, and require transmission for at least 100 miles.

No licenses are required for receiving sets or stations, and no control over such sets is attempted by the bill. Transmitting amateurs are not specifically provided for, but the limitations of wave lengths and power set forth in the 1912

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1 pair of Headphones

2 Insulators

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Phone Met. 6607

We are members of Radio Division, Music Trade Association

bill are eliminated. Under his general power to allocate wave lengths, the Secretary of Commerce may now assign amateurs such wave lengths as the importance of their work may make advisable.

He is directed to refuse to license any applicant who is seeking unlawfully to monopolize radio communication, either through control of manufacture, sale of apparatus or exclusive traffic arrangements, or other means. Revocation of licenses may be made when provisions of the bill or its regulation are broken, or whenever the Interstate Commerce Commission, or another proper body, shall find that a licensee has failed to provide reasonable facilities, or has made any unjust charge, or has instituted unreasonable practices in connection with communications. All laws relating to monopolies shall apply to radio apparatus and communication, the bill states, and in addition to other penalties, licenses may be revoked. The bill also provides for the application of the "Cable Landing License Act" to radio transmission to foreign countries.

The Secretary of Commerce is authorized to collect, in advance of the issuance of licenses, fees for both transmitting station licenses and for operators' licenses. A trans-oceanic station license will cost \$300 per annum; a land commercial license a minimum of \$50; a ship station license, \$25; experimental station \$25; technical and training school licenses \$15; special amateur \$10; and general and restricted amateur stations \$2.50. Operators' licenses run for two years and range from \$2.50 for extra commercial first class, to \$1 and 50 cents for first and second class amateurs. Charges ranging from \$2.50 to 50 cents will be made for each examination if the bill becomes a law. The bill provides that all fees collected for examinations and licenses may be used to defray part of the Department's expenses.

A maximum fine of \$1000 will be imposed upon all persons who violate provisions of the pending bill or any regulations authorized by it, within four months after the passage of the act.

Before a radio station may be erected in the future, a construction permit must be secured from the Secretary of Commerce, setting forth all necessary information and the station.

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

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Hoover Gets Recommendation for Elimination

A recommendation that radio licenses for both amateur and commercial operators be done away with has been made to Secretary of Commerce Hoover by in the interdepartmental radio advisory committee, according to information received by Colonel J. F. Dillon, radio supervisor here, yesterday.

The suggestion is said to have been made for purposes of economy. It is held by the committee, made up of representatives of each Government department, that as licenses are not required of locomotive engineers and other positions involving responsibility and technical knowledge, that radio licenses could also be abolished.

Opposition to such a measure is expected from both shipping and radio concerns on the grounds that without licenses whereby radio communications can be controlled, chaos would result. It has also been pointed out that all other positions on a ship, from seaman to captain, require licenses.

At present ship radio operators are required to pass rigid examinations before they are allowed to operate a ship radio plant, upon the functioning of which the lives of many persons may depend. It is of paramount importance to ship owners and passengers alike that the radioman be entirely capable.

Naval Radio Men Must Be Typists

Modern radio methods are employed in the Naval Radio Central at Washington, and nine radio men, who recently reported from service with the Fleet, found that they had to learn to type messages. Although these men passed speed and accuracy tests of 18 or 19 words in code and 22 to 23 words in plain English, not one of them could copy on a typewriter, believing that the old pencil and paper method was still used. They were soon disillusioned, and set to work learning the standard keyboard, so that they could take down messages neatly in type, making several carbon copies, suitable for delivery to bureaus affected by dispatches.

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Dealers! Send for Price Lists!

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WATCH THE "ARCO" LINE

The Counterpoise

HALL BERRINGER

The purpose of the counterpoise is to reduce the resistance of the antenna system and the losses due to a poor ground. This is specially advantageous where the antenna is erected over dry and rocky or sandy soil and the ground has poor conductivity.

The counterpoise is really another antenna of suitable type supported a few feet above the ground, but insulated from it; and should extend at least one-fourth wave length in all directions for best results. This tends to concentrate the flux in the immediate vicinity of the aerial. If a real good ground is available the resistance of the antenna system will not be much reduced by using a counterpoise, but this can only be determined by experiment. The best test is a comparison of signal strength.

The action of the counterpoise can be considered the same as that of two condensers in series. A capacity effect exists between the antenna and the counterpoise and the counterpoise and the ground. Also a smaller capacity effect exists between the antenna and the ground direct.

In selecting the kind of wire to use in the antenna, the points to be taken into consideration are: Resistance, corrosion, strength, and the ease of handling.

Stranded wire as a rule offers a greater resistance than solid wire, but is a good conductor of high frequency currents, due to the tendency of the currents to travel on the outside of the wires. Litzendraht makes an excellent conductor for this use, but is not practical for outdoor use, as the fine strands are easily broken.

Bronze wire is very strong and the resistance is only slightly increased due to corrosion, but it is hard to handle. Aluminum is lighter and stronger than copper, but not as good a conductor.

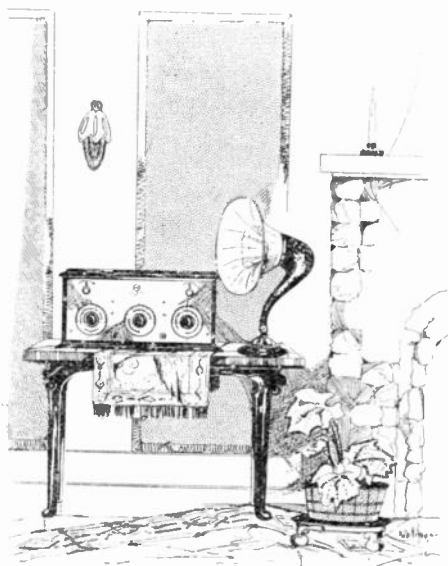
Copper and good copper clad steel are better conductors than aluminum or bronze. Soft drawn copper is amply strong enough for the average aerial and easy to handle. Number 12 copper enameled wire makes an excellent aerial.

Copper, copper-clad and bronze wires soon acquire a green or black coating that serves as a protection against further corrosion, and does not seem to increase the high frequency very much. Aluminum is not affected after the first thin film is formed, and remains a good conductor. In localities where soft coal fumes and chemical fumes predominate, the antenna wire suffers greater corrosion, and aluminum is the least affected. Enameling the wire prevents corrosion until the enamel is destroyed.

The insulation of the antenna is a matter requiring careful attention. If an insulator is defective or dirty or wet, the energy radiated from the antenna will be considerably reduced. Defects of insulators may be caused by breakage after installation or faulty manufacture, such as small cracks or other openings through which the insulator may absorb water. Porcelain is one of the most satisfactory materials for use in constructing insulators because of the large voltages which it will stand without brushing, and its low capacity, but is not suitable under severe mechanical vibration. The design should be long and narrow and placed in series with the source of high potential to cut down the capacity losses.

Antenna insulators are often made of compositions, such as "electrose," and come in various shapes, and usually have eyebolts moulded in. Strain insulators of the "egg" type, when connected in the guy wires to prevent re-radiation, should be of good grade of porcelain, and special care should be taken to see that the glazing is good. When connecting through the hole of the strain insulator always use a large wire, or run the wire through a small piece of quarter-inch copper tubing formed to fit the hole.

Remember that antenna insulators are subjected to high voltages at radio frequencies, and materials that are satisfactory for ordinary house wiring and sixty-cycle alternating currents would not stand up in the antenna.



The Radyne Receiver

Beauty

Distance

Selectivity

Volume

Arrange with your dealer for a demonstration. If you have not heard this remarkable set, he has a surprise in store for you.

Write for descriptive literature.



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Behind the Scenes in a Broadcast Studio

NUMBER THREE—HOW RADIO TALENT IS PAID

By DR. RALPH L. POWER, "The Sky Crier," Los Angeles Examiner Radio

Radio entertainers, as I wrote two or three weeks ago, receive a very material benefit. Professional organizations, that is, bands, orchestras, quartets, and so forth, receive innumerable engagements from the radio publicity. Southern California is dance mad, and good music makers are in constant demand everywhere.

Individual artists, also, find themselves in demand from radio entertainment publicity. Of course broadcasting stations operated by newspaper offices afford a considerable larger amount of publicity than stations which have to utilize word of mouth publicity, mimeographed sheets or booklets.

On the other hand, there is a certain sense of joy and gladness that comes to entertainers with the realization of a duty well performed. They have made others happy and, in so doing, their own life becomes more serene.

But perhaps the greatest thing to them is something that you can do for all these radio artists. You constantly hear an announcement made over the air in which you are asked to write to the studio and voice your appreciation of the artists' work.

Personally, I suspect this announcing has been overdone locally. People are tired of this everlastingly keeping at it—by dignified announcements, by half joking announcements, by exhortation and in various other guises. Once during an entire program is sufficient reminder to the big, invisible audience.

This is the only thing listeners-in are asked to do. It costs them practically nothing, yet they are receiving gratis the most wonderful music programs, lectures and other entertainment.

It is only natural that the performers should be impressed by applause. They miss the visible audience and its expressions of approbation, or otherwise. And so they usually feel amply repaid when they receive a batch of letters from radio friends.

You are only asked to send an applause card or a letter, but it means much to the success and future operation of the broadcasting stations from the standpoint of securing new artists and the return engagement of old favorites.

By the number of returns a director is enabled to gauge rather closely the success of various entertainments, although there have been cases of record where performers pad the correspondence to aid their chances of a return date.

You often wonder what happens when you write to a radio studio. If it is merely a communication to let them know you enjoyed a certain artist the letter goes to that artist from the studio and, perhaps also, you hear from the station. For this and for letters mentioning the reception of the station's program some studios send out a form or a standard letter. Others merely a post card acknowledgment which contains a photograph of the studio, a movie star or other view. As a general rule, these are much more highly prized by fans than letters. Studio managers have been known to attempt to answer radio mail personally, but, after the first few days, the litter is too much for them—it can't be done.

(Continued on page 19)

YOUR RADIO HOSPITAL

ANY SET REPAIRED AND REBUILT TO ORDER

Let Us Build, Repair, or Neutralize Your Neutrodyne—Right!

Full Line of Parts for Super-Hetrodyne

Everything in Radio

SETS INSTALLED AND GUARANTEED

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839 West Washington, Los Angeles, Calif.

Phone Beacon 2235

Open Day and Night

The Cockaday Circuit

By WM. E. SPARLING, Radio Dept., Howland & Dewey

Since the advent of many large broadcasting stations in nearly every city in the country, it has been the desire of many radio fans to pick up those most distant. To do this, of course, the receiving set must be ultra-selective, and many and weird were the circuits evolved with this end in view.

Up to this time there has been no circuit in popular use that has many of the requirements of the ideal set. It is true that there are in use today circuits that are selective enough to tune through local broadcasting, but to gain this selectivity it has been necessary to sacrifice tone and simplicity of control to a large extent.

In the four-circuit tuner developed by Laurence M. Cockaday, there have been incorporated all the desirable features of the ideal receiver—i. e., absolute elimination of interference, extreme distance range, ease of tuning, and truthful reproduction.

In addition to these qualities, the simplicity of the circuit endears itself to the amateur who likes to "make his own." As there are no difficult capacities to balance, it does not require neutralizing, and the wiring is very simple. The parts required to construct the set are but few in number and easily procured, but great care must be exercised in selecting the various parts, for, as a chain is no stronger than its weakest link, so is a receiving set no better than its poorest part.

Many good circuits have been condemned by amateur builders, owing to the use of poor parts. In this circuit particularly too much stress cannot be laid on the advisability of using perfect instruments. The builder can rest assured that he will be amply repaid both in perfect reproduction of tone and in the reception of distant stations.

It has been estimated that there are over one-half million four-circuit tuners in use at this time. This set is probably the most important contribution that has yet been made to the equipment of the radio fan.

It is considered by many owners to be a close second to the eight or twelve-tube Super-Heterodyne, which it resembles a great deal, using, as it does, but two controls for tuning, one of which is automatic and can be calibrated in wavelengths.

The tuning coil used is very different from any other in use at this time. The secondary consists of 65 turns of No. 18 S. C. C. on a three and one-half inch composition tube. The primary is one turn of copper buss wire and the stabilizer coil consists of 34 turns on the same tube. The antenna tuning is 43 turns of No 18 S. C. C. wire band wound and placed at right angles to the primary tube.

The tuning is done by means of two 23-plate condensers, which should be equipped with verniers. The circuit is very loose coupled, and makes use of neither variometers, varicouplers or feed back coils. The tuner will have a wave length range of 150 meters to 675 meters, will not re-radiate, and if properly wired will not be susceptible to body capacity. The circuit is suitable for amateur, broadcast and commercial reception from C. W. telephone and spark transmitters.

Any length aerial can be used, a multi-wired or a single wire, as desired; changing the length of the aerial will not change the tuning of the set.

Build Yourself a "COCKADAY"

We have in stock a complete line of standard parts, including Precision Coil Co.'s Authorized Cockaday Coils, Como Push-Pull Transformers, etc.

Make Our Store Your Radio Headquarters

Free Diagrams of Popular Circuits

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Los Angeles

BATTERY ECONOMY

Figure it out for yourself.

Isn't it wasteful to spend money for batteries that cannot be recharged? A recharge for a 48-volt "B" battery costs 75c. What does a new non-rechargeable 48-volt "B" battery cost?

Then, too, falling voltage reduces your volume of sound.

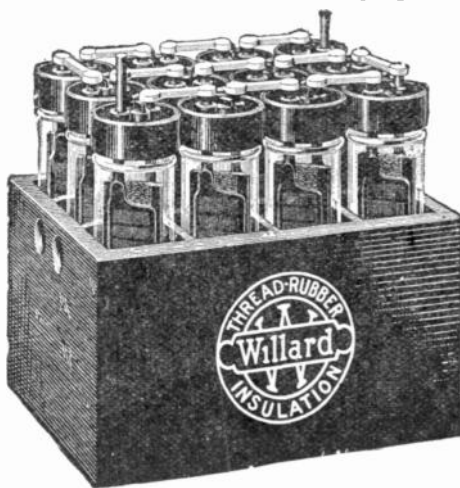
Reduced volume of sound eliminates distant signals, and you cannot bring in remote stations.

Maintain your voltage.

Use Willard Rechargeable Batteries and enjoy the Nation's programs.



RADIO "A" BATTERY
Heavy plates—Threaded rubber—
Unusual capacity.



"RADIO "B" BATTERY
Note the construction—Individual glass cells
that eliminate external and internal leakage.

WILLARD RADIO BATTERIES

For Sale By

BURBANK—John Null.

ONTARIO and UPLAND—R. J. Tobey.

LONG BEACH—A. C. Walker

SANTA ANA, ORANGE, FULLERTON—Orange County Ignition Works.

MONROVIA—Emil Lindstrand.

SAN BERNARDINO—C. H. Stickel.

WHITTIER—Whittier Auto Electric Company.

PASADENA—F. W. Birnie.

RIVERSIDE—Mission Auto Electric Company.

LOS ANGELES—Western Auto Electric Co. or any Willard Service Station.

Or

At Your Nearest Radio Dealer

(Continued from page 15)

Requests for certain numbers are retained in the studio for performance of such requests in so far as practicable. But a small percentage of requests can ever be acceded to.

On an evening when a classical program is in progress by a string trio a fan frantically calls up and wants a request number for their radio party. "Please play tomorrow night on the front porch," or the back porch, or whatever it is. Of course such a request is distinctly out of place.

Maybe another radio fan has a birthday or a wedding anniversary party and wants the sextet from Luccia played. But perhaps the evening's entertainment consists of a jazz band and jazz song numbers.

Radio listeners-in do not always make their request clear. They often ask for the impossible. Song writers call up for their own songs. New artists have their friends call up and say, "Oh, we did enjoy Miss Whoosis, so-so-o-o much. Do have her again, blah."

And thus it is small wonder that the mass of requests gradually simmers down to a few really legitimate ones. And the matter of dedications, too, is decidedly interesting, but—it's another story!

Next week I'll tell you how a well rounded studio program is assembled.

The Scope of the Broadcasts

Educational institutions, churches and newspapers have recognized the value of radio broadcasting, according to the February issue of the Commerce Department Radio Service Bulletin. This pamphlet shows that 95 stations are owned by universities, colleges or schools. It lists 46 newspapers or publishers operating stations, and twenty churches, not including some which utilize other stations. Every state has at least one station broadcasting entertainment, lectures, weather reports, etc. Two stations broadcast data from their market bureaus, and nine municipalities, Chambers of Commerce or Boards of Trade have stations serving police forces or other community interests.



C. D. TANNER
"Your Radio Friend"

RADIO

C. D. Tanner Co

528 W. Washington St.

Try Our New Harkness Receiving Set In Your Own Home

You will be attracted by its beauty of design, simplicity of operation and quality of tone.

Be Your Own Judge

Take this set in the quiet of your own home and judge its clear quality of tone for yourself. In no other way can you appreciate the vividness with which it brings in all the best broadcast programs to your own home. It will be as real as though the artists actually stood before you.

Buy Now

We carry a complete stock of Parts. We specialize in Neutrodyne work
"Tanner's for the Best in Radio"

Come in and get acquainted :: :: Open Evenings

THE C. D. TANNER COMPANY

Our Phone 284-548

528 West Washington

Los Angeles, Calif.

6-8 A. M.
PACIFIC TIME

RADIO TIME TABLE

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

				SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.			
STATION	CITY	METERS	CALL	6 00-6 30	6 30-7 00	7 00-7 30	7 30-8 00	6 00-6 30	6 30-7 00	7 00-7 30	7 30-8 00	6 00-6 30	6 30-7 00	7 00-7 30	7 30-8 00	6 00-6 30	6 30-7 00	7 00-7 30	7 30-8 00
Reynolds Radio Co.....	Denver.....	360	K L Z	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Free Press.....	Detroit.....	517	W C X	.	.	X	.	.	X	X	.	X	.	X	.	X	.	X	.
Detroit News.....	Detroit.....	517	W W J	.	.	.	X	.	X	X	.	X	.	X	.	X	.	X	.

8-10 A. M. PACIFIC TIME

9-11 Mountain Time

10-12 Central Time

11-1 Eastern Time

				SUN.	MON.	TUES.	WED.	THUR.	FRI.	SAT.					
STATION	CITY	METERS	CALL	8:00-8:30	8:30-9:00	9:00-9:30	9:30-10:00	8:00-8:30	8:30-9:00	9:00-9:30	9:30-10:00	8:00-8:30	8:30-9:00	9:00-9:30	9:30-10:00
				8:00-8:30	8:30-9:00	9:00-9:30	9:30-10:00	8:00-8:30	8:30-9:00	9:00-9:30	9:30-10:00	8:00-8:30	8:30-9:00	9:00-9:30	9:30-10:00
S. F. Examiner	San Francisco	360	K U O	.	.	X	.	X	.	X	.	X	.	X	.
Reynolds Radio Co.	Denver	360	K L Z	.	.	.	X	.	X	.	X	.	X	.	X
Star-Telegram	Fort Worth	476	W B A P	.	X	X	.	.	X	.	X	.	X	.	X
News and Journal	Dallas	476	W F A A	.	.	X	.	X	.	X	.	X	.	X	.
Palmer School	Davenport	484	W O C	.	.	.	X	.	X	.	X	.	X	.	X
John Wanamaker	Philadelphia	509	W O O	.	.	.	.	X	.	X	.	X	.	X	.
Federal Tel.	Buffalo	319	W G R	.	.	.	.	X	.	X	.	X	.	X	.

ONLY AT BARKER BROS

IN LOS ANGELES

may you now select
your model of the
nationally known

COLIN B. KENNEDY RADIO

A plan of exclusive representation that scores a triumph for both Kennedy and Barker Bros. A point for Kennedy—in that Barker Bros. deemed them worthy, after rigid tests and careful analysis, of this firm's endorsement. A point for Barker Bros.—in that Kennedy considered them the only logical representatives in Los Angeles for their nationally famous Radio Equipment.

We also maintain the largest Radio Service Department in the city

Member Radio
Trade Association
of Southern
California

Barker Bros.

Complete Furnishers of Successful Homes
BROADWAY, BETWEEN SEVENTH AND EIGHTH

Concerts Daily
12:30 and
2:30 P. M.

10-12 A. M.
PACIFIC TIME

RADIO TIME TABLE

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

				SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.			
STATION	CITY	METERS	CALL	10.00-10.30	10.30-11.00	11.00-11.30	11.30-12.00	10.00-10.30	10.30-11.00	11.00-11.30	11.30-12.00	10.00-10.30	10.30-11.00	11.00-11.30	11.30-12.00	10.00-10.30	10.30-11.00	11.00-11.30	11.30-12.00
L. A. Times	Los Angeles...	395	KH J	X	X														
Earl C. Anthony.....	Los Angeles...	469	K F I	X	X														
So. Electric Co.	San Diego	244	KD P T	X	X														
Hale Brothers	San Francisco	423	K P O			X	X												
Tribune	Oakland	509	K L X	X	X														
Warner Brothers	Oakland	260	K L S					X											
Gould	Stockton	360	K J Q	X	X									X					X
Fallon & Co.....	Santa Barbara	260	K F H J	X	X														
Guy Gresson	Tacoma	380	K F E J			X	X		X	X									
Rhodee Co.	Seattle	455	KD Z E			X		X		X	X		X		X	X	X		
First Pres. Church	Seattle	300	K T W			X	X												
Meier & Frank	Portland	360	K F E C															X	X
Reynolds Radio Co.	Denver	310	K L Z						X	X			X		X		X		
News and Journal	Dallas	476	W F A A						X			X		X		X		X	
Palmer School	Davenport	484	W O C					X		X		X		X		X		X	
Oregonian	Portland	492	K G W					X		X		X		X		X		X	
Federal Tel. Co.	Buffalo	319	W G R																X

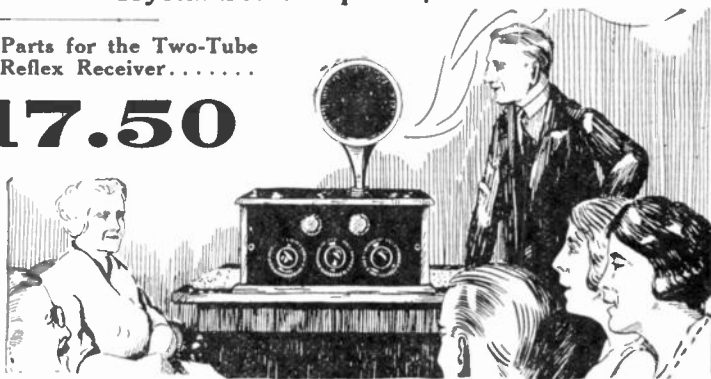
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WHEN EQUIPPED WITH ONE OF SMITH'S RADIO SETS

Reflex — Neutrodyne — Federal

Crystal Set Complete \$7.50

Complete Parts for the Two-Tube
Harkness Reflex Receiver.....**\$17.50**Buy on
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Credit
Plan**A. M. SMITH CO.**

219 W. Third St. (Near Broadway)

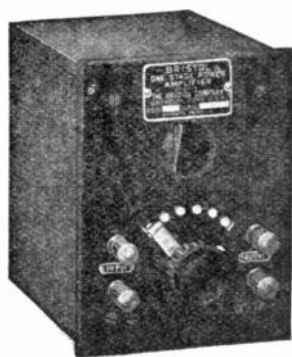
Phone 872-329

12-2 P. M.
PACIFIC TIME

RADIO TIME TABLE

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

				SUN.	MON.	TUES.	WED.	THUR.	FRI.	SAT.	
STATION	CITY	METERS	CALL	12 00-12 30	12 30-1 00	1 00-1 30	1 30-2 00	12 00-12 30	12 30-1 00	1 00-1 30	1 30-2 00
L. A. Times.....	Los Angeles...	395	KH J								
So. Electric Co.....	San Diego.....	244	KD P T			X	X				
Warner Bros.....	San Francisco..	360	K L S	X	X			X	X		
Hale Bros.....	San Francisco..	423	K P O			X	X	X	X		
General Elec.....	Oakland.....	312	K G O				X	X	X		
Harrold Lab'y.....	San Jose.....	360	K Q W			X	X		X	X	
Guy Greason.....	Tacoma.....	360	K F E J			X	X		X	X	
Rhodes Co.....	Seattle.....	280	K D Z E			X	X		X	X	
Honolulu Star Bulletin	Honolulu.....	360	K D Y X	X	X			X	X		
Honolulu Advertiser..	Honolulu.....	370	K G U			X	X		X	X	
Reynolds Radio.....	Denver.....	360	KL Z			X			X		
Pyles Nichols.....	Denver.....	360	K D Z Q			X			X		
News and Journal.....	Dallas.....	476	W F A A	X	X						
Palmer School.....	Davenport.....	484	W O C			X	X		X	X	
Star.....	Kansas City.....	411	W D A F			X	X		X	X	
News.....	Detroit.....	580	W W J			X	X		X	X	
Radio Cor. of Am.....	New York.....	455	W J Z			X	X		X	X	
Herald.....	Calgary.....	430	C F A C			X			X		
Federal Tel. Co.....	Buffalo.....	318	W G R	X	X	X	X		X	X	



Ask your Dealer or send
for Bulletin 3011-X
Give your loud speaker a
treat

Bristol One Stage Power Amplifier

NO C BATTERY REQUIRED

A unit that can be used as a third stage without howling. The usual objections against a third stage of audio frequency amplification are entirely eliminated by the use of the new "impact" circuit.

The Bristol One Stage Power Amplifier does not require separate "A" or "B" battery. It uses common tubes such as U. V. 201A, 216A and U. T. 2.

A remarkable achievement—a third stage audio that works RIGHT—install one today and give that distant station a chance to come in like the locals.

THE BRISTOL COMPANY

WATERBURY, CONN.

Pacific Coast Branch Office: 332 Rialto Building, San Francisco, California

2-4 P. M.
PACIFIC TIME

RADIO TIME TABLE

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

STATION	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
				2 00-2 30	2 30-3 00	2 30-3 00	3 00-3 30	2 00-2 30	2 30-3 00	2 30-3 00	3 00-3 30	2 00-2 30	2 30-3 00	2 00-2 30	2 30-3 00	2 00-2 30	2 30-3 00
L. A. Times	Los Angeles	395	KH J	X	X			X	X	X	X	X	X	X	X	X	X
Angelus Temple	Los Angeles	278	KFSG	X	X	X				X	X	X	X	X	X	X	X
Hale Bros.	San Francisco	433	KPO				X	X		X	X		X	X		X	X
S. F. Examiner	San Francisco	380	KUO				X	X		X	X		X	X		X	X
Tribune	Oakland	509	KLX						X				X				X
General Electric Co.	"	312	KGO					X				X					X
Portable Wireless	Stockton	360	KWG	X	X												
Kimball-Upton	Sacramento	283	KFBK				X	X		X	X		X	X		X	X
First Pres. Church	Seattle	300	KTW		X	X											
Post-Intelligencer	Seattle	270	KFJC				X	X	X	X	X		X	X	X	X	X
Rhodes Co.	Seattle	270	KDZE				X	X	X	X	X		X	X	X	X	X
Oregonian	Portland	492	KGW					X					X				X
Deseret News	Salt Lake City	380	KZN				X	X		X	X		X	X		X	X
Reynolds Radio	Denver	380	KLZ						X			X	X			X	X
Honolulu Advertiser	Honolulu	360	KGU			X	X					X	X			X	X
Star-Telegram	Fort Worth	478	WBAP		X	X											
Palmer School	Davenport	484	WOC							X							X
Daily News-Fair	Chicago	448	WMAO				X			X			X				
Star	Kansas City	411	WDAF				X	X		X	X		X	X			
Free Press	Detroit	517	WCX	X	X												
News	Detroit	517	WWJ				X	X		X	X		X	X		X	X
Orake Hotel	Chicago	390	WDAP				X	X		X	X		X	X		X	X
Radio Cor. of Am.	New York	455	WJZ			X	X		X	X	X		X	X		X	X
Herald	Calgary	430	CFAC			X	X		X	X	X		X	X		X	X
Federal Tel. Co.	Buffalo	319	WGR			X	X		X	X	X		X	X		X	X

RADIO EQUIPMENT PRICES SLASHED!

Reductions of from
20% to 60%

Radio Corp. Sets \$30 Up

SPECIAL NOTICE!

We now have a supply of 201-A Tubes
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We do all forms of Radio Repair Work

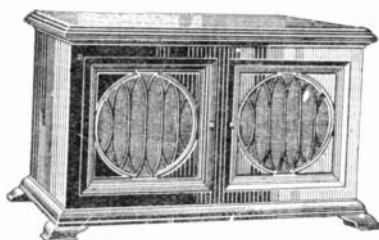
BEACON LIGHT COMPANY

"Everything Gas and Electric"

716 S. Hill St.

LOS ANGELES

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ANNOUNCING

The Most Centrally Located

**RADIO
SHOPPE**

in the City

In Stock A-Tubes

GERMAIN'S
·SIXTH AND MAIN + LOS ANGELES·

4-6 P. M.
PACIFIC TIME

RADIO TIME TABLE

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

				SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT			
STATION	CITY	METERS	CALL	4:00-4:30	4:30-5:00	5:00-5:30	5:30-6:00	4:00-4:30	4:30-5:00	5:00-5:30	5:30-6:00	4:00-4:30	4:30-5:00	5:00-5:30	5:30-6:00	4:00-4:30	4:30-5:00	5:00-5:30	5:30-6:00
E. C. Anthony.....	Los Angeles...	469	K F I	X	X											X	X		
L. A. Herald.....	Los Angeles...	469	Herald					X	X							X	X		
L. A. Examiner.....	Los Angeles...	469	Examin'r							X	X				X	X			
Echophone Radio.....	Long Beach...	234	K F D N					X	X			X			X	X			
Hale Bros.....	San Francisco...	423	K P O					X	X			X				X	X		
Oakland Tribune.....	Oakland.....	509	K L X					X		X				X					
S. F. Examiner.....	San Francisco...	380	K U O						X	X		X				X	X		
Maxwell Elec.....	Berkeley.....	278	K R E																
Portable Wireless.....	Stockton.....	380	K W G					X	X			X	X			X	X		
Gould.....	Stockton.....	380	K J Q						X	X		X	X			X	X		
Radio Den.....	Santa Ana.....	268	K F A W					X				X				X			
Nelson Radio Co.....	Phoenix.....	238	K F B C					X	X			X				X	X		
Post-Intelligencer.....	Seattle.....	270	K F J C					X				X				X			
Star Electric.....	Seattle.....	283	K F H R					X	X			X				X			
First Pres. Church.....	Seattle.....	300	K T W	X	X					X	X			X	X				
Northwest Radio.....	Seattle.....	283	K J R							X	X			X	X				
Mullens Elec.....	Tacoma.....	262	K G B			X	X							X	X				
Meier & Frank.....	Portland.....	248	K F E C			X	X			X	X			X	X				
Hallock & Watson.....	Portland.....	360	K G G					X	X	X	X			X	X				
Pyle & Nichols.....	Denver.....	360	K D Z Q			X	X			X	X			X	X				
Star-Telegram.....	Fort Worth.....	478	W B A P					X											
News and Journal.....	Dallas.....	478	W F A A					X	X			X	X			X	X		
Southern Egr. Exp.....	San Antonio.....	581	W O A I							X	X			X	X				
Palmer School.....	Davenport.....	484	W O C	X	X	X		X	X					X	X				
Post Dispatch.....	St. Louis.....	548	K S D							X	X			X	X				
Daily News-Fair.....	Chicago.....	438	W M A Q							X	X			X	X				
Drake Hotel.....	Chicago.....	390	W D A P					X	X					X	X				
Free Press.....	Detroit.....	517	W C X	X	X	X		X	X			X	X			X	X		
News.....	Detroit.....	580	W W J	X	X	X		X	X			X	X			X	X		
Star.....	Kansas City.....	411	W D A F	X	X	X		X	X			X	X			X	X		
Tribune.....	Great Falls.....	360	K D Y S	X	X														
Cresley Mfg. Co.....	Cincinnati.....	809	W L W					X	X			X	X			X	X		
Radio Cor. of Am.....	New York.....	455	W J Z		X	X		X	X			X	X			X	X		
John Wanamaker.....	Philadelphia.....	509	W O O					X	X			X	X			X	X		
Federal Tel. Co.....	Buffalo.....	318	W G R					X				X				X			

Adjustable
Diaphragm
\$22.50RADIO VETERANS DEMAND
TRIMM HEADSETS"Professional" \$7.65
3000 ohm—all Bakelite"Dependable" \$5.00
2400 ohm—aluminum backTrimm Phonograph At-
tachment \$10.00Jumbo size, 3-in. diameter, at-
tachments to fit all phonographs.

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CARL A. STONE COMPANY

Pacific Coast Distributor

538 San Fernando Bldg.
Los Angeles, Calif.693 Mission St.
San Francisco, Calif.

"Dependable" \$5.00

“REDCO” TRANSFORMERS

INSIST ON THEM



Manufactured by

MORTON & BORKS

Stockton, Calif.

Sole Distributor

THE WHOLESALE RADIO ELECTRIC CO.

946 South Flower St.

Los Angeles

Radio!

**22 Years
in the
Electrical
Business**



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Newbery Electric Corpn.
726 So. Olive St.

Sets or Parts, low priced or high; sets easy to handle; selective; backed by a cordial, friendly service that you will like!

Radiola Special

was \$85 installed
now \$45 installed

Radiola IV

was \$275 installed
now \$210 installed

Radiola Grand

was \$350 installed
now \$265 installed

6-8 P. M.
PACIFIC TIME

RADIO TIME TABLE

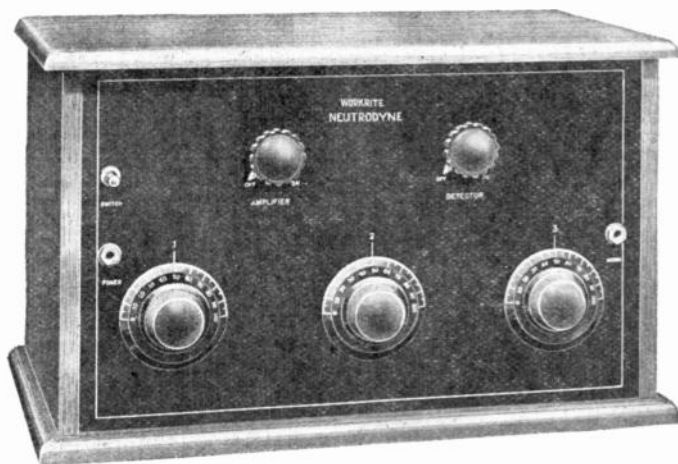
7- 9 Mountain Time
8-10 Central Time
9-11 Eastern Time

STATION	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
				6:00-6:30	6:30-7:00	6:00-6:30	6:30-7:00	6:00-6:30	6:30-7:00	6:00-6:30	6:30-7:00	6:00-6:30	6:30-7:00	6:00-6:30	6:30-7:00	6:00-6:30	6:30-7:00
Bible Institute	Los Angeles	360	K J S	X	X												
L. A. Times	Los Angeles	395	K H J					X	X								
E. C. Anthony	Los Angeles	469	K F I		X	X			X	X							
Angelus Temple	Los Angeles	278	K F S G							X	X						
Echaphone Radio	Long Beach	234	K F O N			X	X							X		X	X
Hale Bros.	San Francisco	423	K P O					X	X			X	X				
S. F. Examiner	San Francisco	360	K U O			X	X	X	X					X	X		
Maxwell Electric	Berkeley	278	K R E							X	X						
Tribune	Oakland	509	K L X				X		X				X				
General Electric	Oakland	312	K G O					X		X			X			X	X
Kimball & Upson	Sacramento	283	K F B K			X	X	X		X	X		X			X	X
Fallen & Co.	Santa Barbara	360	K F H J			X	X			X	X			X	X		
Radio Den.	Santa Ana	268	K F A W			X	X			X	X		X	X		X	X
Southern Elect.	San Diego	244	K D P T			X	X	X	X				X	X		X	X
Nielson Radio Supply	Phoenix	238	K F C B		X		X		X		X		X		X		X
McArthur Bros.	Phoenix	360	K F A D			X	X		X		X		X		X		X
Love Elect. Co.	Tacoma	360	K M O			X	X	X	X	X	X	X	X	X	X	X	X
Mullens Elect. Co.	Tacoma	252	K G B					X	X	X	X	X	X	X	X	X	X
Northwest Radio Ser.	Seattle	283	K J R			X		X		X		X		X		X	
Excelsior Motor Cycle	Seattle	360	K Q P					X		X		X		X		X	
First Pres. Church	Seattle	300	K T W		X	X											
Star Electric	Seattle	283	K F H R			X	X	X	X	X		X	X	X	X	X	X
State Coll. of Wash.	Pullman	330	K F A E					X				X			X		
Oregonian	Portland	492	K G W	X	X	X	X		X		X		X		X		X
Hallock & Watson	Portland	360	K G G		X	X											
Meyer & Frank	Portland	248	K F E C			X		X				X		X		X	
Apple City Radio Club	Hood River	360	K Q P							X				X		X	
Adler's Music Store	Baker, Ore.	360	K F D A		X	X		X	X	X	X		X		X	X	X
Boise High School	Boise, Ida.	270	K F A U						X				X	X		X	X
Bunkerhill-Sullivan Co.	Kellogg, Ida.	360	K F E Y			X		X		X		X		X		X	X
Telegram	Salt Lake	360	K D Y L			X	X	X	X	X	X	X	X	X	X	X	X
Deseret News	Salt Lake	360	K Z N				X	X		X	X	X	X	X	X	X	X
Reynold's Radio	Denver	360	K L Z				X		X					X		X	
Western Radio	Denver	360	K F A F				X	X	X	X		X	X	X	X	X	X
Pyle & Nichols	Denver	360	K Z D Q		X	X								X	X	X	X
Fitzsimmons Hospital	Denver	542	A A 3											X			
Sparks High School	Sparks, Nev.	226	K F F R														
Westinghouse Elec. Co.	Hastings, Neb.	286	K F K X					X				X					
Star-Telegram	Fort Worth	476	W B A P			X		X	X		X	X	X	X	X	X	X
News and Journal	Dallas	476	W F A A			X	X	X	X		X	X	X	X	X	X	X
Palmer School	Davenport	484	W O C		X	X	X	X	X	X	X		X	X	X	X	X
W. O. W.	Omaha	526	W O A W		X	X		X	X		X	X	X	X	X	X	X
Daily News-Fair	Chicago	448	W M A Q						X	X		X	X	X	X	X	X
Post Dispatch	St. Louis	546	K S D		X	X	X	X	X	X	X	X	X	X	X	X	X
Westinghouse	Chicago	538	K Y W			X		X	X	X	X	X	X	X	X	X	X
Sweeney School	Kansas City	411	W H B			X	X	X	X	X	X	X	X	X	X	X	X
Star	Kansas City	411	W D A F			X	X	X	X	X	X	X	X	X	X	X	X
Tribune	Great Falls	360	K D Y S			X	X			X	X						
Drake Hotel	Chicago	390	W D A P	X	X												
Crosley Mfg. Co.	Cincinnati	309	W L W			X	X	X		X	X	X	X	X	X	X	X
Albertan Pub. Co.	Calgary, Can.	410	C H B C							X	X	X	X				
Detroit Free Press	Detroit	517	W G X					X	X								
Radio Cor. of Am.	New York	455	W J Z	X	X	X	X	X	X	X	X	X	X	X	X	X	X
John Wanamaker	Philadelphia	509	W O O			X	X	X	X	X	X	X	X	X	X	X	X
Federal Tel. Co.	Buffalo	319	W Q R							X							
El Buen Tone	Mexico City	525	C Y B					X	X	X		X	X			X	X
El Universal	Mexico City	525	C Y L						X								

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8-10 P. M.
PACIFIC TIME

RADIO TIME TABLE

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

				SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.			
STATION	CITY	METERS	CALL	8 00-8 30	8 30-9 00	9 00-9 30	9 30-10 00	8 00-8 30	8 30-9 00	9 00-9 30	9 30-10 00	8 00-8 30	8 30-9 00	9 00-9 30	9 30-10 00	8 00-8 30	8 30-9 00	9 00-9 30	9 30-10 00
L. A. Herald	Los Angeles	469	Herald					X	X			X	X			X	X		
Bible Institute	Los Angeles	360	K J S	X	X				X	X						X	X		
L. A. Times	Los Angeles	395	K H J	X	X	X				X	X	X	X			X	X	X	X
L. A. Examiner	Los Angeles	469	Examin'r	X	X	X				X	X	X	X			X	X	X	X
E. C. Anthony	Los Angeles	469	K F I	X	X	X				X	X	X	X			X	X	X	X
Angelus Temple	Los Angeles	278	K F S G	X	X	X				X	X	X	X			X	X	X	X
Echophone Radio	Long Beach	234	K F O N					X	X	X						X	X	X	X
Hale Bros	San Francisco	423	K P O		X	X		X	X	X	X	X	X			X	X	X	X
S. F. Examiner	San Francisco	360	K U O																
Warner Bros	San Francisco	360	K L S							X	X					X	X	X	X
Oakland Tribune	Oakland	509	K L X			X	X	X	X			X	X			X	X	X	X
Maxwell Electric	Oakland	278	K R E			X	X	X	X										
General Elec. Co	Oakland	312	K G O					X	X	X				X	X	X		X	X
Portable Wireless	Stockton	360	K W G					X	X							X	X		
Herrold Lab'y	San Jose	360	K Q W									X	X						
Kimball-Upson	Sacramento	283	K F B K									X	X						
Gould	Stockton	360	K J Q					X	X										
Fallon & Co	Santa Barbara	360	K F H J									X	X						
Southern Elect. Co	San Diego	244	K D P T					X	X	X							X	X	X
Univ. of Ariz	Tucson	380	K F D H						X										
Nielson Radio Sup.Co.	Phoenix	238	K F B C													X	X	X	
Post-Intelligencer	Seattle	270	K F J C					X	X	X	X	X	X	X	X	X	X	X	X
Excelsior Motor Co	Seattle	660	K H O					X				X				X		X	
Rhodes Co.	Seattle	269	K F O A					X	X	X						X	X	X	
First Pres. Church	Seattle	300	K T W	X	X	X													
Star Electric	Seattle	283	K F H R						X	X								X	
Mullens Elec.	Tacoma	252	K G B					X	X			X	X					X	
Oregonian	Portland	492	K G W			X	X		X	X		X	X			X	X	X	
Hallock & Watson	Portland	368	K G G									X	X						
Stubbs Elect.	Portland	360	K G N															X	X
Meier & Frank	Portland	248	K F E C												X	X			
Apple City Radio Club	Hood River	360	K Q P									X	X						
Pacific Radio Co	Eugene, Ore.	275	K F A T				X	X				X	X						X
Boise High School	Boise, Ida.	270	K F A U			X	X					X	X			X	X		
Virgin Radio Service	Medford, Ore.	283	K F A Y							X	X				X	X			X
Bunkerhill-SullivanCo.	Kellogg, Ida.	360	K F E Y					X		X		X				X			
Deseret News	Salt Lake City	360	K Z N					X				X				X			
Reynolds Radio Co	Denver	360	K L Z	X	X														
Pyle & Nichols	Denver	360	K D Z Q						X	X				X	X			X	X
WestinghouseElec.Co	Hastings, Neb.	286	K F K X					X	X	X				X	X				
Star Telegram	Fort Worth	476	W B A P					X	X			X	X			X	X		
Dallas News	Dallas, Tex.	475	W F A A	X	X				X	X				X	X				
Palmer School	Davenport	484	W O C					X	X									X	X
Post Dispatch	St. Louis	546	K S D																
Star	Kansas City	411	W D A F			X	X			X	X								
Woodmen of World	Omaha	526	W O A W			X						X						X	
Westinghouse	Chicago	536	K Y W							X	X	X	X	X	X		X	X	
Drake Hotel	Chicago	360	W D A P						X	X	X	X	X	X	X		X	X	X
Crosley Mfg Co.	Cincinnati	308	W L W						X	X									
Detroit News	Detroit	580	W W J									X	X						
Radio Cor. or Am.	New York	455	W J Z						X										
Herald	Calgary	430	C F A C	X	X														
Federal Tel. Co.	Buffalo	319	W G R																
El Universal	Mexico City	525	C Y L						X	X						X	X		
El Buen Tono	Mexico City	526	C Y B													X	X		
Sweeney School	Kansas City	511	N H D			X	X												
Edgewater Beach	Chicago	447	W J A Z						X	X	X	X	X	X	X	X	X	X	X

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Dictagrand Loud Speaker.....	24.50
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Atlas Loud Speaker.....	25.00
Homecharger Gold Seal.....	18.50
No. 4500 Cotocoil Transformer.....	2.50
Harkness Coil—Silk Wound.....	pair 3.00
Sodium Tubes, $\frac{1}{4}$ amps, Detector Tubes, 1 $\frac{1}{2}$, 3, 4, 6.....	4.50
Sodium Tubes, $\frac{1}{4}$ amps. Amplifier Tube.....	4.50
Cardwell Condensors, 11 plate, \$4.25; 17 plate.....	4.75
Cardwell Condensors, 21 plate, \$5.00; 41 plate.....	6.00
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Ballantine R. F. Amplifier.....	15.00
T. N. T. Superhetrodyne Transformer.....	Each 3.50

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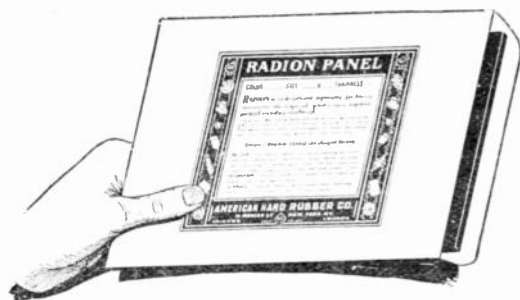
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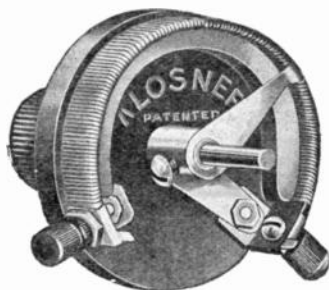
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10-12 P. M.
PACIFIC TIME

RADIO TIME TABLE

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

STATION	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
				10-00-10-30	10-30-11-00	10-00-10-30	10-30-11-00	10-00-10-30	10-30-11-00	10-00-10-30	10-30-11-00	10-00-10-30	10-30-11-00	10-00-10-30	10-30-11-00	10-00-10-30	10-30-11-00
L. A. Times.....	Los Angeles...	395	KH J														
Post-Intelligencer...	Seattle.....	270	KF J C														
Earle C. Anthony.....	Los Angeles...	469	KF I	X X		X X		X X		X X		X X		X X		X X	
Northwest Radio.....	Portland.....	360	KGN														
Oregonian.....	Portland.....	492	KG W														
W. W. Grant.....	Calgary.....	440	CFCN														
*Hale Bros.....	San Francisco...	423	KPO			X X		X X		X X		X X		X X		X X	
Herald.....	San Francisco...	430	CFA C														
Pyle & Nichols.....	Denver.....	360	KD Z Q	X X													
Westinghouse.....	Chicago.....	536	KY W														
Sweeney School.....	Kansas City.....	411	WH B	X X													
Drake Hotel.....	Chicago.....	360	WD A P														
Edgewater Beach.....	Chicago.....	447	WJ A Z														

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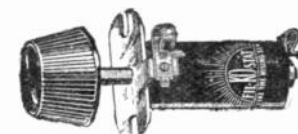
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WEEK COMMENCING MARCH 16, 1924

SUNDAY, MARCH 16—

- 10:00 a. m. Sermon from KHJ studio by Rev. Dan Trundle, Executive Secretary of International Justice to Armenia Society.
10:30 to 12:30 noon Organ recital and entire religious service from the First Methodist Episcopal Church. Arthur Blakeley, organist. Rev. Elmer E. Helms, pastor.
7:00 to 7:30 p. m. Organ recital from the First Methodist Episcopal Church. Arthur Blakeley, organist.
8:00 to 10:00 p. m. Program presenting Louise Gude, soprano; Annie Timmer, 'cellist; Geneva Zubrinsky, violinist. G. Allison Phelps will talk on "White Souls."

MONDAY, MARCH 17—

- 12:30 to 1:15 p. m. Music. News items. Weather report. Silent remainder of day.

TUESDAY, MARCH 18—

- 12:30 to 1:15 p. m. Music. News items. Weather report.
2:30 to 3:30 p. m. Matinee musicale through the courtesy of the Southern California Music Company.
6:45 to 7:30 p. m. Children's program presenting The Sandman and Queen Titania. Fay Marie Steiner, violinist, 9 years of age, pupil of Armadeo Reno, accompanied by Mrs. Phillip Lewis.
8:00 to 10:00 p. m. Program presented by the Golden West Commandery Band, S. H. Perine, director. Perry Weidner will give a talk.

WEDNESDAY, MARCH 19—

- 12:30 to 1:15 p. m. Music. News items. Weather report.
2:30 to 3:30 p. m. Matinee musicale through the courtesy of the Southern California Music Company.
6:45 to 7:30 p. m. Children's program. Bedtime story by "Uncle John."
8:00 to 10:00 p. m. Program presented by Kappa Alpha Chapter of Sigma Alpha Iota.

THURSDAY, MARCH 20—

- 12:30 to 1:15 p. m. Music. News items. Weather report.
2:30 to 3:30 p. m. Matinee musicale through the courtesy of the Southern California Music Company.
6:45 to 7:30 p. m. Children's program presenting Dickie Brandon, screen juvenile. Bedtime story by "Uncle John."
8:00 to 10:00 p. m. Program presented by the One Hundred and Sixtieth Infantry Band, R. N. Curns, director. Floryane Thompson, soprano.

FRIDAY, MARCH 21—

- 12:30 to 1:15 p. m. Music. News items. Weather report.
2:30 to 3:30 p. m. Matinee musicale through the courtesy of the Southern California Music Company.
6:40 p. m. Live stock and vegetable reports.
6:45 to 7:00 p. m. Children's program presenting Richard Headrick, screen juvenile. Bedtime story by "Uncle John."
7:00 to 7:30 p. m. Organ recital from First Methodist Episcopal Church, Arthur Blakeley, organist.
8:00 to 10:00 p. m. Program presenting the Studebaker Radio Orchestra of Long Beach.

SATURDAY, MARCH 22—

- 12:30 to 1:15 p. m. Music. News items. Weather report.
2:30 to 3:30 p. m. Matinee musicale through the courtesy of the Southern California Music Company.
6:45 to 7:30 p. m. Children's program. Bedtime story by "Uncle John."
8:00 to 10:00 p. m. Program arranged by A. G. Pfannkuchen, baritone; Sol Cohen, violinist; Gladys Blackwell Pickering, soprano.
10:00 p. m. Program presented by Sunkist Trio.

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PAUL REESE, Program Announcer

Remote Control Stations:

Los Angeles Evening Herald: 4:45 to 5:15 p.m. Daily except Sunday
 8:00 to 9:00 p.m. Monday, Wednesday, Friday
 Los Angeles Examiner 5:15 to 5:45 p.m. Daily except Sunday
 9:00 to 10:00 p.m. Daily

Program Detail Anthony Studio (Pacific Time), March 16 to March 22, inclusive
 (Does not include detail of remote control stations)
 (Subject to change)

SUNDAY, MARCH 16—

10:00 to 10:45 a.m. L. A. Church Federation Service.
 4:00 to 5:00 p.m. Federated Church Musicians Vesper Service.
 6:45 to 7:30 p.m. Concert by Patrick O'Neill, Irish tenor.
 10:00 to 11:00 p.m. Theron Bennett's Dutch Mill Orchestra.

TUESDAY, MARCH 18—

6:45 to 7:30 p.m. George J. Birkel Co. program.
 10:00 to 11:00 p.m. Concert arranged by Sol Cohen.

WEDNESDAY, MARCH 19—

6:15 to 7:30 p.m. Nick Harris Detective Stories and concert.
 10:00 to 11:00 p.m. Hollywood Community Orchestra.

THURSDAY, MARCH 20—

6:45 to 7:30 p.m. Y. M. C. A. concert, sales lecture and bedtime story.
 10:00 to 11:00 p.m. Gage Christopher concert.

FRIDAY, MARCH 21—

10:00 to 11:00 p.m. Frances Mae Maddux concert.

SATURDAY, MARCH 22—

6:45 to 7:30 p.m. Bedtime story and concert.
 8:00 to 9:00 p.m. Leonard Van Berg, Jimmy Kessel and Barney Webber, singing and popular songs.
 10:00 to 11:00 p.m. Vocal and instrumental concert.

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Program for the Week of March 16

SUNDAY, MARCH 16—

9:00 to 10:00 p.m. The Stillwell Orchestra, an hour of beautiful chamber music, through the courtesy of Lester's Radio Shop.

MONDAY, MARCH 17—

9:00 to 10:00 p.m. All all-Irish St. Patrick's Day program presented by Thomas Taylor Drill, noted musical director and teacher of singing.
5:15 p.m. Talk on Education by Dr. Ralph L. Power.

TUESDAY, MARCH 18—

9:00 to 10:00 p.m. Concert by the Collegiate Californians from the University of Southern California.
5:15 p.m. Talk, "What Psychology Is Doing to Help Earners," by Dr. Martin J. Stormzand of U. S. C. Inspirational talk by Thomas Lutman.

WEDNESDAY, MARCH 19—

9:00 to 10:00 p.m. Concert by the Studio String Quartet from the Goldwn Studios.
5:15 p.m. Health talk by Annette Kellerman.

THURSDAY, MARCH 20—

9:00 to 10:00 p.m. Civic program presented by Fullerton, California.
5:15 p.m. Talk to mothers by Cecile Lowder, registered nurse. Talk on Landscape Architecture, by Ralph D. Cornell.

FRIDAY, MARCH 21—

9:00 to 10:00 p.m. Civic program presented by Sierra Madre, California.
5:15 p.m. "Downfall of Monarchs," talk by Dr. Charles M. Martin of U. S. C. Dr. Charles Kennedy, talk on Perfect Fet.

SATURDAY, MARCH 22—

9:00 to 10:00 p.m. Chamber music program presented by the Zoellner Quartet.
5:15 p.m. Lent services.

SUNDAY, MARCH 22—

9:00 to 10:00 p.m. Civic concert presented by Wilmington, California.

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M. E. Carrier, Mgr. Prof. J. B. Trowbridge, Director of Programs

SUNDAY, MARCH 16—

- 10:45 to 12:30 noon Regular services of the Church of the Open Door, including sermon by Dr. R. A. Torrey. Selections by the Harmony Quartet and Mr. C. M. Books, baritone. Mr. Paul S. McConnell, organist.
- 6:00 to 6:45 p. m. Radio Vesper Service with Sermon by Rev. John Hubbard. Miss Paulene Plummer, organist. Mrs. Marian McGlashan Muller, soprano.
- 8:00 p. m. Sermon by Dr. R. A. Torrey. Mrs. Irvin S. Fallis, soprano. Selection by the Harmony Quartet. Mr. Paul S. McConnell, organist.

TUESDAY, MARCH 18—

- 8:00 to 9:00 p. m. Selections by the Bible Institute Men's Glee Club, Mr. J. B. Trowbridge, director, including the Harmony Male Quartet, Mr. Oscar Walton, organist, Mr. Curtis Glenn Elliott, violinist. Gospel address by Rev. Luther A. Arthur. Subject, "A Beggar by the Wayside."

THURSDAY, MARCH 20—

- 8:00 to 9:00 p. m. Organ recital. Miss Mildred Colville, contralto.

Evening Herald, Los Angeles

Phone Metropolitan 5100

Evening Herald Programs Via Radio Central Station KFI

17TH OF IRELAND—

- 4:15 to 4:45 p. m. Evening Herald's Radiolians regular dance program. Harmon E. Abrahamson, "Saw and Hammer and Cello Bow."

WEDNESDAY, MARCH 19—

- 4:15 to 4:45 p. m. Program arranged through courtesy of Butts Music Co. and Abrasha Orlikoff, violinist.

FRIDAY, MARCH 21—

- 4:15 to 4:45 p. m. Fisher's Mello Jazz Orchestra. Cupie King's comedy chatter.

K F S G—Angelus Temple—278 Meters

Echo Park, Los Angeles.

AIMEE SEMPLE McPHERSON, Evangelist Pastor

SUNDAY, MARCH 16—

- 10:30 to 12:30; 2:30 to 4:30; 7:00 to 7:30; 8:00 to 10:00 p. m. Complete services from Auditorium of the Temple, including special music and the revival sermon by Aimee Semple McPherson. Clarice Stambaugh, soprano; Angelus Temple Quartet; Suwanee Jubilee Singers.

WEDNESDAY, MARCH 19—

- 2:30 to 4:30 p. m. Regular Divine healing services from the Auditorium by Aimee Semple McPherson.
- 7:00 to 7:30 p. m. Children's Bible story by Mother Kennedy. John Walker, baritone.
- 8:00 to 8:30 p. m. Musical program by the Suwanee Jubilee Singers. Judge Carlos S. Hardy of the Superior Court. Madeline Gilliland, soprano.
- 8:30 to 9:15 p. m. Revival sermon by Aimee Semple McPherson.
- 9:15 to 10:00 p. m. Musical program by Suwanee Jubilee Singers. Family Altar—

THURSDAY, MARCH 20—

- 3:30 to 4:30 p. m. Organ recital arranged by Roy Ried Brignall.
- 7:00 to 7:30 p. m. Children's Bible story by Mother Kennedy. Ruth Russell, soprano; Wm. H. Butts and Carl Edward Hatch.
- 8:30 to 9:15 p. m. Revival sermon—Aimee Semple McPherson.
- 9:15 to 10:00 p. m. Program by Butts and Hatch. Family Altar—a Psalm by Aimee Semple McPherson. Angelus Temple Choir.

FRIDAY, MARCH 21—

- 3:30 to 4:30 p. m. Musical program arranged by Gladwyn N. Nichols, Musical Director
- 7:00 to 7:30 p. m. Preview of the coming Sunday International Sunday School Lesson by Mother Kennedy. Alta M. Cain, soprano.
- 8:00 to 8:30 p. m. Program arranged by Nick Harris, Detective and Criminologist. Program through the courtesy of Myra Belle Vickers.
- 8:30 to 9:15 p. m. Revival sermon—Aimee Semple McPherson.
- 9:15 to 10:00 p. m. Program continued by Nick Harris. Angelus Temple Band.

SATURDAY, MARCH 22—

- 3:30 to 4:30 p. m. Musical program by members of the Children's church—arranged by Frank Cummings.
- 7:00 to 7:30 p. m. Bible Story by Mother Kennedy. Gertrude Wilding, Child Soprano.
- 8:00 to 8:30 p. m. Musical program by Temple soloists. Gladys N. Nichols, cornet.
- 8:30 to 9:15 p. m. Revival sermon—Aimee Semple McPherson.
- 9:15 to 10:00 p. m. Mr. and Mrs. R. J. Kennedy, Gospel Duets; Mr. and Mrs. Wm. Black, Gospel Duets; Angelus Temple Orchestra; Gladwyn N. Nichols, cornetist; Kirts Winters, violin; Jas. R. Hood, baritone; Clarice Stambaugh, soprano.

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EVENING PROGRAMS

SUNDAY—

11:00 to 12:00 a. m. Radio Church Services.
8:30 to 10:00 p. m. Rudy Seiger's Orchestra, from Fairmont Hotel.

MONDAY—

8:00 to 8:30 p. m. Organ Concert.
10:00 to 11:00 p. m. Palace Hotel Dance Orchestra.

TUESDAY—

8:00 to 10:00 p. m. Studio Program.
10:00 to 11:00 p. m. Palace Hotel Orchestra.

WEDNESDAY—

8:00 to 11:00 p. m. Palace Hotel Orchestra.

THURSDAY—

8:00 to 9:00 p. m. Organ Recital.
9:00 to 10:00 p. m. Studio Program.
10:00 to 11:00 p. m. Palace Hotel Dance Orchestra.

FRIDAY—

Silent for evening.
10:00 to 11:00 p. m. Palace Hotel Orchestra.

SATURDAY—

8:00 to 12:00 p. m. Art Weidmer's Fairmont Hotel Dance Orchestra.

K F A E—State College of Washington—330 Meters

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

MONDAY, MARCH 17—

7:30 p. m. Top Grafting, Prof. O. M. Morris, horticulturist. Birds of a Summer Day, Prof. W. T. Shaw, zoologist. Orchestra numbers, Pullman High School Orchestra. Some New Plant Diseases, Prof. George L. Zundel, specialist. Importance of Correct Design to Engineering, Prof. E. B. Parker. Songs, Agnes Dilts, Palouse.

WEDNESDAY, MARCH 19—

7:30 p. m. Better Hatches, Prof. L. W. Cassell, poultryman. Fabrics You Will Wear in the Spring, Prof. Edna Irene Avery. Soprano solos, Margherita Beneke, Spokane. Piano solos, Fredericka Kershaw, Waitsburg. Use of Whole Grain Cereals, Miss Mary Sutherland, food specialist. Gaitre and Its Prevention, Dr. D. T. Ford, Pullman. Banjo solos, Erle Hannum, Spokane.

FRIDAY, MARCH 21—

7:30 p. m. Losses from Impure Seed Grain, Prof. E. G. Schafer, farm crops department. Piano solos, Irmingade King, Spokane. Farmers' Influence on Production, Prof. R. N. Miller. Whistling solos, Mrs. W. V. Smith (wife of an engineering student). Songs, Vay Kerns, Palouse. A Talk on New Books, Miss Alice Lindsey Webb.

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

WEEK OF MARCH 16, 1924

SUNDAY, MARCH 16—Silent.

MONDAY, MARCH 17—

- 1:30 p. m. New York Stock Exchange and U. S. Weather Bureau reports.
- 3:00 p. m. Short musical program. Address by Vaughan MacCaughey, "Child Nature." from the Viewpoint of a Father.
- 6:45 p. m. Final reading, Stock Exchange and Weather Reports, and news items.

TUESDAY, MARCH 18—

- 1:30 p. m. New York Stock Exchange and U. S. Weather Bureau reports.
- 6:45 p. m. Final reading, Stock Exchange and Weather Reports, and news items.
- 8:00 p. m. Varied musical program. Address, "My European Impressions," by Rev. John Snape, First Baptist Church, Oakland, California.
- 10:00 p. m. to 1:00 a. m. Dance music from the orchestra in the St. Francis Hotel ball room, San Francisco; Henry Halstead, leader.

WEDNESDAY, MARCH 19—

- 1:30 p. m. New York Stock Exchange and U. S. Weather Bureau reports.
- 3:00 p. m. Short musical program. Address by Florence Runnels, M. A., "Spiritual Aspects of the New Education."
- 6:45 p. m. Final reading, Stock Exchange and Weather Reports, and news items.

THURSDAY, MARCH 20—

- 1:30 p. m. New York Stock Exchange and U. S. Weather Bureau report.
- 6:45 p. m. Final reading, Stock Exchange and Weather Reports, and news items.
- 8:00 p. m. Two one-act comedies, "A Matter of Husbands" and "Op O' Me Thumb." Fremont High School Orchestra.

FRIDAY, MARCH 21—

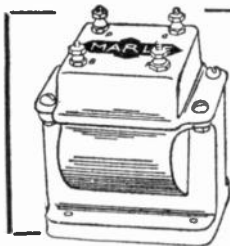
- 1:30 p. m. New York Stock Exchange and U. S. Weather Bureau reports.
- 3:00 p. m. Short musical program. An afternoon with American authors and composers.
- 6:45 p. m. Final reading, Stock Exchange and Weather Reports, and news items.

SATURDAY, MARCH 22—

- 12:30 noon. New York Stock Exchange and U. S. Weather Bureau reports.
- 8:00 p. m. Feature numbers furnished by Berkeley Downtown Business Association.
- 10:00 p. m. to 1:00 a. m. Dance music from the orchestra in the St. Francis Hotel ball room, San Francisco; Henry Halstead, leader.

TUESDAY, MARCH 18, 8:00 to 9:45 P. M.

- Instrumental Selections—(a) Still as the Night, Bohm (Ditson); (b) March of the Tin Soldiers, Trierne (Ditson).....Lyric Trio
- Modesta Mortensen, violin; Dorothy Dukes Dimm, 'cello; Martha Dukes Parker, Piano
- Vocal Selection—Soldiers' Chorus from Faust (Gounod).....
-Quartet of the First Baptist Church, Oakland, California
- Eileen Almstead Piggott, soprano; Ruth Hall Crandall, Contralto; George R. Hunter, tenor; Charles Lloyd, bass, director; Martha Dukes Dimm, accompanist.
- Tenor Solos—(a) I Bring You Heartsease, Branscombe (Schmidt); (b) One Day, Geibel (Presser).....George R. Hunter
- 'Cello Solo—The Swan (Saint-Saens).....Dorothy Dukes Dimm
- Duets for Soprano and Contralto—(a) Love Tales of Hoffmann, Offenbach (Ditson); (b) Nearest and Dearest (Caraccio).....
-Eileen Almstead Piggott, soprano; Ruth Hall Crandall, contralto
- Instrumental Selections—Waltz No. 1 (Schutt); Waltz No. 2 (Schutt).....Lyric Trio
- Address—"European Impressions" (first part). Rev. John Snape, First Baptist Church, Oakland
- Vocal Selections—(a) Annie Laurie (Scotch Melody); (b) Absent, Metcalf (Schmidt)....
-Quartet of the First Baptist Church, Oakland, California



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Contralto Solos—(a) Pirate Dreams, Huerter (Ditson); (b) Passing By, Purcell (Ditson) Ruth Hall Crandall
Violin Solos—(a) Serenade Melancolique (Tschaiakowski); (b) Adagio-Religioso, from Grand Concerto (Vieuxtemps) Modesto Mortensen
Duet for Tenor and Bass—The Moon Has Raised Her Lamp (Benedict) George R. Hunter and Charles Lloyd
Soprano Solos—(a) To a Hilltop (Cox); (b) To the Sun, Curran (Ditson) Eileen Almstead Piggott
Instrumental Selection—Andante Molto Sostenuta, from Trio Opos 37, Bargial (Breitkopf and Hartel) Lyric Trio
Bass Solos—(a) Viking Song, Coleridge-Taylor (Ditson); (b) Calvary, Rodney (Ditson) Charles Lloyd
Address—"European Impressions" (second part) Rev. John Snape
Vocal Selection—Hallelujah Chorus, from The Messiah (Handel) Quartet of the First Baptist Church, Oakland, California
Instrumental Selections—(a) Deep River, Fisher (Ditson); (b) Romance, Debussy (Ditson) Lyric Trio

THURSDAY, MARCH 20, 8:00 to 9:41 P. M.

Two One-Act Comedies, Directed by Maurice Brown

1. Instrumental Selections—(a) Amazon March (Von Blom); (b) Raymond Overture (Thomas); (c) Melodie (Saraste)—Fremont High School Orchestra, Fred Rau, director. Courtesy of Glenn H. Woods, Director of Music of the Oakland Public Schools, Oakland, California.

COMEDY—"A MATTER OF HUSBANDS" (Molnar)

CAST: The earnest young woman, Helen Conrad; a famous actress, Helen Maher. Scene: A drawing room interior. Time: The present.

2. Instrumental Selections—(a) Adoration (Borowski); (b) A Frangesa (Costa); (c) Hamilton March (Rau)—Fremont High School Orchestra.

COMEDY—"OP O' ME THUMB" (Frederick Senn)

CAST: 'Op o' Me Thumb, Maurice Watts; Didier, Elsie Jacobs; Clementina, Norah Derby; Horace, Ralph Geddes; Celeste, Mildred French; Rose, Mary Elizabeth Doerr. Scene: A laundry. Time: The present.

SATURDAY, MARCH 22, 8:00 to 9:45 P. M.

Violin Solos—(a) Prize Song from "The Meistersinger" (Wagner); (b) Deep River (Taylor) Orley See. Mertiana Towler, accompanist

Soprano Solos—(a) Cara mio ben (Giordani); (b) The Lass with the Delicate Air (Dr. Arne) Mme. Florida Parrish-Moyle

Readings from James Whitcomb Riley Mrs. Oscar M. Bennett

Violin Solo—Spanish Dance, Rehfield (Schott) Orley See

Soprano Solo with Violin and Piano—Love Like the Dawn Came Stealing, poem by Gilbert Moyle, Cadman (White-Smith) Mme. Florida Parrish-Moyle

Cornet Solos—(a) My Heart at Thy Sweet Voice (Saint-Saens); (b) Calm as the Night Carl Bohm Mrs. T. A. East

Readings from Edgar Guest Mrs. Oscar M. Bennett

Baritone Solo—Pilgrim's Song, Tschaiakowsky (Ditson) Albert E. Brear

Piano Solos—(a) Impromptu in F Sharp (Chopin); (b) Waltz in A Major (Moszkowski) Helen Merchant

Whistling Solo—Morning Mood, Peer Gynt Suite (Grieg) Shirley Irvine

Soprano Solo—The Wren (Benedict) Grace G. Brear

Address—"Present Economic Status of the Farmer" Professor B. H. Crocheron

Whistling Duet—Love Song, Cadman (White-Smith) Shirley and Ethel Irvine

Duet for Soprano and Baritone—Passagebird's Farewell (Hildach) Mr. and Mrs. Albert E. Brear

A CHINESE DEGREE—By the Chinese Degree Teams of the Berkeley Lodge of Elks

Characters: Lee Ding Ni, Dr. Earle Clement; Loy Al Ni, Dr. Fred Batkin; Too Long, Jo Mills. Assisted by Musical Walsh on the ocarina, harmonica, jews harp and saxophone.

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K G W—The Morning Oregonian—492 Meters

PORTLAND, OREGON

(PACIFIC TIME)

Program for Week March 16 to March 22, 1924

11:30 a. m. Daily except Sunday—Weather forecast.
7:30 p. m. Daily except Sunday—Weather forecast and market reports.

SUNDAY, MARCH 16—

6:00 p. m. Church Services provided by Westminster Presbyterian Church, Dr. E. H. Pence, pastor.
7:00 p. m. George Olsen's Metropolitan Orchestra in dinner program of concert music from Hotel Portland.

MONDAY, MARCH 17—

3:30 p. m. Literary program by Portland Library Association.
7:00 p. m. Talk by Mrs. R. E. Barrett, City Manager of Warrenton, Oregon; subject, "Advertising Oregon."
8:00 p. m. Piano recital by Beatrice Dierke.
9:30 p. m. Concert by artists from the Civic Music Club.

TUESDAY, MARCH 18—

11:15 a. m. Market Basket.
12:30 p. m. Concert by Civic Music Club of Portland.
3:30 p. m. Talk by Jeanette P. Cramer, home economics editor of The Oregonian.
7:45 p. m. Talk for farmers, Oregon Agricultural College extension service.

WEDNESDAY, MARCH 19—

11:15 a. m. Window Shopping.
12:30 p. m. Concert by Darby's Orchestra of Cotillion Hall.
3:30 p. m. Children's program.
8:00 p. m. Orchestra concert.
9:00 p. m. Alexander Hamilton Institute Business Talk by James Albert.
10:00 p. m. Dance music by George Olsen's Metropolitan Orchestra of the Hotel Portland.

THURSDAY, MARCH 20—

11:15 a. m. Window Shopping.
12:30 p. m. Concert, courtesy Sherman, Clay & Co.
3:30 p. m. Woman's story program. Installment of "The Midlander," by Booth Tarkington.
8:00 p. m. Radio play.
10:00 p. m. Dance music by George Olsen's Metropolitan Orchestra of the Hotel Portland.

FRIDAY, MARCH 21—

11:15 a. m. Market Basket.
12:30 p. m. Concert.
3:30 p. m. Lecture provided by Extension Service, Oregon Agricultural College.
8:00 p. m. Accordion solos by Johnny Sylvester.
8:15 p. m. Studio program of Dance Music by George Olsen's Metropolitan Orchestra of Hotel Portland, Herman Kenin, director.
9:00 p. m. Lecture by Dr. Peter C. Crockatt, professor of Economics of University of Oregon; subject, "History and significance of the British Labor Movement."
10:30 p. m. Hoot Owls with Darby's orchestra.

SATURDAY, MARCH 22—

3:30 p. m. Children's program. Story by Aunt Nell.
10:00 p. m. Weather forecast and dance music by George Olsen's Metropolitan Orchestra of Hotel Portland (2 hours).



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RADIO PROGRAM BEGINNING MARCH 16TH

Daily Except Sunday, 7:00 to 7:30 p. m. News items, United States Weather Bureau report, market and financial summary.

SUNDAY, MARCH 16—

9:30 to 10:30 p. m.

MONDAY, MARCH 17—

8:00 to 10:00 p. m.

Talk by Rev. John Snape, sacred songs.

Broadcasting from Stephens' Union, University of California campus at Berkeley, over private leased wires through Radio KLX. Broadcasting supervised and programs arranged by the University of California Radio Club.

1. Campus news bulletins by the A. S. S. U. publicity bureau.

2. Lecture by Professor J. V. Breitwieser, professor of education at the University of California. Subject, "The Principles of Salesmanship."

3. Program de luxe by the Treble Cleft Society of the University of California.

8:00 p. m.

Studio program arranged by the Wiley B. Allen Company of Oakland. Professionals participating: Genevieve Morris, soprano; L. L. Westling, baritone; Mrs. Westling, pianist and accompanist; Millard Martin, violinist; Cecilian Trio—Miss June Ulsh, violin; Miss Dorothy Ulsh, cello; Hazel Hunter, piano, and Kathryn Goggin, accompanist.

THURSDAY, MARCH 20—

7:00 to 7:30 p. m.

News items, United States Weather Bureau report, market and financial news.

FRIDAY, MARCH 21—

7:00 to 7:30 p. m.

News items, United States Weather Bureau report, market and financial summary.

8:00 p. m.

8:00 p. m.

Studio program:

Pacific Quartet: Vocal solos by Sue Hill, coloratura soprano. Mid-Henri Carmer. Vocal solos by Sue Hill. Vocal solos by Mrs. Emma L. Doig. Flute solo by Ethel Guyon.

SATURDAY, MARCH 22—

7:15 to 10:00 p. m.

Broadcasting of events at the annual Charter Day Banquet of the University of California Alumni at the Hotel Oakland over private leased wires through Radio KLX. Evening's program will consist of speeches by W. W. Campbell, president of the University of California, and by men in public life who are members of the University of California; instrumental and vocal solos, University Glee Club songs, college songs and band music.

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SUNDAY, MARCH 16—

- 9:00 to 10:15 a. m. Complete services of the First Methodist Church; Rev. J. W. Bergin, pastor.
 2:00 to 3:00 p. m. Organ concert by Miss Margaret Agnew White of the Rialto Theater.
 3:00 to 4:00 p. m. Address by Rev. J. Frank Norris, pastor of First Baptist Church.
 9:00 to 10:00 p. m. Popular concert by Fred Cahoon's WBPA Southern Serenaders Orchestra.

MONDAY, MARCH 17—

- 5:30 to 6:30 p. m. Concert by Owen Crockett's Yeoman Orchestra, featuring Irish tunes for St. Patrick's Day. (E. L. O. announcing.)
 7:30 to 8:45 p. m. Concert by the orchestra and band of the Odd Fellows Orphanage, Corsicana, Texas. (The Hired Hand announcing.)

TUESDAY, MARCH 18—

- 5:30 to 6:30 p. m. Concert offered by Miss Virginia Jackson, pianist, and other artists. (E. L. O. announcing.)
 7:30 to 8:45 p. m. Concert by the 450-voice choir and the 25-piece orchestra of the First Baptist Church, J. Dahlbert Coutts, director. G. C. A. announcing.)

WEDNESDAY, MARCH 19—

- 5:30 to 6:30 p. m. Monthly recital offered by Sam S. Losh, pianist and baritone, and pupil-artists. (E. L. O. announcing.)
 7:30 to 8:45 p. m. Concert by George Freeman's Sooner Serenaders, the Texas Hotel Orchestra. (The Hired Hand announcing.)

THURSDAY, MARCH 20—

- 5:30 to 6:30 p. m. Concert by the Postoffice Quartet and Brass Quartet of Weatherford, Texas. (E. L. O. announcing.)
 7:30 to 8:45 p. m. Monthly organ recital by Will Foster, organist of the First Methodist Church. (G. C. A. announcing.)

FRIDAY, MARCH 21—

- 5:30 to 6:30 p. m. Concert by Frank Cheek's Glee Club. (E. L. O. announcing.)
 7:30 to 8:45 p. m. Concert by the First Presbyterian Church Orchestra, Mrs. Thomas Holt Hubbard, director. (G. C. A. announcing.)

SATURDAY, MARCH 22—

- 5:00 to 5:30 p. m. Review of the interdenominational Sunday School Lesson and radio Bible class, by Mrs. W. F. Barnum.

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K S D—St. Louis Post-Dispatch—546 Meters**Pacific Time****SUNDAY, MARCH 16—**

7:00 p. m. Music program direct from the Grand Central Theatre.

MONDAY, MARCH 17—

6:00 p. m. Studio music program by Hawaiian students at St. Louis University.

TUESDAY, MARCH 18—

6:00 p. m. Concert by Metropolitan Police Band, H. J. Falkenhainer, conductor.

WEDNESDAY, MARCH 19—

8:00 p. m. Program of Abergh's Concert Ensemble, Arne Arnesen, violinist, broadcast direct from Hotel Statler.

7:00 p. m. Program by quartet of West Presbyterian Church Choir.

9:00 p. m. Broadcasting direct from Hotel Statler dance music played by Rodemich's Orchestra.

THURSDAY, MARCH 20—

6:00 p. m. Program by members of Standard Oil Band of Wood River, Illinois, under direction of I. L. Roy Stocker.

FRIDAY, MARCH 21—

Silent.

SATURDAY, MARCH 22—

6:30 p. m. Missouri Theatre Orchestra concert and specialties broadcast direct from the theatre.

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Na-ald 13-plate Vernier

Na-ald 23-plate Vernier
Na-ald 43-plate Vernier
Neutralizing Condenser
Freshman Mica Cond.

COUPLERS, ETC.

Hillco Coupler
Premier Coupler
Eagle Coupler or Vtr.
Branston Coil
Shamrock Coupler or Vtr.
Shamrock Oscillating
Workrite Coupler or Vtr.
Lincoln Coupler, Bakelite
Workrite Neut. Kit
Workrite Neutroformer
Cocaday Coil
Shamrock Reflex Coils
Coast Reflex Coils
Lincoln Reflex Coils
Signal Loose Coupler

CRYSTALS

Argentite Plain
Argentite Woodsmetal
Argentite Nickel
B Metal Crystals
Mounted Galena

DETECTORS

Glass encased, small
Glass encased, large
Navy Type Detector
Lincoln Fixed Adjustable

DIALS

Radion, 2 1/4 -inch, black
Radion, 3 -inch, black
Radion, 4 -inch, black
Radion, 2 1/4 -inch, mahog.
Radion, 3 -inch, mahog.
Radion, 4 -inch, mahog.
Hercules, 2 -inch, black
Hercules, 3 -inch, black
Hercules, 3 1/2 -inch, black
Hercules, 2 -inch, mahog.
Hercules, 3 -inch, mahog.
Composition Dial, 2 -inch
Composition Dial, 3 -inch
Composition Dial, 4 -inch
Na-ald, 2 -inch
Na-ald, 3 -inch
Na-ald, 4 -inch
Na-ald, 3 -inch Vernier
Na-ald, 4 -inch Vernier
Bell Dial, 3 1/2 -inch
Bell Dial, 3 -inch

JACKS AND PLUGS

Howard Multi-Plug
Pacent Double Plug

Saturn Plug
Sta-put Plug
Sta-put Jr.
Marco Multi-Plug
K-C Plug
Pilot Plug
Sure Grip Plug
Four-Way Plug, large
Four-Way Plug, small
Hercules, mahogany
W. W. Antenna
Freshman Antennella
Saturn Jack No. 1
Saturn Jack No. 3
Saturn Jack No. 4
Saturn Jack No. 5
Leach Jack, single
Leach Jack, double
Pacent Jack, single
Pacent Jack, double
Marco Gridleak
Cutler-Hammer Gridleak
Electrad Leak
Electrad Variohm
Tiny Turn Vernier
Na-ald Vernier
Durham Resist
Marco No. 3, open circuit Jacks
Marco No. 4, closed circuit
Marco No. 1, double circuit
Marco No. 5, single filament
Marco No. 6, double filament
Marco No. 8, Neut.
Marco No. 9, Neut.
Marco No. 10, Neut.

PHONES AND HORNS

Morrison Unit
Lincoln Senior
Lincoln Junior
Worthmore
Little Tattler
Trutone Horn, A or B
Trutone Senior
Trutone Little Senior
Madera Horn and Unit
Madera Horn and Unit
Pathe, 1924, mahogany
Mercury Speaker
Shell tone
Perfect tone
Dictagrand
C. I. C. Loud Speaker
C. I. C. Unit
Rubber Adapters
Double Fone Att.
Venice Phone Att.

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DEALERS WRITE FOR OUR PRICE LIST

LINCOLN PRODUCTS AS

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Telephone Your Order and Get Delivery Within a Few Hours

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Acme Pot Rheo., 30 ohm
Cutler-Hammer—
Potentiometer, 300 ohm
Rheostat, 30 ohm
Rheostat, 125 ohm
Raymond Vernier Rheos.
Accurate 30 ohm Rheos.
Filkostat
Howard 25 ohm. Rheos.
Howard 40 ohm. Rheos.
Howard 60 ohm. Rheos.
Howard Power Rheos.
Hercules 30 ohm. mhg. or
black
Accurate 30 ohm. mhg. and
Dial
Howard Potentiometer—
200 ohm.
400 ohm.
Dayton Amp. Unit
Dayton Det. Unit
CRL No. 106 Leak
CRL No. 107 Leak and
Cond.
CRL 400 ohm. Potentio-
meter

SOCKET AND ADAPTERS

Eagle
B. B. Comp.
Hopewell
Workrite No. 199
Workrite Standard
Marco W. D. 11 Socket
Bell Socket
Coto-Coil Socket
Na-ald Socket No. 449
Na-ald Socket No. 400, De
Luxe
Na-ald Socket No. 411
Na-ald Socket No. 401
Na-ald Adapter
No. 430 Socket

TRANSFORMERS

Thordarson High Ratio
Erla 3 1/2 - 1
Erla 6 - 1
Erla No. 2 Reflex
Hedgehog Premier
Amertran
All American 5 - 1
All American 10 - 1
Coto-Coil, small
Coto-Coil, large
Samson
Acme, A2

Acme, Va2
Acme, R2
Acme, R3
Acme, R4
Marle, A4
Marle, A7
Marle, A6
Marle, A8

INCIDENTALS

Loop Aerial, folding
Battery Clip, small
Battery Clip, medium
Battery Clip, large
Battery Clip, Grip Tight
Battery Clip, No. 27 copper
H. D. Copper Wire, 100 ft.
No. 14 Copper Wire, 100 ft.
Fixture Wire, 100 ft.
Spaghetti Special
Spaghetti Rubber
Resis. Base Mounting
S. O. S. Battery Tester
Insulators, rubber
Insulators, Little Joe
Single Phone Cords
Double Phone Cords
Na-ald Phone Cords, 20 ft.
Na-ald Tip Jacks
Freshman Resistance Leak
Freshman Resistance Leak
and Cond.
Freshman Leak and Handle
Buss Bar
Luco Solder Paste
Buss Bar, 5-lb. roll
Marco 1 1/2 or 3/4 Nick, Bezel
Marco 1 1/2, black
Erla Bezel, 3/4, 1 or 1 1/2 in.
Signal Key
Signal Buzzer
No. 70 Mast Pipe Fix.
No. 60 Mast Pipe Fix.
Terminal Assortments
Terminal No. 3 Placements:
Order by Code name.

"Conoid," 1000
"Nipple," 700
"Emotion," 700
"Equinox," 550
"Equator," 500
"Contain," 300
"Nereid," 300
"Consort," 300
"Consol," 250
No. 20 Double Covered Cot-
ton Magnet Wire
No. 22 Double Covered Cot-
ton Magnet Wire

No. 24 Double Covered Cot-
ton Magnet Wire
Ross Wire, copper, tin,
brass
Cotton Headbands
Leather Headbands
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Monodyne Amplifiers
Monodyne Eliminator
"100 Hookup" Books
Lightning Arrestors
Brackets, Detector
Brackets, Amplifier
Soldering Iron
Solderall
Lincoln Set Junior
Electrad Lead In
Sta-put Double Plug

CABINETS

Unfinished Gum

6x10 1/2
7x9
7-12
7x14
7x16
7x18
7x21
7x24
7x26

RADION

6x7
6x10 1/2
6x14
6x21
7x9
7x10
7x12
7x14
7x18
7x21
7x24
7x26
9x14
10x12

LINCOLN PANELS

7x10
7x12
7x14
7x18
7x21
7x24

LINCOLN "B" BATTERIES

B-1, 45 volts, large 5.00
B-2, 45 volts, small 4.75
B-3, 22 1/2 volts, large 2.50
B-4, 22 1/2 volts, small 1.90
B-5, 22 1/2 volts, small 2.25
6 Taps

O COMPANY

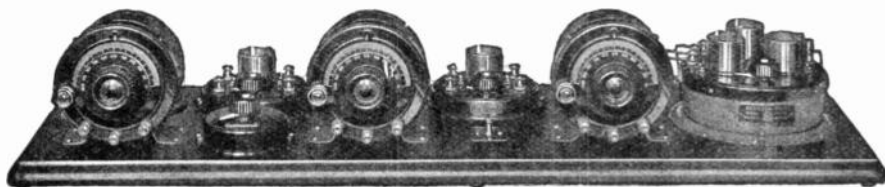
Phone 872-350

115 E. 11th St., Los Angeles

GOOD AS THE NAME!

ATWATER KENT

RADIO EQUIPMENT

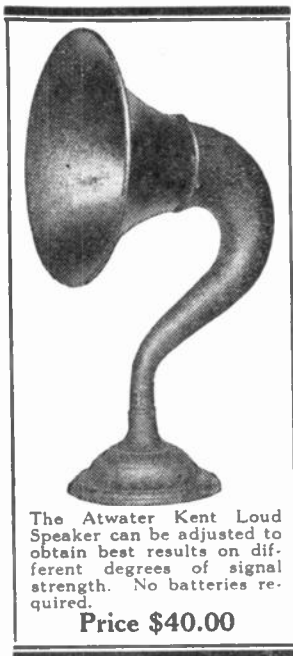


The Atwater Kent Model 10 Receiving Set. Price \$110.00

A Truly Remarkable Receiving Set

OUTSTANDING among the advantages of this receiving set is its remarkable selectivity, and its wide range of operation:—the desired broadcasting station can be tuned in at will. It gives exceptional tone qualities and volume. You should hear it perform. Atwater Kent Radio Equipment includes complete sets and all parts necessary for the assembling of complete sets.

*Satisfaction Absolutely
Guaranteed*



The Atwater Kent Loud Speaker can be adjusted to obtain best results on different degrees of signal strength. No batteries required.

Price \$40.00

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ELECTRIC EQUIPMENT CO.

DISTRIBUTORS

1240 South Hope St.

Los Angeles, Cal.

Telephone 873-921

Letters to the Editor

Editor's Note:—In reading the following letters, readers should note the location from which they come. Long distance reception is, naturally, easier to receive in places where interference is at a minimum than in our cities.

Editor Radio Doings,

Dear Sir:

In your issue of February 17-February 23, Mr. Horace Bull, Colton, California, wishes that some reader would advise him what station, on February 8 at 8 p. m., was calling, "Hello, San Francisco, Hello, Sacramento," on a wave length of about 525.

No doubt, Mr. Bull has been advised of what took place on that date long before this letter reaches you. If not, you may care to publish same.

On date mentioned, Eastern time 11 p. m., Pacific time 8 p. m., the American Telephone & Telegraph Company, through radio station WMAQ, the Chicago Times, Chicago, Illinois, wave length 448, conducted a transcontinental and international roll call of telephone stations in the order given, each station answering to its name when called, and all telephone stations listening in all of the time.

Mr. Beach, Vice-President of the American Telephone & Telegraph Company, as announcer first called Mr. Caldwell at Havana, Cuba, passing the time of day with him as to the weather conditions, times, etc., and asked for a selection of music, and so on, calling Key West, Palm Beach, Jacksonville, Dunkirk, South Carolina; Charlotte, North Carolina; Lynchburg, Va.; Pittsburgh, Pa.; Terre Haute, Ind.; St. Louis, Kansas City, Denver, Rawlins, Wyoming; Salt Lake City; Sacramento; San Francisco.

San Francisco, when called upon, gave as a selection "Home, Sweet Home" on the chimes and also taps on the bugle as a good-night selection at just 8:15 Pacific time and 11:15 Atlantic time.

The reception with me 3000 miles away was wonderful, all stations regardless of distance in exactly the same strength of voice. I feel pretty good at the performance of my little set, which is a one-detector, UV-199 tube, "Green" hook-up.

Very truly yours, A. S. CARLETON, 28 Cedar St., West Lynn, Mass.

Santa Cruz, Calif., March 3, 1924.

Editor of Radio Doings:

Perhaps one of the readers of your radio magazine can tell me the call letters of a broadcasting station broadcasting on Sunday evening. They signed off at 8:15 Pacific time.

Yours truly, HYMAN WIEZEL.

P. S.—This station was broadcasting on about 309 meters.

RADIO CABINET SHOP

Specializing in the making of high class Cabinets, soft or hard woods, plain or elaborate

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Prest and Dean Radio Electric Co.

Complete Line of Radio Sets and Supplies

Colin B. Kennedy Sets—"The Royalty of Radio"

742 East Fourth Street, Long Beach

Phone 635-213

RADIO SHOW

**MAR. 31
TO APR. 5
AUTOMOTIVE
SETS**



**\$200 Cash
Essay Prizes**

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**ADMISSION
FREE**

PAUL G. HOFFMAN CO., Inc.
STUDEBAKER DISTRIBUTORS
FIGUEROA AT PICO STREET

Letters to the Editor

Editor, Radio Doings.

Dear Sir:

I must unburden myself to somebody, so here goes. Your "Letters to the Editor" column is my despair. When I see in it that somebody gets such stations as PWX, KYW, CFCH and CYL, I think I will forget about radio for life.

My simple long distance stations are KGO, KPO, KFAE, KDPT, KZN, KDYL, WBPA, KGW, KUO and KLX.

A friend of mine tries to add to my tortures by telling me how he got KYW, CFCH and CYB in Mexico City. My set is a Westinghouse Type RC three-tube outfit. I hardly ever use the amplifiers at all, so the above stations are all on the detector, but so are my friend's stations. And a peanut tube at that. Before I close I want to say I don't know why some fellows growl about the amateur so much. I have no trouble with them; are on a sharp wave length. All my interference is from 600 meter Government stations. I will be glad to receive any suggestions through this column. I have been told that the radio frequency will not work on this set.

Yours truly,

JOHN F. J. FAY.

1742 Crenshaw Blvd., Los Angeles, Calif.

Radio Doings, Los Angeles, Calif.

Gentlemen: I would like to know the call letter of the station that was broadcasting between 7:30 and 8 p. m., Pacific time, this evening (February 24, 1924) on a wavelength of approximately somewhere between 200 and 300 meters. This information would be greatly appreciated.

Very truly yours,

BERNARD AHLGREN,

1125 Minn. Ave., San Jose, Calif.

NOTE:—Possibly some of our readers may be able to furnish this information.

Editor, Radio Doings,
Los Angeles, Calif.

Dear Sir: I have just read the letter by Mr. Floyd Dennis, and I heartily agree with him that we ought to support our local stations. It is certainly plainly visible to any far-seeing radio fan that our local stations furnish better programs than any more distant station. Any one who does not like our local programs ought to move to another location, for the excellent music furnished by KPO, KHJ, KFI, or any other Pacific Coast station, is unexcelled. I myself can feel the lure of getting distant stations, and enjoy doing so, but I will say that when I want a real good program I tune in on the Pacific Coast stations.

I enjoy reading Radio Doings more and more.

Very truly yours,

BERNARD AHLGREN,

1125 Minn. Ave., San Jose, Calif.

Harkness Sets

Installed in Your Phonograph, Complete, \$90.00

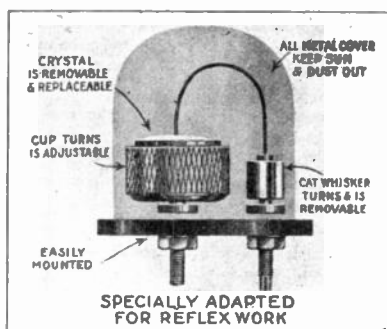
THORNTON & EVEREST

225 W. 12th St.

Metro. 1714

Los Angeles, Cal.

"Kills Your Reflex Troubles"



The "LINCOLN" Enclosed Fixed Adjustable Detector

At last, the ideal detector. This very remarkable device is causing a sensation. Thousands are already in use and radio fans throughout the country are clamoring for it.

Study the illustration—note that the **solid gold** cat's whisker can easily be turned, adjusted or removed. Observe that the crystal can be turned or replaced at a moment's notice. See that a metal cover—handsome nickel-plated metal—prevents breakage and keeps out light and dust. Every one carefully set and tested when shipped. Guaranteed—any faulty part will be replaced within one year. Defective crystal within six months will be replaced. That's fair— isn't it? This wonderful Enclosed Fixed Adjustable Detector costs only \$2.00. Ask for it at any dealer's.

Mention this advertisement
Address: Department O-3

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The Lincoln Mfg. Co.

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Kierulff & Ravenscroft
Los Angeles

Fobes Supply

San Francisco

Oakland

Portland

Seattle

Experiments Offer Unique Field for Fan

There are various types of radio fans. The radio experimenter is one who has nourished rather than outgrown that creative instinct which in childhood prompted him to build with blocks and, having felt the monetary thrill of prodigious achievement, demolishes his noble work with one good blow.

The field of radio experimentation is one of those great open spaces. Whether one enters it to revolutionize the art or just for the fun of building something that works, only to tear it down and replace it with something that may not work, the success of the venture depends mainly upon three open secrets, to wit: The amount of imagination with which one is blessed; skill, which comes with practice and patience; and, third, the materials with which one works.

It is with the third principle that this article has to deal, and it is principally to the beginner that it is addressed. Before taking the plunge it would be well to memorize the following quotation from Shakespeare, substituting the word "parts" for the word "habit":

Costly they habit as thy purse can buy,

But not expressed in fancy.

Many a seasoned experimenter, asked concerning the name or function of mysterious looking objects in his laboratory, has answered, "Oh, that is just a pile of useless gear I collected before learning that the best is none too good."

The most expensive is not always the best, but assuming that there is some foundation for the oft repeated maxim, "You can't get something for nothing," price is a good general guide to merit.

Condensers are a case in point. The more expensive makes on the market today are by far the better.

The radio amateur who builds his own set has become critical of workmanship and discriminating on points of efficiency. He will no longer purchase a variable condenser with friction connection between the movable part and wire terminal. It must be properly "pigtailed," that is, must have a flexible and neatly soldered connection between the stator and binding post.

Manufacturers who have come to realize this are turning out condensers with metal bearings so that the rotor does not wooble. If the axis simply is stuck into a hole in the bakelite the condenser is not durable. The hole will enlarge so that the movable plates will not remain in any fixed position. There can be no play in the well balanced, solidly constructed variable condenser. Always buys those the capacity of which is rated in microfarads and not simply by the number of plates.

In selecting fixed condensers squeeze the sides between the thumb and forefinger. If it is not perfectly solid its capacity is no more fixed than the old-time telescope suit case.

Other apparatus with movable parts such as variometers and variocouplers should be purchased with the same care. The latter should be wound on bakelite and not too heavily encased in shellac.

Vacuum tubes are as important to radio as carburetors are to automobiles. The characteristics of the various makes and designs should be studied in determining the selection of the proper tube for a certain duty. Generally tubes

"OH BOY"—"HARKNESS"

Parts Single Tube.....\$14.75

With Tubes.....\$48.50

Parts Two Tube..... 18.50

Loud Speaker, Batteries... 58.25

SETS BUILT TO ORDER

BRIDEWELL RADIOS

Res. Phone
Hum. 4019

3514 South Main, Los Angeles

Office Phone
Hum. 4933-J

REPAIRS

INFORMATION CHEERFULLY GIVEN

OPEN EVENINGS

may be cataloged under two heads, soft and hard. Soft tubes function better as detectors and require a lower plate voltage than do amplifiers which are usually hard, that is, the vacuum is nearer perfect.

The purchaser of tubes should rely upon the directions furnished by the manufacturer. The filament voltage required for any tube determines whether it should be operated with a story battery or dry cells. If the filament current is more than 0.25 ampere a storage battery is necessary for economical upkeep.

Rheostats should be used in accordance with the specified voltage, as the difference in voltage between the battery and that required by the tube must be taken care of by the rheostat. Graphite rheostats are preferable, as they permit finer adjustment. If wire rheostats are used, get those with heavy wire, as they will not burn out or break as readily as those wound with thin wire.

Radio "Luxury" in Frankfort

German interests desiring a monopoly, or at least control of radio, assert that it is a "Luxury," and should be subject to taxation, contending that it will only be possible to finance good broadcasting if the control remains with the Government. Recently, however, the Post office has granted permission to special companies to construct broadcasting stations, and given private licenses to buy receivers.

Those who approve of private operation say such control will discourage initiative, and that it will be impossible to enforce regulations without spying out home-made sets. The system of Government control will, however, be continued temporarily, and those who listen in must use outside antenna, and purchase sets stamped by the Government, as well as possess a Post Office license, costing 25 gold marks a year. The first broadcaster licensed in Frankfort was the Sudwestdeutsche Rundfunkdienst, A. G., which will operate exclusively within a radius of 150 kilometers.

Great Britain has about 580,000 licensed "listeners-in," compared with only 30,000 a year ago, and broadcasting is still increasing, reports to the U. S. Government state. This year manufacturers expect a large increase in their business. About 225,000 individuals who first took out temporary licenses were later given constructor's licenses, which apparently are permits to build sets. This type of license seems popular, as between 32,000 and 75,000 per month were issued toward the close of 1923. All told, 165,000 British broadcasting licenses were issued to owners of British manufactured sets, 75 per cent of whom are said to own crystal sets. Since the broadcasting stations are mostly located in popular districts, a large majority of set owners are satisfied with simple crystal sets.

Let a Thor Reproducer Displace that Ugly Horn!



Thor Reproducer made with fringed silk shade effect. Table lamp height. \$28

A non-directional loud speaker which distributes its mellow tone in all directions with equal clarity and volume.

Easily most exquisite Radio Appliance on the market—especially adapted for richly furnished homes. The "talk" of the recent Los Angeles Radio Show.

Dealer territory still open. Write to

THOR RADIO COMPANY

Claus Spreckles Building, San Francisco

Los Angeles to London in Three Seconds

"Hello, London, are you there?"

London adjusted its headphones. France tuned in, and KFI, Radio Central Station continued its hour and half program, broadcast over six thousand miles.

Earle C. Anthony, owner of the KFI Radio Central Station, was the first man to talk across this continent, and the Atlantic. Mr. Anthony gave the trans-country calls, hailing the different stations that were co-operating with KFI on this unique test. KGO, the Oakland, California, station, rebroadcast to WGY, Shenectady, New York, where it was then retransmitted to London, 2 L O. The U. S. Playing Card Company, in Cincinnati, who had a scheduled program for the period of the test, shut down that they offer no interference to the program.

A memorable assemblage of brilliant personages collected in the Los Angeles Packard Building to assist in the epoch-making event. William May Garland, Los Angeles member of the Olympic Games Committee, invited over radio, athletes from England and France to Los Angeles in 1932 to participate in the Olympic games to be held in America for the first time. Monte Blue, representative motion picture actor of the younger school, made a short and typically "snappy" speech as his contribution to the program. Charles Wakefield Cadman, whose music is well known in England and on the continent, played a number of his own compositions, thus giving lovers abroad their first opportunity to hear Mr. Cadman interpreting his own music. Margaret Messer Morris, a mezzo-soprano, and Sol Cohen, talented violinist, perhaps the best interpreters of Mr. Cadman's music on the Pacific Coast, appeared with him in a group of songs. Willa Holt Wakefield, beloved monologist of American vaudeville and English music halls, in her radio debut re-established contact with her vast audience after a temporary retirement. Harry Porter, a California baritone, sang a brilliant operatic aria, accompanied by Sylvia Marotta, Italian pianist.

Within an hour after the completion of this program, at eight o'clock, Pacific Time, a cable was received in the Los Angeles Examiner offices, a remote control of the Radio Central Station, KFI, that the entire program had been received in London, and from there retransmitted to all of England, France and Germany.

Watch for the Opening of a Complete Radio Shop on Western Ave.

High class goods at low prices.
Complete sets or parts to build.

SUPER HETERODYNE FREED-EISEMANN NEUTRODYNE
HARKNESS, ERLA, COCKADAY FOUR CIRCUIT
or any kind you may wish.

A complete machine shop to build or repair anything pertaining to Radio.
Sets made selective.

No charges if we can't make your set perform

Watch for the opening in the next issue

Elite

RADIO SHOPPE

132 So. Western

Los Angeles

Questions and Answers

HALL BERRINGER

Gentlemen:

44 W. Carter Ave., Sierra Madre, Mar. 7.

You seem to be answering a great many questions and perhaps you can help me out. I have been battling with a 3-tube Cockaday, but with indifferent success. The main trouble seems to be lack of sufficient regeneration. With the grid leak and condenser connected as shown on Cockaday diagram I get no regeneration at all, while connecting them up in the usual way (Condenser and leak in parallel, and in series with grid) makes considerable improvement. When purchasing wire was unable to get No. 18 S. C. C. as specified and had to use 18 D. C. C. This might make a difference. Also wound antenna loading coil bank-wound, as specified, but would hardly work at all. Rewound this as single layer, and this brought great improvement. Tried various values of phone condenser, and with no phone condenser at all. Latter method gives best volume, but also considerable howling. Putting fixed condenser across primary of first transformer eliminates howling, but also ruins the volume. Among the parts I am using in this circuit are the following: Coils as described above, two "Wireless Shop" 23-plate condensers, 3 "A" tubes, two General Radio Co. audio transformers (5 to 1), Freshman variable grid leak. Now, it isn't necessary to take up your valuable space printing all of above, but I would sure appreciate it if you could answer the following questions in an early issue of the "Doings":

1—How can I increase regeneration?

2—Does it make any difference if coils are wound with single cotton or double cotton wire? 3—Is it essential that antenna loading coil be bank-wound?

4—What is supposed to be the advantage in connecting grid leak and condenser as shown on Cockaday diagram (one side of grid leak to grid and other to filament negative)?

5. Should a phone condenser be used? If so, what capacity, and where located?

Answer 1—By increasing the load in the plate circuit.

Yours very truly, E. A. FORAN.

2—No. 3—No.

4—A grid leak should always shunt the grid condenser.

5—A phone condenser is usually .001 cap. Yes, it will help shunt the B battery and phones.

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Yours a

RADIO HOME

Complete
De Forest

Outfit

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\$235

Endless enjoyable entertainment for old and young. A wonderful instructor for the children. Come in any time for a demonstration.

Complete
Zenith

Outfit

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\$275

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806-808 SOUTH BROADWAY
332 SOUTH BROADWAY

OTHER STORES: LONG BEACH AND SAN DIEGO

Questions and Answers

Box 91, Motor A, San Bernardino,
Calif.

Radio Doings.

Dear Sirs: Questions 1—Will the enclosed circuit work well?

2—Will it work better than just the one tube hook-up?

EDWARD HOLUBEK.

Answer 1—We don't advise this circuit.

2—No.

Question 1—I have an Aeriola Sr. set and am getting very excellent results. It only tunes to about 500 meters. How can one increase the wave length of these sets?

2—What is the best position of an aerial, one running east and west or north and south?

HYMAN WEIZEL,
Santa Cruz, Cal.

Answer 1—You must load the antenna circuit, and the plate circuit.

2—This depends on the direction you desire to receive from and your location.

Fullerton, Calif., March 4, 1924.

Dear Sir: Is it possible to use a Skinderviken button to transmit?

2. What small circuit would you use when using one 5-watt tube?

I would be very much pleased if you should answer these questions.

Best 73's.

ALFRED G. HILTON.

1003 E. Commonwealth Ave.,

Fullerton, Calif.

Answer—1. This button is used in the telephone transmitter.

2. Hartley.

San Diego, Calif., March 6, 1924.

Radio Doings.

"Questions and Answers" Dept.

Dear Sirs: I have a one-tube Harkness set, with 75-foot antenna. KHJ, KFI and KGO come in clearly, but husky vibrations and gurgling, with an occasional clear note, come in from KFSG, and there are times when I have the same difficulty with KGO. My set has an adjustable crystal, not a fixed one.

Can you tell me where the trouble lies?

Very truly yours,

GRACE B. CARRUTHERS.

2628 Broadway, San Diego, Calif.

Answer—Suggest you try a new crystal.



GOLD SEAL
HOMCHARGER

**Charges Radio and Auto Batteries
at Home Over Night for a Nickel**

No stopping—no sticking—no muss—no fuss—no trouble. Self-polarizing—high-charging rate—finished in mahogany and gold—approved by Underwriters. Price \$18.50 complete with ammeter (\$25.00 in Canada)—no extras to buy—at all good dealers.

FREE Ask your dealer or send direct for free HOMCHARGER list of broadcasting stations and GOLD SEAL bulletin.

Insist on the GOLD SEAL

It's your guarantee against substitution and appears on name-plate and package. No other charger is just as good.

*The Automatic Electrical Devices Co. 172 West Third St., Cincinnati, O.
Largest Manufacturers of Vibrating Rectifiers in the World*

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Western Manager

400 San Fernando Bldg., Los Angeles, Cal.

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Shipments to all points west of Rockies from
Los Angeles stock.

You are courteously
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Have 200 Distributors

(Service Stations)



An increase of twenty-five since the first of the year.
This indicates an increasing approval of our product.

GILMORE OIL COMPANY

2333 East 28th Street

Los Angeles, Cal.

Status of Broadcasting Stations

On March 1 there were 548 broadcasting stations licensed to transmit by the Department of Commerce. The returns for February show a gain of 14 stations. Eight new Class A stations licensed during the last week in February follow:

LIST OF NEW "A" BROADCASTING STATIONS		Frequency Kcys.	Wave Length Meters	Power Watts
Call	Station			
WBBS	First Baptist Church, New Orleans, La.....	1200	250	100
KFNZ	Royal Radio Company, Burlingame, Calif.....	1300	231	10
WBBW	Ruffner Junior High School, Norfolk, Va.....	1350	222	50
WCBE	Uhalt Radio Company, New Orleans, La.....	1140	263	5
KFOB	Glenwood Technical Assn., Minneapolis, Minn.	1340	224	5
KFOC	First Christian Church, Whittier, Calif.....	1270	236	100
KFOD	Vern Peters, Wallace, Idaho.....	1340	224	10
KFOF	Rohrer Electric Co., Marshfield, Oregon.....	1250	240	10
KFOH	The Radio Bungalow, Portland, Oregon.....	1060	283	15
WBBL	Grace Covenant Presbyterian Church, Richmond, Va.	1060	283	50
WBBZ	Noble B. Watson, Indianapolis, Ind.....	1320	227	50
WCBR	University of Mississippi, near Oxford, Miss.	1240	242	20
TRANSFERRED CLASS C TO CLASS A				
WGAQ	Glenwood Radio Corp., Shreveport, La.....	1190	252	150
KYQ	Electric Shop, Teves & Joaquin Co., Ltd., Honolulu, T. H.....	1110	270	100

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NEUTRODYNE SPECIALIST

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to Build

**RADIO AND ELECTRIC
SUPPLIES**

OPEN EVENINGS

5664 Hollywood Blvd., Hollywood, Calif.

Holly 1734

"Out of the Air"

By LISTENER-IN

There will be a mass meeting of radio fans, dealers, manufacturers, broadcasters and, in fact, all interested in radio at the Angelus Temple, Echo Park, on Monday, March 17th, at 8 p. m. There will be addresses by prominent radio men and engineers. Radio problems will be discussed in a spirit of co-operation. Let's all attend. No religious matters will be discussed.

We understand that Mr. W. G. McAdoo is trying to make arrangements to put in a broadcasting station in the Alexandria Hotel, Los Angeles, from which he can reach the public during the coming presidential campaign.

The call letters of the new station at Long Beach owned by the Echophone Radio Shop are KFON. They are broadcasting on 234 meters, and their power is 100 watts. For the present they will be on the air daily, except Sunday, at 5:45 to 6:45 p. m. and 8:00 to 9:30 p. m. They promise to let us have a detailed program within a short time. You find their name appearing on our time tables.

KNX, Electric Lighting Supply Co., broadcasting from the California Theatre, Los Angeles, have been conducting some tests lately. We have had so many telephone calls asking who this station was that we are inserting this notice. They expect to be on the air with a regular schedule within a short time.

Mr. Colin B. Kennedy, of the well-known manufacturing company bearing his name, is very enthusiastic about the class of broadcasting he has heard while staying in Los Angeles. He states that it is not surpassed by any in the country, and he comments on our announcers, saying that nowhere has he heard so much individuality of these gentlemen delivered over the air. Mr. Kennedy has left for San Francisco, his old home, where he will stay about a week.

Wishing to co-operate with the listening-in public, KFSG, Angelus Temple, will be silent every Tuesday as well as Monday.

A Radio Show, under the auspices of the Radio Division of the Music Trades Association, will be held in the sales-rooms of Paul G. Hoffman Company, Figueroa at Pico, Los Angeles, March 31 to April 5.

Mr. Charles A. Stevens, one of the largest drygoods merchants of Chicago, had the pleasure of listening in to a program broadcast from his own station in that city while visiting Los Angeles on Sunday last.

The Radio Stores Company, 348 South Spring Street, Los Angeles, will open another store about April 1 in the New Commercial Exchange Building, now nearing completion, on Eighth between Hill and Olive.

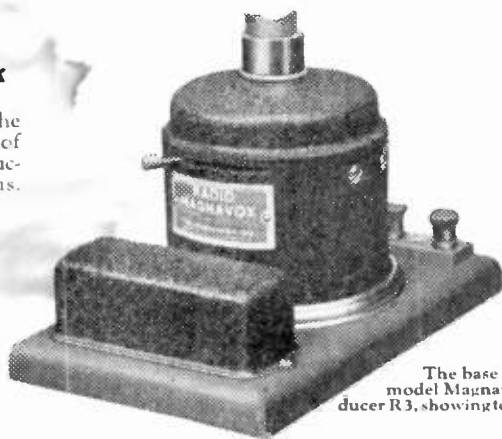
V. M. Bitz, one of the best-known radio men in the west, is the manager of the radio department just opened up by the Germain Seed Store, Sixth and Main Streets, Los Angeles. Mr. Bitz was the operator at KHJ for a long time, and was one of the few that reached Australia in the radio test with that country carried out last year.

Frederic L. Tomlinson Co. have opened at office at 423 H. W. Laughlin Bldg., Los Angeles. This firm are agents for Raco Braid, Sexton Condensers, Radio Units Inc., and others.

W. J. Bransford of Stockton has joined the sales force of the Globe Commercial Co. Mr. Bransford has been with the Union Oil Company previously.



Pioneers in the development of sound reproducing apparatus.



The base of the new model Magnavox Reproducer R3, showing tone control

Important features now offered in Magnavox Radio—the Reproducer Supreme

THE Magnavox electro-dynamic principle obviates the need of any mechanical adjustment to regulate the air-gap or change the position of moving parts. This famous principle of operation permits the use of an electrical volume control.

This control directly affects the character of the electrical circuit which creates the sound, controlling the sensitivity of the instrument and also its volume of reproduction.

Moreover, this electrical control produces a great saving of current (already reduced in the new R3 and R2 to a maximum of .6 ampere) for, by its action, the current value can be reduced

to a minimum of .1 ampere. The new Magnavox electro-dynamic Radio Reproducers R3 and R2, in fact, are equipped with the first true sound controlling device ever designed. See them at your dealers and write us for catalog.

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No Radio Receiving Set is complete without them

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A NEW Perfex at a Lower Price

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REAL SATISFACTORY SERVICE

Wireless Shop Quality throughout. Comes **complete** with
Tubes, Batteries, Loud Speaker, Phones and Aerial Wire—
Nothing else to buy.

And—Can You Imagine All This for

ONE HUNDRED DOLLARS

It comes to you in a beautiful American Walnut Cabinet which contains
the set and all batteries.

The aerial may be small, even inside the room will often suffice.

The large production facilities of THE WIRELESS SHOP enables us to
produce a **Quality** product for no more than is ordinarily asked for a
cheap assembly of second grade apparatus.

This set is built **Complete** in our own shops in Los Angeles. Buy from
the manufacturers and save. Get direct factory service.

See this new Radio at either of our stores. Our Sales Studio at Seventh
and Alvarado is open every evening until 9:30.

ONLY \$100.00 COMPLETE

Slightly More on Deferred Payments



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698 SO. ALVARADO ST.
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